

CHARGE TO REVIEWERS

Climate Program Office Review

May 24-26, 2022

Purpose of the Review

The National Oceanic and Atmospheric Administration ([NOAA](#)), Office of Oceanic and Atmospheric Research ([OAR](#)) conducts science reviews every five years to evaluate the quality, relevance, and performance of the research and activities its laboratories and programs conduct and support. These reviews are also intended to ensure that OAR research is linked to NOAA's mission and priorities, is of high quality as judged by preeminence criteria, and is carried out with a high level of performance.

The purpose of the Climate Program Office ([CPO](#)) review, which will be held virtually May 24-26, 2022, is to provide an independent, external assessment of the program, including its management structures, and to recommend strategic directions in key areas for CPO and for OAR. The review will assess the research and other science activities CPO funds, how CPO decides what types of research and science to support, and how CPO engages with the public and peer communities to communicate about its work.

Scope of the Review

The evaluation scores of this external review will cover the past five years of CPO activity and management while the recommendations based on the findings will be forward-looking to help CPO improve the quality, relevance, and performance of the research and science it supports in the current and future environment it faces. OAR only recently began requiring science reviews for programs in addition to its laboratories and, as such, this is CPO's first formal science review.

The areas for this CPO review are: 1) Climate Science/Earth System Science and Modeling; 2) Climate and Societal Interactions; 3) Communication, Education and Engagement; 4) Integrated Information Systems and Risk Areas Initiative; and 5) Portfolio Management, Administration, and Organizational Excellence. Reviewers are asked to provide perspective and advice on how CPO and NOAA/OAR can most effectively position themselves over the next five years to tackle new, often rapidly-changing challenges and opportunities while leveraging existing research programs, partnerships, technologies, data science, and products.

Background

OAR's 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 accomplishes its mission through laboratories and programs positioned at the intersection of NOAA's science, service, and stewardship priorities and the broader academic, interagency, and non-governmental organization (NGO) research community. This interface enables OAR to build partnerships and to take an integrated research approach that can enhance society's ability to make effective science-based decisions. The primary components of OAR are:

[Laboratories](#) conduct an integrated program of research, development, and services to improve the understanding of the Earth system and describe and predict changes occurring in them. The laboratories and their field stations are located across the country and around the world.

[Program offices](#) select, fund, and manage high-priority, competitive research, and a portfolio of activities that includes assessments, decision support, outreach, education, and capacity building activities. Program offices support and foster collaboration within NOAA's labs and across the environmental science community to advance understanding of the Earth system and foster the application of this knowledge in risk management and resilience efforts.

External partnerships are essential for achieving NOAA's mission and support the delivery of world-class science. Partnerships include, but are not limited to, NOAA Cooperative Institutes, National Sea Grant College Program, other federal agencies, state and local governments, academia, professional societies and non-profit organizations, the international community, and the private sector.

In supporting climate science, OAR conducts foundational research to detect, understand, and predict changes in the atmosphere and oceans, as well as research and extension activities to inform a range of public and private decisions. Climate research at NOAA responds to numerous legislative mandates and policy drivers. The most important Congressional mandates for CPO include the National Climate Program Act of 1978 (which required the Department of Commerce to establish a National Climate Program), the Global Change Research Act of 1990 (which established the interagency U.S. Global Change Research Program and mandated the periodic National Climate Assessment), and the National Integrated Drought Information System Act of 2006 and reauthorizations in 2014 and 2019 (which established the drought early warning and information system now housed in CPO). CPO-relevant mandates are also found in the International Cooperation in Global Change Research Act of 1990, the Arctic Research and Policy Act of 1984, and The Weather Act of 2018.

