

**Terms of Reference (TOR) for NOAA Coral Reef Conservation Science
Program FY 2016 Science Evaluation**

March 24, 2016

Background and Purpose of the Review

The NOAA Coral Reef Conservation Program (CRCP) was established in 2000 to support NOAA's responsibilities under the [Coral Reef Conservation Act](#) (CRCA) and Presidential Executive Order 13089 on Coral Reef Protection. The mission of the CRCP is to protect, conserve, and restore coral reef resources by maintaining healthy ecosystem function. To ensure mission success, the CRCP undertakes periodic evaluations of the information provided by NOAA scientific projects and programs that support coral reef conservation and management¹. Strategic guidance for advancing the mission of the Program is found in [NOAA Coral Reef Conservation Program Goals & Objectives 2010-2015](#)² (CRCP Goals and Objectives).

The purpose of this science evaluation is to provide information on the quality, performance, and utility of NOAA coral ecosystem research and monitoring, and evaluate the extent to which the information provided by programs and projects advances national level CRCP Goals and Objectives. Results of this evaluation will be used in conjunction with ongoing and future assessments of other program components to inform future allocation of CRCP resources to address strategic coral reef management needs in a targeted, cost-effective, and efficient manner.

Objectives and Guiding Outcomes

This science evaluation will focus on: (1) how well the information generated by CRCP research and monitoring supports CRCP Goals and Objectives 2010-2015; (2) the relevance and quality of the information for coral reef conservation and protection; (3) the effectiveness and efficiency of information translation and dissemination so that it is useful and used for management and conservation; and (4) the need for any adjustments to science priorities to address gaps and/or emergent federal and jurisdictional management needs.

The evaluation will be guided by the following desired outcomes:

- Information produced by the CRCP is efficiently obtained and delivered, of high quality, meets the goals of both the [National Coral Reef Monitoring Plan](#)³ and the CRCP Goals and Objectives, and is leveraged by coral reef conservation managers to support effective management decisions and fulfills other relevant legislative and management requirements;
- CRCP ecosystem monitoring and research results are used to protect and conserve coral reef ecosystems;

¹ NOAA Coral Reef Conservation Program Roadmap for the Future: A Plan for Developing CRCP Direction Through 2015

² NOAA Coral Reef Conservation Program. 2009. NOAA Coral Reef Conservation Program Goals & Objectives 2010-2015. Silver Spring, MD: NOAA.

³ NOAA Coral Program (2014). National Coral Reef Monitoring Plan. Silver Spring, MD, NOAA Coral Reef Conservation Program.

- Coral reef managers are able to effectively access the best available scientific information; and
- NOAA's CRCP monitoring and research priorities and investments are guided by the requirements of the CRCP Goals and Objectives and any relevant legislation, and are informed by a continuing dialog among federal and non-federal scientists and managers.

Scope of Review

The CRCP supports three broad categories of research and monitoring activities at NOAA: (1) ecosystem research to understand ecological processes and their responses to current stressors, including climate, land-based sources of pollution, and fishing impacts; (2) monitoring to report on coral reef ecosystem status and trends; and (3) place-based studies to answer locally relevant management questions. This evaluation will focus on the data and information produced from these projects that characterize coral reef status and trends, address ecosystem-level questions, new and emerging environmental stressors, and/or provide a better understanding of ecosystem dynamics and processes and their responses to environmental and anthropogenic stressors, including climate change, land-based sources of pollution, and impacts of fishing. Place-based studies designed to answer local management questions are being evaluated in a parallel internal program assessment that will be conducted in parallel with this evaluation.

The evaluation will focus on information provided by ecosystem research and monitoring projects and programs that have been supported since implementation of the CRCP Goals and Objectives began in 2010, as well as continuing, long-term datasets dating back as far as 2001. Information from some shorter duration projects will also be included due to their contribution to the understanding of ecosystem-level processes and stressors. This includes projects, programs, and datasets in NOAA's coral reef ecosystem research and monitoring portfolio that are currently receiving funding from CRCP and those that were recently funded as potential components of the ongoing CRCP ecosystem research and monitoring portfolio.

The evaluation will not review science that is conducted external to NOAA through cooperative agreements with states and territories or through public and private partnerships, nor will it evaluate the administrative processes by which CRCP funds are administered or the methodology or protocols used by specific projects.

Information Provided to Panelists

The Coral Reef Conservation Program will supply some of the required information to the Panelists and will contract with a third party to obtain additional information from NOAA and non-NOAA coral reef conservation managers on the relevance, effectiveness, and quality of information produced by the Program.

Information supplied by CRCP:

- Background/Foundation Information;
- Summary of relevant statutes pertaining to coral reef conservation and management;
- Overview of the CRCP Mission;
- CRCP Goals and Objectives document;

- Results of internal assessment of progress made toward goals and objectives of emphasis from past 5 years;
- National Coral Reef Monitoring Program objectives;
- Results/recommendations from PIFSC and SEFSC Ecosystem Science Reviews;
- Results/recommendations from other relevant LO science reviews (OAR, NOS or NESDIS);
- The information and products that are generated by the programs or projects included in this evaluation;
- The geographical scope that the information intended to represent; and
- The intended audience for the information.

