



SAB R&D Portfolio Review Task Force Update and Discussion on Next Steps

A Presentation to the
NOAA Science Advisory Board
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Co-Chairs

July 16, 2012



Outline



- Purpose and Scope
- PRTF Meetings Update
- Survey Update
- Meetings and Teleconferences
- Next Steps



Purpose

- Provide an Update on Task Force Work including information requested from NOAA
- Input from SAB on next steps



Scope of Activities to Review



- NOAA's entire R&D Portfolio
- May consider other key activities and infrastructure as necessary to answer the questions
- Examine both NOAA's internal (e.g. labs and centers) and external (e.g. cooperative institute, Sea Grant programs, competitive grants) R&D portfolios



Review Timing



- Preliminary recommendations for November 2012 SAB meeting
 - High level identification of opportunities and issues for both questions
- Final report by Spring 2013 SAB meeting



Meetings to date

- Teleconference calls on January 5 and 27.
- First in-person meeting Feb. 21-22; NOAA presented high level overviews, based on pre-existing materials:
 - NOAA and its strategic directions
 - R&D overview
 - Summary of prior evaluations of NOAA R&D
 - Task force requested information on a number of topics
- Teleconference Meeting March 14
- Second in-person meeting April 4
- Third in-person meeting May 16-17



Survey Update

- Initially sent out to Bench Scientists on April 27th, 2012
- Survey initially closed May 12th, 2012
- Survey reopened May 23rd – May 29th to accommodate a few NOS labs that did not receive the survey invitation.



Survey Update - Questions



There were 3 primary questions

Exciting Activities

New Opportunities

Work Environment: supportive, non-supportive

Demographic questions

- R&D Unit
- Primary work location
- Number of years at this location
- Type of employment
- Scientific specialty
- Name