Overview of CPO Activity Areas Relevant for this Review

CPO's mission is to advance scientific understanding, monitoring, and prediction of climate and its impacts to enable effective decisions. To accomplish this mission, CPO has (as of September 2021) 67 employees (including 31 Federal and 36 affiliates) within four divisions and the Director's Office carrying out a broad range of programs, functions, and activities within a FY21 budget of approximately \$80M¹. Together, CPO's work and funding support climate research, assessments, decision-support research, outreach, education, and capacity-building activities to advance our understanding of the Earth's climate system, including the role of and affect on human populations, and to foster the application and use of this knowledge to improve the resilience of our Nation and its partners. Although most of CPO's funding is awarded through competitive grants, (in FY20, 235 grants were funded totaling \$68.7M), contracts and other financial vehicles are also used to support CPO priorities. For the purposes of this review, CPO's activities are organized under five areas: 1) Climate Science/Earth System Science and Modeling; 2) Climate and Societal Interactions; 3) Communication, Education and Engagement; 4) Integrated Information Systems, Risk Area Initiative; and 5) Portfolio Management, Administration and Organizational Excellence.

Activity Area #1: Climate Science / Earth System Science and Modeling

CPO's Earth System Science and Modeling ([ESSM](#)) Division advances scientific understanding, modeling, prediction, and projection of the Earth's atmosphere, ocean, land, and cryosphere as an integrated system. The Division's Programs (Modeling, Analysis, Predictions and Projections [[MAPP](#)], Climate Observations and Monitoring [[COM](#)], Climate Variability and Predictability [[CVP](#)], Atmospheric Chemistry, Carbon Cycle, and Climate [[AC4](#)], and Earth Radiation Budget [[ERB](#)]) fund a unique and highly flexible research enterprise (internal and external to NOAA). ESSM's research portfolio includes process-level studies and field campaigns; Earth system observations and monitoring; predictability studies of climate phenomena; testing for transitions of research-to-operations and research-to-applications; improving model representations of key processes and prediction technologies; applying Earth system and climate models to societally-relevant challenges; projecting future climate variability and change; and developing methodologies, tools, datasets, and products for Earth system applications, including risk assessment and attribution. Division programs work within the USGCRP and USCLIVAR, and international WCRP to coordinate and execute joint Federal research activities.

¹ Reviewers will be provided historical and updated budgets, number of grants and pertinent information prior to or during the review presentations.

Activity Area #2: Climate and Societal Interactions

CPO's Climate and Societal Interactions ([CSI](#)) Division supports high-impact, societally relevant and interdisciplinary climate science focused on adaptation through reducing vulnerability and risk, and identifying opportunities with the use of climate knowledge and information. CSI works with partners to enhance community resilience in the face of climate variability and change, through research and engagement activities designed to connect innovative science directly to complex and dynamic preparedness, adaptation and resilience challenges. CSI and ESSM both engage heavily in regional and national assessments (such as the National Climate Assessment). Programs managed by CSI are a key component of NOAA's research enterprise, which has evolved over time to include the private sector, NGOs, interdisciplinary teams and the social sciences at large. The CSI Division's flagship program is the Regional Integrated Sciences and Assessments ([RISA](#)) Program. CSI has recently reorganized to include the new Adaptation Science Program ([AdSci](#)) [based on the programs formerly known as Sectoral Applications Research Program ([SARP](#)), the Coastal and Ocean Climate Applications ([COCA](#)) Program, and the International Research Applications Program ([IRAP](#))], in order to best address adaptation science to help achieve a more resilient future.

Activity Area #3: Communication, Education, and Engagement

CPO's Communication, Education, and Engagement ([CEE](#)) Division serves CPO and NOAA in three ways: 1) CEE coordinates and supports CPO-focused efforts to promote awareness, appreciation, and support for CPO's investments in climate science and services among executive leadership within DOC and NOAA, on Capitol Hill, and among peer communities; 2) CEE coordinates and supports cross-NOAA efforts to promote public climate literacy and to help people find and use NOAA's / partners' maps, data, and information services through managing and maintaining [Climate.gov](#). Climate.gov integrates climate science information from across NOAA and provides climate science news, beginner-friendly climate-related maps and data, and a curated collection of classroom ready resources with educator training and professional development workshops; and 3) CEE coordinates and supports interagency efforts to help U.S. communities and businesses better understand and manage their climate-related risks and opportunities, which includes building resilience to climate-related hazards through managing and maintaining the U.S. Climate Resilience Toolkit ([CRT](#)), which gives easy public access to federal science-based information, tools, data products, and expertise—all designed to help U.S. decision makers, resource managers, municipal planners, and business and policy leaders ("stakeholders") make their valued assets more resilient to extreme events.

