

Terms of Reference (TOR) for NOAA Fisheries Science Program Reviews
2015 Protected Species Science

Purpose of the Review

NOAA Fisheries works to conserve, protect and recover species under the US Endangered Species Act (ESA) and the US Marine Mammal Protection Act. To ensure NOAA Fisheries achieves these mandates, it is appropriate to conduct periodic reviews of the scientific programs supporting protected species conservation and management.

Reviews of science programs at the National Marine Fisheries Service (NMFS) Science Centers (including associated laboratories) and, when appropriate, the Office of Science & Technology (ST) are conducted annually to:

- Evaluate the quality, relevance, and performance of science and research conducted in NMFS Science Centers and associated laboratories
- Strategically position the Science Centers and ST in planning future science and research.

Objective

The objective for these reviews is to evaluate the current scientific programs of the NOAA Fisheries Science Centers and, where determined appropriate, the Offices of Science & Technology and Office of Protected Resources that are directed to provide information relative to the conservation and management of marine mammals, endangered or threatened wildlife, and species of concern under NMFS jurisdiction. In addition, these reviews will assess the extent to which current science programs are focused on the highest information needs identified by NOAA Fisheries managers. Protected species-related science programs addressed in this review include all marine mammals, turtles, fish, invertebrates and plants listed under the ESA or protected under the MMPA and species of concern' and will address the range in species from those with substantial amounts of data to species where the data and information is limited.

Data collected on protected species includes:

- NOAA supported visual and acoustic surveys from ships and aircraft, including charter and unmanned platforms
- Land based field studies at both remote and local coastal sites
- Diet data, including scats, stomach contents, and biochemical data
- Genetic data to assess population structure and spatial distribution
- Tracking data from various forms of tags and telemetry
- Data from emerging technologies (e.g., autonomous vehicles, eDNA, etc.)
- Habitat use and habitat quantity and quality data, as appropriate, to assess restoration actions
- Bycatch related logbook and observer data
- Stranding and entanglement information
- Captive broodstock projects to aid recovery of highly depleted stocks

- Data related to the reduction of anthropogenic takes and mortality (e.g., bycatch and harassment mitigation measures)
- Socioeconomic data as appropriate

Assessments for protected species include determination of:

- The abundance, productivity, spatial structure and diversity of protected resource stocks
- Level of take that will not impede recovery
- Interactions among listed species as predator and prey and associated trophic dynamics
- Both direct and indirect anthropogenic mortality
- Habitat restoration strategies at various spatial scales
- Effects of climate change on recovery and restoration strategies

It is recognized that there are a variety of other protected species science programs within NOAA Fisheries (e.g., marine mammal health) but the focus of this exercise will be for reviewers to provide advice on the direction and quality of the data collection and assessment programs.

Information Provided to Reviewers

Staff of the Center, Office of Science & Technology, and Office of Protected Resources will provide information that both describes their relevant programs and answers the following questions:

1. To what extent do available data quality, statistical precision, and frequency of data collection impact overall analytical accuracy, precision and timeliness of scientific products and advice?
2. What are the major successes in protected species research and how should they be supported?
3. What are the major limitations/weaknesses on protected species research and how could they be resolved?
4. What recommendations do you have for improvement in protected species science to meet the information needs for protected species conservation in the region?
5. Identify the highest priority needs for improving protected resources science in the region.
6. To what extent are protected resources data readily accessible to various external researchers who may wish to replicate NOAA Fisheries' analyses?

Overarching Questions for Reviewers

The Reviewers will use this information (and any ensuing discussion) to provide advice on the direction of the research to address conservation and management needs in the region. In doing this, the Reviewers should consider these overarching questions:

1. Do current and planned protected species scientific activities fulfill mandates and requirements under the ESA and MMPA, and meet the needs of the regulatory partners?

2. Are there opportunities to be pursued in conducting protected species science, including shared and collaborative approaches with partners?
3. Are the protected species scientific objectives adequate, and is the best suite of techniques and approaches to meet those objectives?
4. Are the protected species studies being conducted properly (survey design, statistical rigor, standardization, integrity, peer review, transparency, confidentiality, etc.)?
5. How are advances in protected species science and methodological approaches being communicated and applied in NMFS?

Format

The meeting will last for 3-5 days depending on the complexity of individual Center's programs. The venue will allow public access to open sessions and have wireless internet access, audio visual capability (e.g. teleconferencing, overhead projector, microphone amplification). The Science Centers and ST will endeavor to provide access to open sessions of the review by the public who are unable to attend in person and remotely located staff. Prior to the review, a teleconference between Center leadership and the review panel will be held to discuss and clarify the charge to reviewers, the scope of the review, focus questions provided in the scope, background documents provided, and products of the review.

A typical 4-day review would be structured with presentations that address topics related to the review overarching questions but may be organized differently e.g. by mandate or by species. These presentations will draw upon background material as described in the material to be provided by the Center.