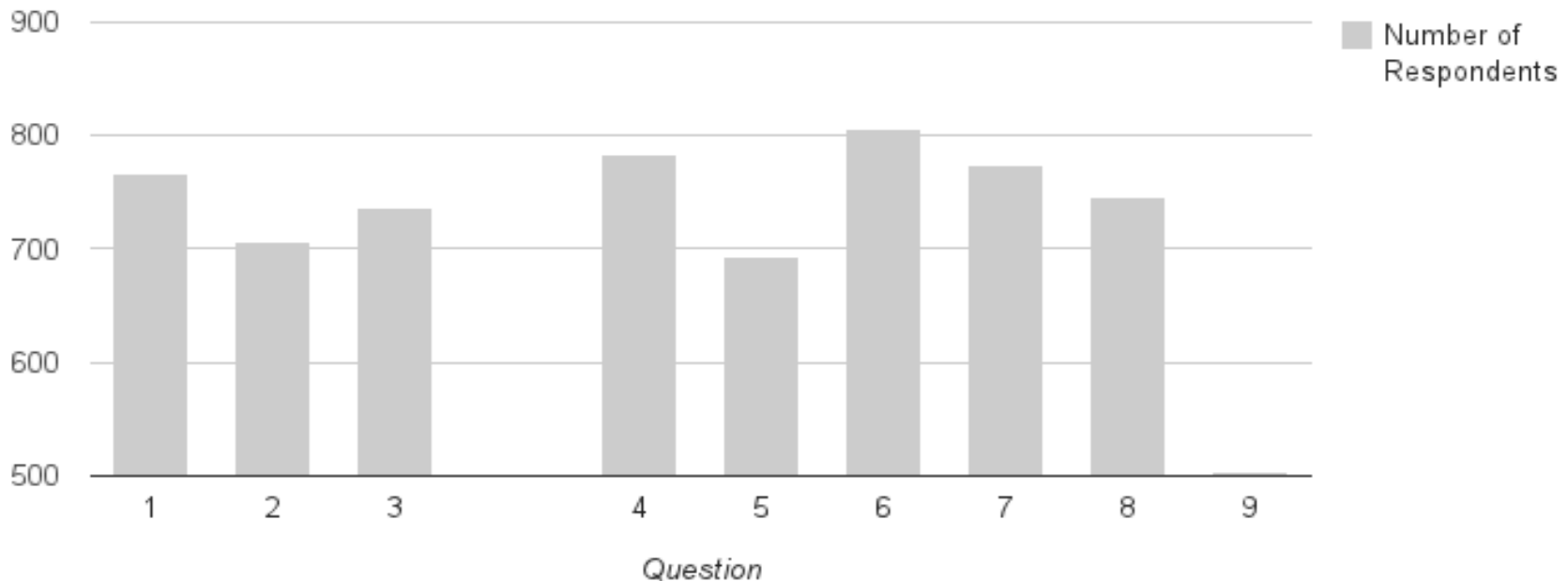


Survey Update – Preliminary Results



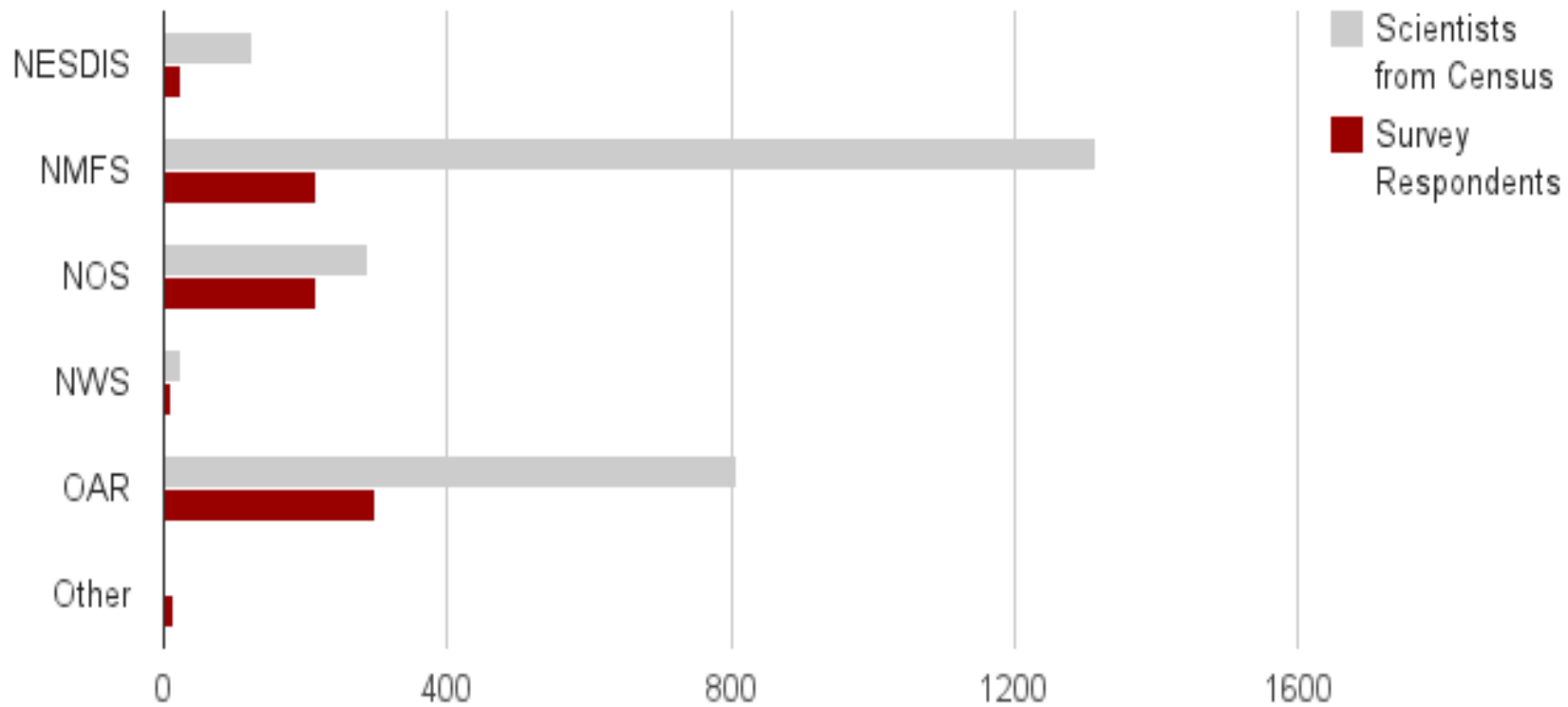
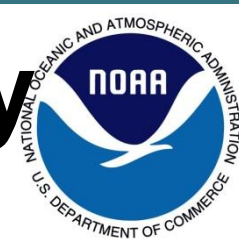
- ~2560 Bench Scientists identified
- 775 (30%) individuals responded