Activity Area #4: Integrated Information Systems, Climate Risk Areas Initiative, Assessments

In addition to efforts in and from the perspectives of Activity Areas 1-3, CPO further pursues *coordinated and integrated*, interdisciplinary approaches and collaborations to respond to the increasing demand for actionable, accessible, and equitable climate information to address societal impacts of our changing climate. CPO co-produces knowledge to inform decisions through integrated information systems, which are integrated sets of components for collecting, storing, and processing data and for delivering and communicating information, knowledge, and products. Currently, CPO manages two integrated information systems.

The National Integrated Drought Information System ([NIDIS](#)) is established (authorized in 2006 with updates in 2014 and 2019) by Public Law. The mission of NIDIS is to help the nation move to an increasingly proactive approach to understand and manage drought risks and impacts, and to improve long-term drought resilience. NIDIS works with various federal, state, local and tribal agencies as well as a network of researchers, academics, resource managers, and policymakers, which has provided the basis for establishing regional Drought Early Warning Systems ([DEWS](#)). These systems encourage innovation by integrating new, locally relevant drought information and supporting the introduction of new technologies that detect and communicate drought risks and warnings. The National Integrated Heat Health Information ([NIHHIS](#)) is

emerging and getting Congressional attention. NIHHS seeks to improve Federal, state and local planning, preparedness and response for extreme heat and its health impacts by bringing together researchers, experts from federal agencies, and local decision makers across disciplines (health care providers, emergency managers, city planners, and energy utilities) to leverage the best-available science to curtail or eliminate health risks of extreme heat.

CPO's recent and self-motivated Climate Risk Areas Initiative ([CRAI](#)) aims to create more cohesion across CPO's ESSM, CSI, and CEE Divisions, while strengthening partnerships inside and outside of NOAA, to ultimately help advance climate science understanding and reduce impacts in key societal climate risk areas for which NOAA's mission is well aligned. These climate risk areas are currently: Coastal Inundation, Marine Ecosystems, Water Resources, and Extreme Heat.

<http://crai/>

Activity Area #5: Portfolio Management, Administration, and Organizational Excellence

CPO *aligns* its portfolio against the science and service needs of NOAA, external stakeholders and partners, and *balances* its support across the R&D continuum from fundamental to applied R&D and research transitions to operations and applications. CPO uses a mixture of competitively-based (~63% of CPO support in FY20) and directed research funding (~37% of CPO support in FY20) mechanisms, depending on the type of research and the results needed, to advance science and inform decisions to tackle the rapidly evolving risks, threats and opportunities of climate change, and promote resilience and prosperity Nationwide, especially in vulnerable and underserved communities.

CPO's Administrative Services Division (ASD) supports the implementation of budget execution and formulation, grants management, human resources, property management and other administrative functions of CPO. ASD manages day-to-day office operations including: personnel actions, responses to grants and budget inquiries, domestic and international travel support, space planning, facilities support, and acquisition management. ASD oversees the development, implementation, monitoring, and reporting of CPO's policies and procedures in support of CPO's mission.

CPO provides research and training opportunities to students and early career professionals at all levels from diverse backgrounds to ensure that its workforce reflects the diversity that is one of the Nation's greatest strengths. The office is working to promote employment opportunities to the increasingly diverse talent pool in its key mission areas and leveraging Direct Hire Authorities to recruit alumni from NOAA's excellent education programs. CPO has also committed to providing an inclusive office environment that embraces, encourages and leverages the diversity of its employees, funding, applicants, and partners to further its mission and vision.