- Day 1
 - Presentations about Center by Center leadership
 - Theme 1: Protected Species science activities, mandates, management needs
 - Public comment (variable)
 - Panel deliberation (closed session, 1 hr)
- Day 2
 - Theme 2: Opportunities for conducting protected species science
 - Theme 3: Adequacy of protected species science objectives
 - Public Comment (variable)
 - Panel deliberation (closed session, 1 hr)
- Day 3
 - Theme 4: Protected species studies conduct
 - Theme 5: Advances in protected species science
 - Public comment (variable)
 - Preparation of the Panelists recommendations (closed session, 1 hr)
- Day 4
 - Preparation of Panelists recommendations (closed session, as needed)
 - Panel and Center Directorate discuss the results of the review (i.e., debrief, closed session)

Panelists will be provided, at minimum, a 1 hour closed working session at the end of each day. Each day, during which informational presentations are made, will also include a specific interval for public comment. Stakeholders are invited to participate as observers and to comment during the daily public comment sessions. At the close of the review, the Panel and Center Directorate will discuss the results of the review in closed session. Additional personnel (e.g. Chief Scientist, ST Director, center staff, and program review coordinator) are expected to attend the closed session and this will be communicated to the Panel prior to the start of the review.

Briefing and Background materials

All background materials will be provided to the Panel electronically through the Center (or Office of Science & Technology) website no later than 2 weeks prior to the review. All presentations will be provided to the Panel, through the website, 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 observations of and recommendations for the 5 themes provided within the TOR for the Program Review. The chair may 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 Center Director at the close of the review. Final versions will be submitted by the Panelists 1 week after the review concludes.

The Panel Chair will summarize the program review proceedings (e.g. what happened, salient issues, and recurring themes) in a report submitted to the Center Director at the close of the review. The report will not represent a consensus of Panelist's observations and recommendations (FACA).

Review Team Resources

NOAA Fisheries will pay for the travel cost and per diem for all Panelists external to NOAA Fisheries and a set fee for the services of non-governmental Panelists. Each Center will assist review panel members in making travel arrangements.

During the review the Center will provide the review panel with wireless broadband services and space to convene closed working sessions. If requested in advance, the Center will, within reason, provide other items (e.g. desktop computers, printers/copiers) to assist the review panel with report preparation.

The review Panel will, if needed, be provided 1 full day to write draft review reports at the conclusion of presentations by Center staff.

Review Panel

The scientific review panel will include 4-7 independent PhD-level or equivalent scientists with reasonable familiarity with the topic. Panels should include:

- 1 scientist from NOAA Fisheries
- 1 scientist from another NOAA line or staff office (optional).
- 3- 5 (the majority) scientists external to NOAA.
- 1 Science Center Director (SCD, optional)

NOAA Fisheries requires the Chair is not a NOAA Fisheries employee and encourages that the Chair of the Panel be a federal scientist external to NOAA. The NOAA Fisheries Program Review Coordinator will attend and provide guidance to the Panel on complying with FACA. To ensure a majority of independent reviewers, reviewers who are members of Science and Statistical Committees will be from a different region than the center being reviewed, and use of recently retired and former NOAA Fisheries employees will be limited. The NOAA Fisheries Assistant Administrator or their designee shall approve the Panel selections.

Agency Response

The Center Director will send the Chair's summary report and the panel members' individual reports to the NOAA Fisheries Chief Science Advisor as soon as the reports are received. The Center Director will also prepare a brief response, including agency actions, to Chair's summary report within 10 weeks of receipt of the Chair's review report package by the NOAA Fisheries Chief Science Advisor. The response can include clarifying information and respond to controversial points within individual reports even if not mentioned in the Chair's summary.

The NMFS Chief Science Advisor will send the package on to the NMFS AA for clearance.

At end of 90 days of the close of the review, all documents (Chair's summary report, Director's response, individual reviewers' reports) will be posted on the Center and Office of Science and Technology websites. Authorship of the individual review reports will remain anonymous to the public.

Material to be Provided by the Center

The Centers will provide presentations made by staff and background materials in order to facilitate the independent review. All materials (e.g. power point presentation, word files, pdfs) will be named such that the file names indicate the main topic the material covers. Materials will be provided in an interactive agenda format (i.e. materials will be linked to the talks listed on the agenda) and will be marked as required primary references (must read) and secondary references (optional for further detailed information).

Appendix 1. Program Reviewer Report Templates

Chair's Summary¹ of Program Review of Protected Species Science Science Center

Address

Dates

Review Panel Members

- Name, Affiliation, Chair
- Name, Affiliation, Reviewer (as many as needed)

Background and Overview of Meeting

General Observations and Recommendations

Panel Member's Major Recurrent Observations and Recommendations

- **Theme 1**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Theme 2**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Theme 3**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Theme 4**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Theme 5**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Other**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue

Conclusions

¹ Notes: This report is a summary by the chair NOT consensus. Summarized findings and recommendations should be reported as "Panel members said" NOT "Panel concluded".

Reviewer Report on Program Review of Protected Species Science

Science Center

Address

Dates

Background

General Observations and Recommendation

Key (Specific) Findings and Recommendations (as reviewer has comments on)

- **Theme 1**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Theme 2**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Theme 3**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Theme 4**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Theme 5**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue
- **Other**
 - Observations
 - Strengths
 - Challenges
 - Recommendations to address issue

Conclusions