



U.S. DEPARTMENT OF COMMERCE
Office of Inspector General



**National Oceanic and
Atmospheric Administration**

***Improvements Needed in Reporting of
Performance for NOAA Goals –
Build Sustainable Fisheries,
Recover Protected Species, and
Predict and Assess Decadal to
Centennial Climate Change***

Final Report No. FSD-15989-4-0001/September 2004

Office of Audits





UNITED STATES DEPARTMENT OF COMMERCE
The Inspector General
Washington, D.C. 20230

SEP 7 2004

MEMORANDUM FOR: Vice Admiral Conrad C. Lautenbacher, Jr., USN (Ret.)
Undersecretary of Commerce for Oceans and Atmosphere
National Oceanic and Atmospheric Administration

FROM:

Johnnie E. Frazier

SUBJECT:

*Improvements Needed in Reporting of Performance for
NOAA Goals — Build Sustainable
Fisheries, Recover Protected Species, and Predict and
Assess Decadal to Centennial Climate Change*
Final Report No. FSD-15989-4-0001

This is our final report on our audit of NOAA's reporting for the following three performance goals and their associated measures in the *Department of Commerce FY 2002 Performance & Accountability Report (PAR)*: (1) "build sustainable fisheries," (2) "recover protected species," and (3) "predict and assess decadal to centennial climate change."

We determined NOAA's reporting for all three goals should be improved: in some cases, the titles of measures did not convey a clear impression of what was being assessed; in others, explanations and verification details were incomplete, or supporting documentation was inadequate. Taken together, these weaknesses diminish the usefulness of the reported performance information.

To correct these deficiencies, NOAA needs to (1) revise certain performance measures to convey clearly what is being assessed; (2) strengthen internal controls to ensure that reported data is fully supported and adequately explained; and (3) provide appropriate detail in *PAR* discussions of the results.

In responding to the draft report, NOAA concurred with all seven of the recommendations. The National Marine Fisheries Service (NMFS) generally concurred with the recommendations and findings, with a few exceptions. NMFS noted its disagreement with certain statements and conclusions contained within the report. Also, NMFS identified certain actions taken or planned with respect to the "recover protected species" goal. In addition to concurring with recommendations, the Office of Oceanic and Atmospheric Research (OAR) identified certain actions taken or planned to address the recommendations within the report.

Where appropriate, we have modified the report to reflect NOAA's response. Within appropriate sections of this report we summarize NOAA's response to our draft report as

well as provide comments. NOAA's complete response is attached to the report as Appendix I.

In accordance with the Department Administrative Order 213-5, please provide us with your action plan addressing the recommendations for our review and concurrence within 60 days of this memorandum. Should you feel the need to discuss the content of this report and the action plan, please call me at (202) 482-4661, or Thomas McCaughey, Director, Financial Statements Audits Division, at (202) 482-6044.

We appreciate the cooperation and courtesies your staff extended to us during our review.

Attachment

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EXECUTIVE SUMMARY

The Department of Commerce relies on activities of the National Oceanic and Atmospheric Administration (NOAA) to support the strategic goal, "observe and manage the Earth's environment to promote sustainable growth."¹ In its annual *Performance and Accountability Report (PAR)*,² Commerce details the outcome of these activities against NOAA's seven goals and related performance measures. This audit report details our findings and recommendations regarding NOAA's procedures for collecting, verifying, and presenting performance data in the *FY 2002 PAR*³ for the goals and measures listed in table 1.

Table 1. NOAA Goals and Measures Covered

With respect to the performance goal on building sustainable fisheries, NOAA reports measures to assess the sequence of events associated with sustaining or rebuilding fisheries over time. For the performance goal on recovering protected species, NOAA reports measures reflecting efforts to prevent the extinction of species identified as threatened and endangered⁴ and to increase the number of commercial fisheries that do not have adverse impacts on marine mammals. As for the goal concerning the prediction and assessment of decadal to centennial change, NOAA reports on the development of the observing systems that will be used to provide policymakers with the scientific information and expert assessments necessary to make decisions on long-term global and regional environmental issues. The first two goals are supported by National Marine Fisheries Service (NMFS) activities; the third goal by Office of Oceanic and Atmospheric Research (OAR) and the National Environmental Satellite Data and Information Service (NESDIS).