Response by Question





Survey Update – Preliminary Results





Survey Update – Non-Responders Survey



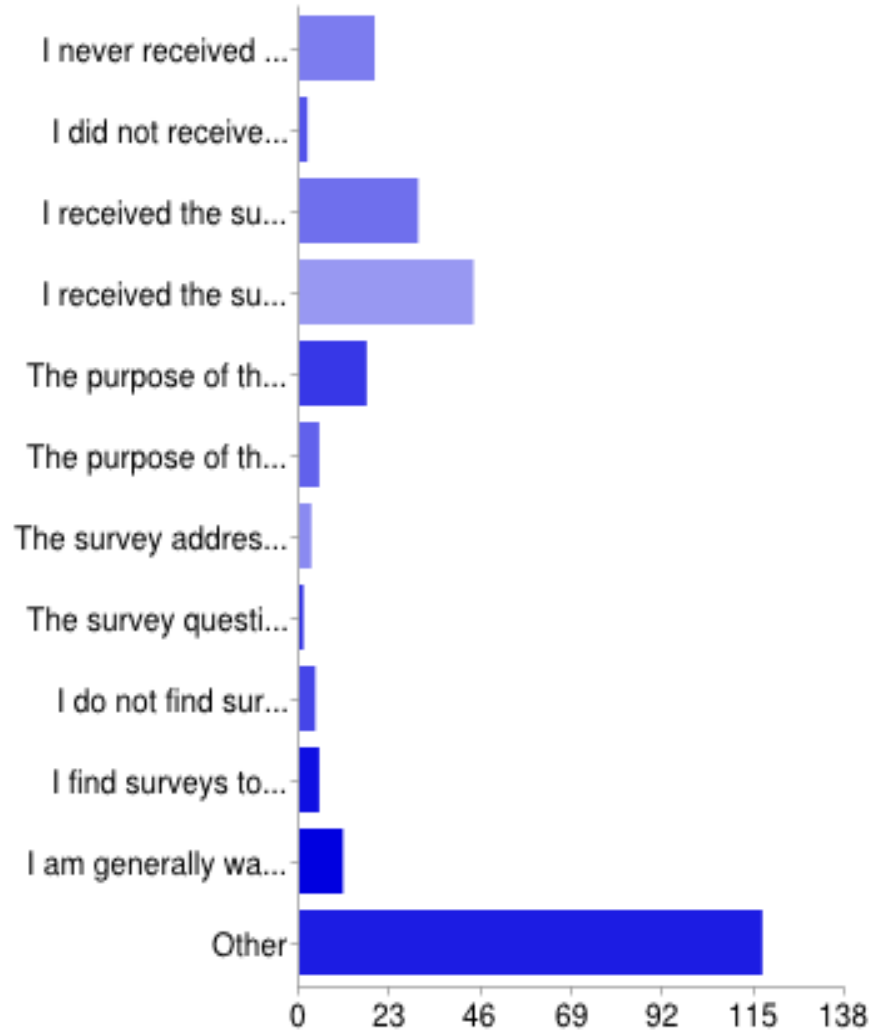
- Sent out June 4th, 2012
- 258 responses
- Used as a form of validation



Survey Update – Non Responders Survey



I never received the survey.	19	7%
I did not receive the survey prior to the deadline.	2	1%
I received the survey but forgot to take it.	30	12%
I received the survey but did not find the time to complete it.	44	17%
The purpose of the survey was not relevant to me.	17	7%
The purpose of the survey was unclear.	5	2%
The survey addresses sensitive topics; I prefer to keep those opinions to myself.	3	1%
The survey questions were not clearly stated.	1	0.5%
I do not find surveys to be useful, so I decided not to complete it.	4	2%
I find surveys to be too time consuming.	5	2%
I am generally wary of taking surveys so I am not likely to respond to them.	11	4%
Other	117	45%





