



Office of Oceanic & Atmospheric Research

Delegations & Directives

CIRCULAR NUMBER: 216-3

Effective: March 10, 2021

SUBJECT: OAR Laboratory and Program Science Evaluations

SECTION 1. PURPOSE

This policy establishes the authorities and responsibilities for managing regular and recurring science evaluations of the quality, relevance, and performance of individual programs and laboratories to evaluate their success in achieving intended outcomes through research, development, and transition activities conducted by and through National Oceanic and Atmospheric Administration's (NOAA) Office of Oceanic and Atmospheric Research (OAR) laboratories and programs.

SECTION 2. BACKGROUND

This policy supersedes OAR 001.07, dated July 23, 2007 and OAR 216-3, dated March 27, 2015. This policy has been updated to revise roles and responsibilities to conform to current OAR organizational structure. It complies with the requirements of NOAA Administrative Order (NAO) 216-115A, "Research and Development in NOAA," as well as the OAR mission and goals articulated in the OAR Strategy. OAR is the primary research and development (R&D) organization within NOAA. As articulated in OAR's Strategy, its mission is "to conduct research to understand and predict the Earth system; develop technology to improve NOAA science, service and stewardship; and transition the results so they are useful to society."

OAR can most effectively achieve consistent standards of excellence through periodic evaluations of its research, development, and transition, including extension services and outreach. The purpose of these evaluations is to provide external assessments of the quality, relevance, and performance of laboratories and programs in meeting goals and objectives, as specified in the laboratory/program, OAR, NOAA, and appropriate interagency groups' strategic and operating plans. Such evaluations can:

- Inform performance improvements and portfolio management;
- Encourage innovative and collaborative approaches to meet goals and objectives;
- Assess research contributions and clearly articulate the value of the research toward achieving the NOAA mission and as appropriate interagency goals;
- Evaluate for stakeholders the outcomes of OAR research, development, and transition; and
- Highlight directions for future strategic plans.

This policy addresses the requirement in NAO 216-115A for evaluations of the quality,

relevance, and performance of individual laboratories and programs by expert panels.

SECTION 3. SCOPE

Each evaluation will focus on a single laboratory or program. Each evaluation will evaluate the research, development, and transition activities, including extension services and outreach, conducted by (intramural) and through (extramural) OAR laboratories and programs. The evaluations will assess science, technology, their transition to applications, and portfolio management.

SECTION 4. APPLICABILITY

This policy applies to OAR research laboratories and programs. These include Air Resources Laboratory (ARL), Atlantic Oceanographic and Meteorological Laboratory (AOML), Chemical Sciences Laboratory (CSL), Climate Program Office (CPO), Geophysical Fluid Dynamics Laboratory (GFDL), Global Monitoring Laboratory (GML), Global Ocean Monitoring and Observing Program (GOMO), Global Systems Laboratory (GSL), Great Lakes Environmental Research Laboratory (GLERL), National Sea Grant College Program (NSGCP), National Severe Storms Laboratory (NSSL), Ocean Acidification Program (OAP), Office of Ocean Exploration and Research (OER), Pacific Marine Environmental Laboratory (PMEL), Physical Sciences Laboratory (PSL), Technology Partnerships Office (TPO), and Weather Program Office (WPO).

SECTION 5. RESPONSIBILITIES (See Enclosure A)

SECTION 6. POLICY

Science evaluations assess quality, relevance and performance of research, development, and transition (including extension services and outreach) to both internal and external interests, and help to strategically position the laboratories and programs for future planning. Each laboratory and program will undergo a science evaluation at least once every five years, at the discretion of the OAR Assistant Administrator (AA), or until superseded by NOAA policy.

SECTION 7. PROCEDURES

Laboratories and Programs will be evaluated according to criteria and processes that are detailed in the NOAA OAR Research Evaluation Guide. Per NAO 216-115A, the assessment criteria will include quality, relevance, and performance (described below). The composition of evaluation panels should reflect the diversity of expertise necessary to assess the laboratory or program on all of these criteria. The evaluations will be conducted in compliance with the Federal Advisory Committee Act (FACA). When appropriate, the evaluation can be done in coordination with a Federal Agency Committee or other review process. Additional criteria may be considered.

“Quality” is “a measure of the novelty, soundness, accuracy, and reproducibility of a specific body of research.”¹ This refers to the merit of R&D within the scientific community. Assessing the quality of scientific and technical work relies heavily on the time honored tradition of peer review. Bibliometric data on peer-reviewed publications and citations, patents, awards, and

¹ The definitions of quality, relevance, and performance are quoted from NAO 216-115A.

other professional recognitions are some of the factors to consider.

“Relevance” is “a measure of how well a specific body of research supports NOAA’s mission and the needs of users and the broader society.” This primarily refers to the value of R&D to users beyond the scientific community. Relevance includes not only hypothetical value, but actual impact. It considers the question, “What would not have happened if you did not exist, and how much would society have missed?” Examples of ways the impact of R&D can be realized include the application of scientific knowledge to policy decisions, the improvement of operational capabilities at NOAA’s service lines and other collaborating institutions, or licensing of inventions for commercial use.