Performance Goals	Associated Measures
Build Sustainable Fisheries	<ul style="list-style-type: none"> • Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007 • Reduce the number of major stocks with an "unknown" stock status to no more than 98 by FY 2007 • Increase the percentage of plans to rebuild overfished major stocks to sustainable levels
Recover Protected Species	<ul style="list-style-type: none"> • Reduce by 10 (from a FY 2000 baseline of 27) by FY 2007, the number of threatened species at risk • Increase the number of commercial fisheries that have insignificant marine mammal mortality • Reduce by 11 (from a FY 2000 baseline of 29) by FY 2007, the number of endangered species at risk of extinction
Predict and Assess Decadal to Centennial Climate Change	<ul style="list-style-type: none"> • Assess and model carbon sources and sinks throughout the United States • Assess and model carbon sources and sinks globally • Determine actual long-term changes in temperature and precipitation throughout the United States

We found the performance measures for all three goals, as well as associated explanations and verification details, in need of improvement. Unclear measures, weak

¹ The Department's other two strategic goals are (1) provide the information framework to enable the economy to operate efficiently and equitably, and (2) provide infrastructure for innovation to enhance American competitiveness.

² Submitted to document compliance with the Government Performance and Results Act of 1993.

³ The Department and NOAA reported FY 2002 results only for "predict and assess decadal to centennial change" in the *FY 2002 PAR*. Therefore, for the remaining two goals, we assessed the FY 2001 data contained in the report as this was the latest performance data available.

⁴ Threatened species are species likely to become endangered in the foreseeable future while endangered species are those species determined to be in imminent danger of extinction.

procedures in place to ensure data reliability, insufficient documentation, and inadequate explanations diminish the usefulness of reported performance results. Our specific findings are as follows:

- **Performance data for NMFS-supported goals—“Build Sustainable Fisheries” and “Recover Protected Species”—was compromised by unclear measures, weak procedures to ensure reliable data, insufficient documentation, and inadequate explanations**

As currently worded, clarification is needed for certain measures under both goals. In reporting performance results, NMFS should make it clear through the title of its measure and explanations of results whether reported progress represents (1) stocks being fully rebuilt for the goal on building sustainable fisheries or species being removed from the categorization of threatened or endangered for the performance goal on recovering protected species or (2) when a stock or species biomass growth is growing, declining at a reduced rate, or stabilized.

For the goal on recovering protected species, measures incorrectly imply that NMFS is assessing its successes at improving individual species to the point where they can move out of the threatened or endangered categories. However, this is not the case.

NMFS officials explained the intent of the measures is to report any success at stabilizing or improving the status of a species even if such improvements do not result in the removal of a species from the overfished, threatened, or endangered categories.

With respect to the measure on reducing the number of overfished major stocks supporting the goal of building sustainable fisheries, NMFS informed us that success is not reported until a stock is fully rebuilt. However, depending upon the definition contained in a rebuilding plan, a stock could be determined as not “overfished” when it reaches one half of its rebuilding mass target. It would be useful for NMFS to clarify as to what it considers as a success with regard to this measure.

Build Sustainable Fisheries

- Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007

Recover Protected Species

- Reduce by 10 (from a FY 2000 baseline of 27) by FY 2007, the number of threatened species at risk of extinction
- Reduce by 11 (from a FY 2000 baseline of 29) by FY 2007, the number of endangered species at risk of extinction

Also, NMFS’ use of baselines for these same three measures precludes accurate assessments of its success because the number of species categorized as overfished, threatened, or endangered is always changing. For example, the FY 2000 baseline for overfished stocks included nine species that were subsequently moved to worse categories and does not account for three new species that were added after FY 2000. For the threatened and endangered measures, the FY 2000 baseline is incomplete in that it does not include the Northern California steel head, which was added to the list in June 2000, or account for subdivisions within species such as the right whale which was split into three species. In all three cases, any progress the agency might make with new or subdivided species through 2007 will not be reflected.