Meetings and Teleconferences



- As part of the data collection process, the Task Force held a number of meetings, teleconferences, and information requests to gather information on tasks in its charge
- In-Person meetings were held in May 2012 with:
 - NOAA Assistant Administrators or designees;
 - Senior Managers from NOS, NWS and NESDIS;
 - Bob Gagosian, Ocean Leadership; and
 - Staff from the Office of Management and Budget



Meetings and Teleconferences



- Teleconference meetings were held in June with:
 - NOAA Council of Fellows
 - Cooperative Institutes' Executive Council
 - Representatives from the Sea Grant Association and Coastal States Organization
 - 7 Presidential Early Career Award in Science and Engineering (PECASE) winners:
 - 4 Social Scientists, including the NOAA Chief Economist;
 - Maureen Wiley, Chief, Resource and Operations Management



Meetings and Teleconferences



- Information Requests were sent to SAB Working Groups and relevant NOAA Federal Advisory Committees;
- Teleconferences planned for July will include former NOAA Administrators (Byrne, Knauss, Baker, Lautenbacher)



Information Requested from NOAA in May



- NOAA Research Council: Terms of reference and list of topics recently discussed
- Description of the Coastal Ocean Program
- Costs of performing intramural and extramural research
- List of Congressional authorizing and appropriating committee members
- Example of a NOAA annual operating plan
- Document that illustrates formation of Hurricane Forecast Improvement Project
- Holistic Understanding Objective Implementation Plan and Logic Model
- Position description for Chief Scientist
- Demographics of the Fed scientific workforce to inform understanding of issues related to age and retirements.



Foreshadowing

- Berrien Moore added: chaired earlier SAB review (that review recommended significant aggregation)
- Research programs and budget lines highly dispersed –creates challenges
- Ecosystem research not yet up to scale
- “One NOAA” understanding and treatment is elusive



Next Steps

- Next meetings
 - July: Seattle
 - September: Boulder
- Drafting of key recommendations



Request



- Comments/Questions on Process to Date and Next Steps



Back Up Slides





Task Force Members



- Peter Kareiva, Co-Chair and Chief Scientist, The Nature Conservancy
- Roberta Balstad, Co-Chair and Special Research Scientist, Columbia University
- Susan Avery, President, Woods Hole Oceanographic Institution
- Scott Burns, Director, Environment Focus Area, Walton Family Foundation
- Lesley-Anne Dupigny-Giroux, Associate Professor and Acting Chair, Department of Geography, University of Vermont
- Jeremy Jackson, Senior Scientist Emeritus, Smithsonian Institution
- Frank Kudrna, Principal Water Resource Engineer, URS Corporation, Chicago
- Berrien Moore, Dean, University of Oklahoma College of Atmospheric & Geographic Sciences
- Jim Sanchirico, University of California, Davis
- Jerry Schubel, Executive Director, Aquarium of the Pacific
- John Snow, Regents Professor of Meteorology, University of Oklahoma
- The SAB Chair, Ray Ban, Consultant, Weather Industry and Government Partnerships, The Weather Channel is an ex-officio member of the Task Force



Terms of Reference-Charge



The SAB will conduct a needs-based review to provide advice to NOAA on prioritization of the agency's research and development portfolio (including identification of gaps and areas for integration of effort) that is strongly linked to NOAA's current Strategic Plan and recognizes the high likelihood of constrained financial resources. Further, the SAB will provide advice on an appropriate organizational approach within NOAA for support of this R&D portfolio.



Terms of Reference- Questions



1. What portfolio of R&D activities does NOAA need to achieve its vision and strategic goals?
 - What R&D portfolio does it currently have?
 - What are the differences?
 - What changes should be made?
 - What changes take priority?
2. How should NOAA's R&D portfolio be organized and managed to achieve its vision and strategic goals? Is NOAA's expertise appropriate?
 - How is it organized and managed now? What expertise does it have now?
 - What are the differences?
 - What changes should be made?
 - What changes take priority?