“Performance” is “a measure of both effectiveness (the ability to achieve useful results) and efficiency (the ability to achieve quality, relevance, and effectiveness in timely fashion and with little waste).” It refers to the effectiveness and efficiency with which R&D activities are organized, directed, funded, and executed. Assessing performance may include considerations of technical execution, finances, workforce, infrastructure, and leadership necessary to achieve the organization’s goals, through the laboratory or program’s own capacity and that of its partners. This necessarily involves understanding the quality of management, including interaction with stakeholders, clear articulation of strategic direction, as well as the balance of the R&D portfolio across time frames and intended applications.

SECTION 9. REVISIONS

The OAR Office of the Chief Financial Officer/Chief Administrative Officer (CFO/CAO) is responsible for developing and revising this policy for the OAR AA. Submit recommended changes to this policy to oar.hq.smt@noaa.gov.

SECTION 10. DISTRIBUTION.

OAR-wide and OAR internet accessible.



March 10, 2021

Craig N. McLean

Assistant Administrator

(Enclosures)

ENCLOSURE A

RESPONSIBILITIES

To simplify the following text “Director” refers to the Director of the laboratory or program that is being reviewed. “Relevant DAA” refers to the Deputy Assistant Administrator (DAA) that oversees the organization being reviewed.

Assistant Administrator (AA). The AA authorizes and approves all policies associated with review and evaluation of OAR research laboratories and programs. The AA charges and appoints an evaluation panel of experts, receives the final summary report and makes final decisions on actions to be taken as a result of the evaluation. The AA delegates responsibility to conduct the evaluations to the relevant DAA.

Deputy Assistant Administrator for Science (DAA/ Science) and Deputy Assistant Administrator for Programs and Administration (DAA/ P&A). The DAA/Science or the DAA/P&A, in collaboration with the Laboratory or Program Director, is the lead management official for conducting laboratory and program science evaluations, respectively. When the evaluation is overseen or coordinated by a Federal Advisory Committee (FAC), the relevant DAA or his/her designee will coordinate with the FAC, as appropriate. The relevant DAA provides input on potential evaluation panel members and meets with the evaluation panel to plan the science evaluation, reviews the summary reports and makes recommendations to the AA on actions to be taken in response to the reports. In instances where the DAA/Science is also the Director of the Laboratory being reviewed, or the DAA/P&A is also the Director of the Program being reviewed, the responsibilities as the lead management official for the evaluation will be transferred to the other DAA.

Chief Financial Officer/Chief Administrative Officer (CFO/CAO). The CFO/CAO oversees the program and laboratory evaluation process, ensuring that it adheres to requirements in this circular, NOAA Administrative Order 216-115A, and OMB Circulars 11 and 123. The CFO/CAO coordinates with OAR components to ensure sufficient resources are available for laboratory and program science evaluations. The CFO/CAO ensures that the evaluations inform strategic planning, performance measures, budget formulation, and enterprise risk management. The CFO/CAO oversees development of and updates to guidance for conducting the evaluations, including the NOAA OAR Evaluation Guide. The CFO/CAO delegates day to day activities in these areas to the Strategic Management Team within the Office of the CFO/CAO.

The Strategic Management Team provides OAR-level corporate oversight for evaluations to ensure conformance with policy and advise on science evaluation issues. Incorporating direction from the AA, DAAs, and CFO/CAO, along with input from labs and programs, the Strategic Management Team creates and revises the Evaluation Guide to ensure the evaluations are useful for OAR and NOAA. The Strategic Management Team coordinates evaluations for programs and laboratories. Responsibilities include:

- Coordinate with laboratories/programs to schedule evaluations;
- Appoint a Headquarters liaison to work with a Review Coordinator, appointed by each Program or Laboratory Director, on actions identified in the Evaluation Guide;

- Implement the evaluation process in accordance with the Evaluation Guide;
- Work with others in the Office of the CFO/CAO to ensure resources are available to support science evaluations;
- In collaboration with the Director, analyze the final review panel recommendations;
- Review draft summary reports for technical corrections and accuracy of content and consistency of findings with policy prior to DAA review;
- Track and monitor implementation of recommendations; and
- Ensure that evaluations inform strategic planning, performance measures, budget formulation, and enterprise risk management.

Directors. Directors collaborate with the relevant DAA to define the scope, emphasis, and themes of the evaluation and recommend potential reviewers. Directors coordinate with the CFO/CAO to integrate findings and recommendations from evaluations into strategic planning, performance measures, budget formulation, and enterprise risk management. In accordance with the Evaluation Guide, the Directors prepare briefing materials, responses to specific questions, and other pertinent information for the Review Panel. Directors identify a Review Coordinator to work with the Headquarters liaison to complete actions identified in the Evaluation Guide and ensure on-site logistical support for science evaluations. Directors review the draft report for technical corrections and prepare the OAR response to evaluation findings and recommendations for the relevant DAA. Directors ensure that actions agreed to in the response plan are implemented.