Role for Each Reviewer and the Chair

Reviewers were chosen as subject matter experts from academic institutions, not-for-profit organizations and other federal agencies. Each reviewer will independently prepare their written evaluations of *at least one activity area*, but are invited to provide evaluations for every area for which they feel qualified, as well as the CPO as a whole. The Chair, a Federal employee, will create a report summarizing the individual evaluations. The Chair will not analyze individual reviewer's comments nor seek a consensus among the reviewers. The Chair's summary report will highlight ratings, findings, and recommendations for CPO as a whole and for each activity area.

Proposed Schedule and Time Commitment for Reviewers: Two teleconferences will be scheduled before the May 24-26, 2022 virtual review with the review team and the Acting OAR Deputy Assistant Administrator for Programs and Administration, David Holst, who will serve as the OAR Senior Executive liaison with the

review team and for the completion of the report. The goal of the first teleconference is to discuss the charge with you, the reviewer, as well as the scope of the review, the focus areas to address the review questions, and the initial information addressing the review questions that will be provided to reviewers. In the second phone call, we will discuss the draft review agenda and the reporting form for reviewers to use for their evaluations. During both calls, we ask that you as a reviewer identify any additional information needs. All relevant information requested by the review team will be provided on the review website at least two weeks before the review.

We request that within 45 days of the review, the review team provide the draft summary report to the OAR Deputy Assistant Administrator for Programs with a copy to the OAR Strategic Management Team (oar.hq.smt@noaa.gov). Once the report is received, OAR staff will review the report to identify any factual errors and will send corrections to the review team. Once corrections are accepted by reviewers, we ask that the final summary report be submitted to the OAR Assistant Administrator, OAR Deputy Assistant Administrator for Programs, and CPO Director, with a copy to the OAR Strategic Management Team.

Review Team Resources: OAR will provide the resources necessary for the review team to complete its work. Information to address each of the Program's activity areas to be reviewed will be prepared and posted on a public review website. Preliminary information will be compiled and posted before the first teleconference meeting and the second major update, which includes final review presentations and materials, will be provided prior to the second teleconference.

General Guidance

As further explained below, reviewers will be provided reference materials (documents and pre-recorded presentations), which address elements of the review.

- Reviewers should refer to the following documents and legislative mandates (pre-recorded synopsis briefings will be provided) to assess the Program's successes over the last five years:
 - [National Climate Program Act of 1978](#)
 - [Global Change Research Act of 1990](#)
 - [National Integrated Drought Information Services Act of 2006](#) and [National Integrated Drought Information System Reauthorization Act of 2018](#)
 - [Weather Research and Forecasting Innovation Act of 2017](#)
 - [DOC](#) and [NOAA Strategic Plans](#)
 - [OAR Strategy](#)
 - [CPO Strategic Plan 2015-2019](#)
 - [The National Global Change Research Plan 2012–2021](#)
- Reviewers should refer to the following documents to provide advice and input on the Program's operations over the next five years:
 - [OAR Strategy 2020-2026](#)
 - [2021 OAR Implementation Plan](#)
 - [NOAA Research and Development Research Areas](#)
 - The National Global Change Research Plan 2022-2031 (in development as of September 2021. Drafts will be provided as they become publicly available before the review)
- The CPO's general engagement of, and responsiveness to, stakeholders should be considered as follows:
 - Determine how well the Program is performing in terms of engaging researchers, industry, citizen scientists, NGOs, community stakeholders, and the public.
 - Review how well the Program has performed over the past five years in reaching both national and international partners to encourage collaborative activities.
 - Consider how the Program has designed, along with stakeholders, strategic research plans,

assessments, and products that respond to needs.

Evaluation Guidelines

Individual reviewers are asked to consider **quality, relevance, and performance** (as defined below) when providing an **overall rating for CPO as a whole and for each activity area they review**. Reviewers will provide one of the following overall ratings:

- *Highest Performance*: Program greatly exceeds the satisfactory level and is outstanding in almost all areas.
- *Exceeds Expectations*: Program goes well beyond the satisfactory level and is outstanding in many areas.
- *Satisfactory*: Program meets expectations and the criteria for a satisfactory rating.
- *Needs Improvement*: Program does not reach expectations and does not meet the criteria for a satisfactory rating.