Information obtained from managers via an independent survey or similar instrument:

Relevant federal and jurisdictional managers will be asked for the following information as it pertains to the CRCP product(s) or information (grouped as data types and streams) that they utilize for understanding the actions needed for coral reef conservation, including those related to management under the Endangered Species Act protection:

- What information do you use from the CRCP?
- How do you use the information (i.e., what are the primary actions, management decisions, policy areas, or other activities you have undertaken that were supported with CRCP information)?
- To what degree does the information meet your needs for management decisions?
- How easy is it to access the NOAA office or NOAA representative to deal with your request?
- How accessible is the information that you use?
- How satisfied are you with the format of data received?
- How satisfied are you with the documentation of data received?
- Do you have suggestions as to how CRCP can improve its products or services?

Questions for Panelists to Frame Recommendations

The purpose of this evaluation is to provide external input and recommendations to the CRCP to guide development of future priorities, investment strategies, and plans for research and monitoring supported by internal NOAA funding. To accomplish this, the evaluation will be structured around the following questions related to the utility, relevance, effectiveness, and quality of information produced by the CRCP⁴.

⁴ Relevance: CRCP research and monitoring investments demonstrate clear connections to the National Ocean Policy Priority Objectives, the Department of Commerce Strategic Plan, the NOAA Strategic Plan, and are intricately linked to the CRCP goals and objectives in the roadmaps and implementation plans.

Effectiveness and Efficiency: CRCP research and monitoring investments are well planned, executed, and results are generated and disseminated in a timely manner to their intended audience and others. Investments are also highly leveraged, combining other funding sources and engaging multiple partners to maximize the return on investment

Quality: Results and products from CRCP research and monitoring investments are provided to managers,

The Panelists should consider the following overarching questions. The first set of questions relates to the utility of the information and the second set relates to the relevance, effectiveness, and quality of the information.

Utility: Information generated by the CRCP ecosystem research and monitoring should be useful and easily accessible for managers to inform and enhance conservation and management of coral reef ecosystems.

- 1) To what degree is the information generated by the CRCP responsive to stated management goals and objectives, including its contribution to an increased understanding the status and trends of coral reef ecosystems?
- 2) To what degree is the information easily accessible and provided in a timely manner and a useful format?
- 3) What can be done to make information and data more useful for managers and others who are involved in making management decisions?

Relevance, effectiveness, and quality: Information generated by the CRCP ecosystem research and monitoring should support the CRCP mission, as described by the CRCP Goals and Objectives, and the Program may periodically adjust monitoring and research priorities to better support its mission.

- a) Are there information gaps or requirements for coral reef conservation and management that are not being addressed by CRCP current ecosystem research and monitoring efforts?
- b) Could underused monitoring or research datasets be utilized to fill these gaps?
- c) What is the appropriate balance between current long-term monitoring and project-based empirical studies?
- d) What data streams are less relevant to coral reef conservation and management, and could be terminated, modified, or possibly transitioned without placing future coral reef conservation and management efforts at risk?
- e) What are the opportunities for greater collaboration with partners or for increasing synergies within CRCP monitoring and research that could result in a reduction in the overall cost of supporting coral conservation and management information needs?
- f) Are there more efficient and cost-effective approaches to obtaining needed information and data (e.g., current technologies, data management solutions)?

Format

This evaluation will not duplicate other CRCP assessments and evaluations. It will utilize the information collected and generated by ongoing and recent program reviews to avoid redundancy. For example, the CRCP recently conducted an internal assessment to determine how projects funded from 2010- 2015 align with the CRCP Goals and Objectives

professional institutions, and scientific experts based on a transparent peer-review process. The data and data derived products are recognized and referenced at the national and international levels, and are well cited with regard to their value in supporting coral reef conservation and management, as well as advancing the understanding of corals, coral reef ecology, and the stresses they are subject to.

(2010-2015). In addition, the NOAA Southeast Fisheries Science Center (SEFSC) and the Pacific Island Fisheries Science Center (PIFSC) will be reviewing their Ecosystem Science Programs in FY16, and these reviews will include coral reef research and monitoring.

This evaluation will culminate in a panel review meeting that will last for 3-4 days. The venue will allow access to open sessions and have wireless internet access, audio visual capability (e.g., teleconferencing, overhead projector, microphone amplification). The CRCP will endeavor to provide access to open sessions of the review by individuals such as remotely located staff who are unable to attend in person. Prior to the review, a series of teleconferences between CRCP leadership and the review panel will be held to discuss and clarify the charge to Panelists, the scope of the evaluation, focus questions provided in the scope, background documents provided, and products of the review.

The 3-4 day panel review will be structured with presentations that address topics related to the review overarching questions. These presentations will draw upon background material as described in the material to be provided by the CRCP and coral reef conservation managers.