Terms of Reference-Assumptions



- By managing R&D as a portfolio, NOAA can explicitly assess the tradeoffs among competing investment opportunities in terms of their benefits, costs, and risks.
- A business model for R&D based on agency strategy yields a business case for OMB, Congress. The results of this portfolio review may be used as a basis for advocacy for NOAA R&D.
- This review will take a “zero-based” rather than an incremental approach to strategy, but recognize limits to change.
- This review will stay at the strategic level, sacrificing depth for breadth.



Additional Information on the Terms of Reference (TOR)



- NOAA suggested additional information to address the questions in the Terms of Reference including a possible approach and issues to consider in addressing the TOR questions as well as some key definitions.
- The Task Force provides this document to the SAB for approval with the Terms of Reference.



Additional Information: Budget Definitions



- Research (including both basic and applied)
 - **Basic research**: systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. Basic research, however, may include activities with broad applications in mind.
 - **Applied research**: systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met
- Development
 - Systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.



Budget Definitions-cont.

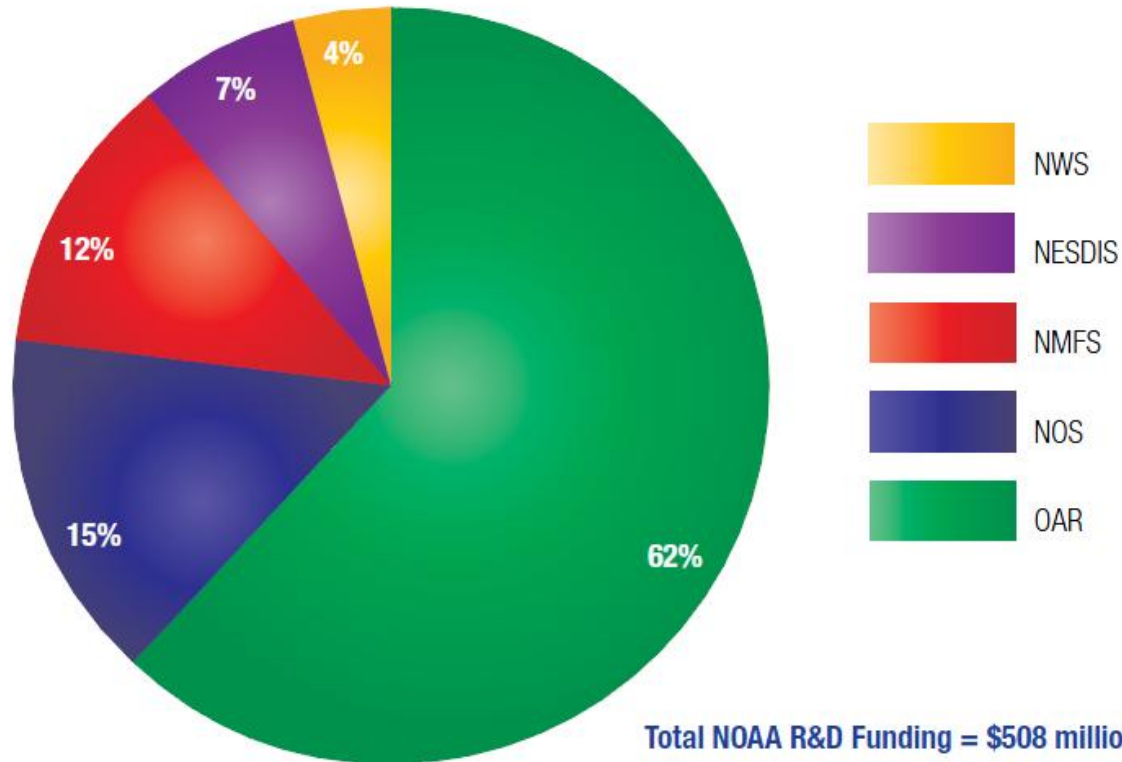


- Extramural Budget
 - The sum of the total obligations minus amounts obligated for such activities by employees of the agency in or through Government-owned, Government-operated facilities
- R&D expenses
 - Include administrative expenses for R&D
 - Exclude physical assets for R&D such as R&D equipment and facilities



R&D in FY13 Budget Request

- Total NOAA request: \$5,130M
- Research, development, and R&D equipment: \$651M
- Research & development: \$508M



Total NOAA R&D Funding = \$508 million
(Excludes Equipment)