In addition to the overall ratings, individual reviewers are also asked to assign a **rating for each of the subcategories (quality, relevance, and performance) for the activity areas they review** (see the Appendix). For Activity 5 (Portfolio Management, Administration and Organizational Excellence), reviewers are asked only to assess performance. Please note that ratings for each activity area are relative to the satisfactory definitions given below.

Reviewers are asked to identify specific problem areas that need to be addressed in order to meet/exceed satisfactory performance.

1. Quality:

Evaluate the quality of CPO-produced and -sponsored climate science research and other scientific outputs (including assessments, decision support research, outreach, education, engagement capacity-building research, etc.). Quality is a measure of the novelty, soundness, accuracy, and reproducibility of research and other scientific outputs. Assessing the quality of scientific work involves the time-honored tradition of peer review. Bibliometric data on peer-reviewed publications and citations, as well as awards and other professional recognitions, are critical to understanding the research quality of individuals and organizations, particularly for benchmarking against other organizations of similar size and scope.

Quality Rating Criteria: Satisfactory rating – CPO-produced and -sponsored research and other scientific outputs are generally sound and accurate. CPO-sponsored research results in a modest number of publications in respected journals relative to the amount of funding. CPO staff and sponsored scientists are often recognized for excellence through collaborations, accomplishments, and national and international leadership positions. While good work is done, CPO staff and scientists funded by the program are not consistently recognized for leadership in their fields. Other ratings - Reviewers should adjust their ratings up or down using the evaluation guideline overall ratings above.

Quality Evaluation Questions to Consider:

- Is CPO's research and other scientific outputs sound and accurate?
- Does the Program conduct (or oversee/fund) preeminent research? Are the scientific outputs meritorious or novel and considered significant contributions to the scientific and/or decision-making communities?
- How does the quality of CPO's research and other scientific outputs rank among programs in other U.S. Federal agencies? Other science agencies/institutions?
- Do CPO and CPO-sponsored researchers and scientists demonstrate scientific leadership and excellence in their respective fields (e.g., through collaborations, research accomplishments, publications, awards, societies)?

- Does CPO create/foster/use effective and diverse partnerships/networks/other relationships to ensure and enhance the quality of its scientific outputs?
- Are appropriate approaches / procedures / policies in place to ensure that high-quality work will be done and built upon in the future?

Indicators of Quality: Indicators can include, but are not limited to the following:

- Number of refereed publications and citations and other measures (often in the form of an index) that represent the value of CPO-sponsored refereed publications to the advancement of understanding (e.g., Hirsch Index).
- Evidence of scientifically accepted/valid methodologies used to produce outputs and certainty of results considered.
- Service of individuals in technical and scientific societies such as journal editorships, service on U.S. interagency groups, service of individuals on boards and committees of international research-coordination organizations. Elected positions on committees, boards, executive level offices in prestigious organizations (e.g., fellowship in the American Meteorological Society, etc.).
- Number of NOAA, DOC and external awards/recognition for CPO funded activities, such as publications, field campaigns, CPO funded initiatives, including through training programs such as Association of Climate Change Officers Climate Fundamentals Academies, and CPO employees
- Number and growth of web site visitors and “Quality of Relationship” scores.
- Evidence of collaboration, networking, relationship building and co-development/co-production of knowledge.
- Evidence of innovation in use and incorporation of climate information

2. **Relevance:**

Evaluate the degree to which CPO activities and the research and other scientific outputs that are produced are relevant to the missions of OAR and NOAA, and to needs of users and the broader society. Relevance is a measure of the impact and value of CPO’s work beyond CPO, including the scientific community and other communities, which is or can be realized through the application of scientific knowledge and outputs to climate resilience planning, climate services, policymaking, and other types of community and end-user decisions.