Draft Schedule:

- Day 1
 - Presentations from CRCP leadership that outline the CRCP goals and the information needed to achieve the goals
 - Topic: TBD
 - Public comment (variable)
 - Panel deliberation (closed session)
- Day 2
 - Topic: TBD
 - Topic: TBD
 - Public comment (variable)
 - Preparation of the Panelists recommendations (closed session)
- Day 3
 - Preparation of Panelists recommendations (closed session, as needed)
 - Panel and CRCP leadership discuss the results of the review (Panel debrief, closed session)
- Day 4
 - Reserved for Panelist report out if necessary

Panelists will be provided, at a minimum, a one-hour closed working session at the end of each day. Each day has time allotted for informational presentations and will also include a specified interval for public comment. Stakeholders and the public are welcome to observe panel discussions and may comment during defined public comment intervals. At the end of the review, the Panel and CRCP will discuss the results of the review in closed sessions. Additional personnel (e.g., CRCP leadership, staff,

presenters, and program review coordinator) may be asked by the Panel to attend the afternoon closed sessions.

Briefing and Background materials

All background materials will be provided to the Panel electronically at least 2 weeks prior to the review. All presentations will be provided to the Panel at the beginning of the review. Briefing books may be provided at the request of the Panel Chair.

Products

Each Panelist will produce a succinct report detailing his or her findings, observations, and recommendations related to the questions provided within the Terms of Reference for the evaluation. The Chair may also submit an individual report, but this is not a requirement. Individual reports are required for NOAA to comply with the Federal Advisory Committee Act (FACA, 1972). Draft reports will be submitted to the CRCP Program Manager at the close of the review. Final reports will be submitted two weeks after the review concludes.

The Panel Chair will also summarize the program review proceedings (e.g., what happened, salient issues, and recurring themes) in a separate report that is also submitted to the CRCP Program Manager at the close of the review. The report will not represent a consensus of Panelist's observations and recommendations (FACA). The review Panel will, if needed, be provided one full day to write draft individual review reports and the Chair's summary report.

Review Panel Resources

NOAA OCM will pay for the travel cost and per diem for all Panelists external to NOAA OCM. OCM will assist review panel members in making travel arrangements. During the review, the CRCP will provide the review panel with wireless broadband services and space to convene closed working sessions. If requested in advance, CRCP will, within reason, provide other items (e.g. desktop computers, printers/copiers) to assist the review panel with report preparation.

Review Panel (Note: Individuals on Panel to be determined)

The scientific review panel will include 4-7 independent senior marine resource managers as well as PhD-level or equivalent scientists with reasonable familiarity with the topic. Panel makeup will be determined through conversations with CRCP leadership and program managers.

NOAA Guidance⁵ states that the Chair of the panel not be a NOAA employee or affiliate,

⁵ NOAA Administrative Order (NAO) 216-115: Strengthening NOAA's Research and Development Enterprise Procedural Handbook. Chapter 5, pp 24- 25.

should be a federal scientist, and should be employed by an agency external to NOAA. The panel will be chaired by a non-NOAA federal scientist and supported by a NOAA federal scientist who is not affiliated with the CRCP. Having a non-NOAA Chair will maintain the impartiality that is of highest priority, while including a NOAA panel member will provide a working knowledge of NOAA organizational structure, planning, and budgeting as well as context for the cross-NOAA matrix structure of the CRCP. The NOAA CRCP Science Program Evaluation Coordinator will attend and provide guidance to the Panel on complying with FACA. To ensure a majority of independent Panelists, individuals who are affiliated with CRCP will not be involved in the portfolio of projects and programs being reviewed. Use of recently retired and former NOAA CRCP employees will be limited. The CRCP Senior Management Council (in consultation with their Assistant Administrators) and the NOAA NOS Assistant Administrator or their designee shall approve the Panel selections.

Agency Response

The CRCP Program Director will send the Chair's summary report and the panel members' individual reports to the CRCP Senior Management Council as soon as the reports are received. The Program Director will also prepare a response to the Chair's summary report within 10 weeks of receipt of the Chair's review report package. The response should describe any actions that will be taken, to the extent practicable and in conformance with proposed Administration budgets and priorities, and may include clarifying information and responses to controversial points within individual reports even if not mentioned in the Chair's summary. All documents (Chair's summary report, Director's response, individual Panelists' reports) will be posted on the CRCP websites within 90 days of the close of the review. Authorship of the individual review reports will remain anonymous to the public.

Material to be Provided by the CRCP

An independent survey or other appropriate tool will be used to collect information from coral reef conservation managers on the degree to which the information generated by the CRCP is being used to inform and or enhance conservation and management of coral reef ecosystems. CRCP will ensure that the information is collected in a manner that is consistent with the Paperwork Reduction Act. The CRCP will also provide background materials and will arrange for presentations to be made by staff and program leads in order to facilitate the independent review. Materials will be provided in an interactive agenda format (i.e., materials will be linked to the agenda items) and will be marked as required primary references ("must read") and secondary references ("optional information").