Relevance Rating Criteria: Satisfactory rating - The activities of CPO show linkages to the OAR and NOAA missions, its guiding strategic plans, OAR, NOAA, Administration and Congressional priorities, and is of value to the Nation. There are some efforts to work with stakeholder and customer needs (e.g., other NOAA Line Offices and the greater scientific, service and user communities), but these are not consistent throughout the activity areas. Other ratings - Reviewers should adjust their ratings up or down using the evaluation guideline overall ratings above.

Relevance Evaluation Questions to Consider:

- How well do CPO activities address issues and priorities identified in NOAA and OAR strategic plans as well as other NOAA Line Office, partner and stakeholder strategic, research and other related plans and/or policy and guiding documents?
- Are CPO activities responsive to relevant congressional mandates (see [background section] for information on most important mandates for CPO)?
- Does the CPO portfolio reflect an appropriate balance of foundational, applied and research transition activities to meet the needs of the climate science and service communities?
- Do CPO activities address existing and/or future scientific and/or socially relevant local, regional, tribal, national and international needs? For example, is the CPO portfolio helping to meet our

Nation's needs to improve decisions for effective adaptations, especially in vulnerable and underserved communities? Is the CPO portfolio increasing our Nation's resilience by reducing vulnerability?

- Are stakeholders, community leaders, priority audiences and customers (e.g. inclusive of NOAA Research community) engaged to ensure relevance of CPO activities, including the co-development of information and products?
- Does CPO have identified plans, processes, and systems in place so that information about CPO data, information, and other work products are provided to the relevant stakeholders?
- Is the CPO priority-setting process leading to the most relevant science for the Nation?
- Does CPO information result in improved climate risk understanding and reduction, including policies?
- Is CPO accelerating critical knowledge and taking appropriate actions by making effective and sustained investments in key societal challenge areas?
- Are there research and science topics and outputs relevant to OAR, NOAA, and national needs that CPO should be pursuing but is not?
- Is CPO's work producing beneficial outcomes?

Indicators of Relevance: Indicators can include, but are not limited to the following:

- Evidence of linkages to objectives in OAR, NOAA, NOAA Line Office and external (e.g., USGCRP) strategic plans; Administration, NOAA and OAR priorities (e.g., milestones completed in the Annual Operating Plan) and responsiveness to relevant legislation.
- A list of established partnerships and collaborations that connect CPO with a diverse range of stakeholders.
- Evidence of public outreach and participation in CPO events, academic conferences, CPO-hosted webinars and workshops, or local educational efforts.
- A list of products, information, and services supported by CPO and an indication of value to the climate science and risk management communities.
- Access and use of CPO information, products and resources, as demonstrated by usage of and downloads from CPO websites.

3. **Performance:**

Evaluate how well CPO carries out its research and science activities in meeting the missions of OAR and NOAA and the needs of users and the broader society. Performance is a measure of the effectiveness (the ability to achieve useful results) and efficiency (the ability to achieve quality, relevant and effective results in timely fashion and with minimal waste). In addition to assessing how well performance metrics and milestones are met, performance assessment also considers the adequacy of leadership/management, planning, processes, resource allocation, the workforce, infrastructure, etc. in designing and carrying out research and science activities to meet CPO's goals. Therefore, reviewers are asked to evaluate performance within the context of two sub-categories: A) Research/Science Leadership and Planning, and B) Effectiveness and Efficiency.

Performance Rating Criteria: Satisfactory rating - CPO generally has documented scientific objectives and strategies through strategic and implementation plans (e.g., Annual Operating Plan) and a process for evaluating and prioritizing activities. The Program usually demonstrates effectiveness and efficiency in completing its established objectives, milestones, performance measures and outputs, and in delivering most of its scientific outputs to appropriate communities and users. CPO often works to increase efficiency (e.g., through improving processes and leveraging partnerships, etc.), build workforce and research community diversity, and the program management generally functions as a team and works to improve operations. Other ratings - Reviewers should adjust their ratings up or down using the evaluation guideline

overall ratings above.

A. Leadership and Planning: Assess whether CPO has clearly defined objectives, scope, and methodologies for its key activities and projects.

Performance (Leadership and Planning) Evaluation Questions to consider:

- Does CPO have clearly defined and documented scientific goals, objectives, rationale, and methodologies for key activities/projects that address scientific and societal needs?
- Are human resources adequate to meet current and future needs? Is CPO managed to ensure diversity and inclusion in its workforce? Does it provide professional development opportunities for staff?
- Are there effective management and administrative approaches/processes/resources in place in CPO to support high-quality and timely work and work outputs?
- Does management work as a team to improve CPO operations?
- Is infrastructure (e.g., IT, staffing) sufficient to support high quality research and development?
- Does CPO have an effective evaluation process(es) to determine priorities, select new projects/activities; continue those with consistently high marks for merit, application, and priority fit; and end/transition projects/activities?
- Does CPO provide effective scientific leadership to and interaction with NOAA and the external community on issues within its purview?
- Does CPO have the leadership and flexibility to respond to unanticipated events or opportunities that require new research and science activities (i.e. time and resources)?

Indicators of Performance (Leadership and Planning): Indicators can include, but are not limited to the following:

- CPO Strategic and Implementation/Operating Plans.
- Documentation and evidence of following standard operating procedures and processes.
- Commitment to maintaining/improving a robust, diverse staff (CPO demographics) and greater research community, including support of early career scientists.
- Are there institutional, managerial, resource, or other barriers to the team working effectively?
- Active involvement in OAR/NOAA/external planning processes, including OAR/NOAA budgeting.
- Staff and customer inquiries are acknowledged and are kept apprised of status when to expect resolution.
- Consistent and seamless communications across CPO Divisions, other OAR labs/program offices and OAR HQ.

B. Effectiveness and Efficiency: Assess the effectiveness and efficiency of CPO's activities, given its goals, resources, and constraints and how effective the Program is in obtaining needed resources.

Performance (Effectiveness and Efficiency) Evaluation Questions to consider:

- Do CPO activities/projects meet planned performance measures and milestones?
- What processes does management employ to monitor the execution of activities/projects?
- Is the overall level of support provided by OAR/NOAA sufficient?
- Are CPO funds executed as planned?
- How well integrated is CPO-funded research and science activities with NOAA's, OAR's and other relevant LO's planning and execution activities? Is there enough coordination and integration among CPO's programs to ensure effectiveness and efficiency?
- Do CPO and CPO-funded researchers/scientists leverage relationships with collaborators and stakeholders to maximize results?

- Does CPO use an appropriate mix of competitive and directed funding mechanisms to effectively and efficiently achieve usable and actionable results ?

Indicators of Performance (Effectiveness and Efficiency): Indicators can include, but should not be limited to, the following:

- Reports and action items (e.g., reports to Congress) are delivered on time
- Percentage of AOP performance measure and milestones met
- Percentage of CPO budget executed according to plan, including amount and timeliness. Monthly obligation sheets track all funding actions by program and project codes;
- Databases track all grant and CI actions by grant numbers. Grants and other research/science activities processed and funded according to schedule.

Appendix Sample Compiled Reviewer Ratings Table Template

Reviewers provide an Overall Rating (using the Ratings below) for CPO as a whole, Quality, Relevance, Performance and Overall Ratings for Activity Areas 1, 2, 3, 4 and a Performance Ratings for Activity Area 5.

Ratings (Codes):

- Highest Performance (**HE**): Program greatly exceeds the satisfactory level and is outstanding in almost all areas.
- Exceeds Expectations (**EE**): Program goes well beyond the satisfactory level and is outstanding in many areas.
- Satisfactory (**S**): Program meets expectations and the criteria for a satisfactory rating.
- Needs Improvement (**NI**): Program does not reach expectations and does not meet the criteria for a satisfactory rating.

		Reviewers								
Area	Rating Categories	1	2	3	4	5	6	7	8	9
CPO	Overall									
1	Quality									
	Relevance									
	Performance									
	Overall									
2	Quality									
	Relevance									
	Performance									
	Overall									
3	Quality									
	Relevance									
	Performance									
	Overall									
4	Quality									
	Relevance									
	Performance									
	Overall									
5	Performance									