In addition, for all measures under both goals, we found that NOAA did not maintain appropriate documentation. In some cases documentation did not support reported data, and in others it was simply not available.

Finally, for certain measures under both goals, we found that discussions in the *PAR* (1) did not include details essential to understanding the data and NMFS' real impact on reported outcomes; (2) described verification procedures that ascertained the scientific quality of the data rather than the accuracy of the numbers; and (3) did not explain that the data was cumulative.

- **Performance reporting for OAR/NESDIS goal—"Predict and Assess Decadal to Centennial Climate Change"—needs stronger oversight to ensure data reliability and enhance understanding**

Improvements are also needed in the reporting of the performance measures supporting this long-term climate change goal. The measure for assessing and modeling carbon sources and sinks throughout the United States includes global data collected from ocean-going vessels while the measure dealing with long term changes in temperature and precipitation does not convey that data is collected from the contiguous United States only (i.e., excludes Alaska and Hawaii). Targets for the two carbon sources measures define success by the number of data collection sites "established," but the term "established" has not been strictly defined, so counted sites could be at different stages of development.

Like NMFS, neither OAR nor NOAA maintained adequate supporting documentation for two of the three measures. In the case of the measure relating to determining actual long-term changes in temperature and precipitation throughout the United States, support was not maintained but the results could quickly be recalculated. In the case of the carbon sources measures, a recalculation of the data showed that NOAA had in fact underestimated its progress for both in the *PAR*.

Explanations provided for the carbon sources measures contained errors as well: as it was not based on the most current information, the discussion of the U.S. measure incorrectly identified the specific ocean tracks and profiling sites to be used by NOAA for data collection. The global measure disclosed the establishment of one site, but failed to report that two others were operational.

And finally, NOAA lacks adequate procedures at the program level for corroborating the accuracy of information presented in the *PAR*, a deficiency which permitted the reporting of incorrect data. And, as was the case with the NMFS-supported goal, verification approaches described for the OAR/NESDIS measures in the *PAR* are not appropriate, in that they are methods for ascertaining the scientific quality of the data rather than ensuring the accuracy of reported numbers.

Management attention is needed to ensure that the titles of performance measures are consistent with what is reported, supporting documentation is maintained, and that

sufficient detail is contained within the *PAR* to explain the results and the reliability that can be placed on the data.

In responding to the draft report, NOAA concurred with all seven of the recommendations. The National Marine Fisheries Service (NMFS) generally concurred with recommendations and the findings, but noted its disagreement with certain statements and conclusions contained within the report. Specifically, NMFS clarified that for the purpose of reporting success under the measure relating to reducing the number of overfished stocks, that success is not reported until a stock is fully rebuilt. For the measures relating to reducing the number of threatened and endangered species, NMFS disagreed with our conclusions that FY 2001 performance reporting was not supported. Also, NMFS identified certain actions taken or to be taken with respect to the "recover protected species" goal. The Office of Oceanic and Atmospheric Research (OAR) concurred with our recommendations and identified certain actions taken or planned to address the recommendations within the report.

We are encouraged by actions NOAA claims it has taken or planned to address the recommendations within the report and await the action plan to address the recommendations. Where appropriate, we have modified the report to reflect NOAA's response. Within the appropriate sections of the report, we summarize NOAA's response to our draft report as well as provide comments. NOAA's complete response is attached to the report as Appendix I.

INTRODUCTION

The National Oceanic and Atmospheric Administration's mission is to describe and predict changes in the Earth's environment, and conserve and manage the nation's coastal and marine resources.

The Department of Commerce relies on NOAA activities to support the strategic goal, "observe and manage the Earth's environment to promote sustainable growth."⁵ Commerce reports on the outcome of these activities in its annual *Performance and Accountability Report (PAR)*, which documents compliance with the Government Performance and Results Act of 1993 (GPRA). GPRA seeks to improve the effectiveness, efficiency, and accountability of federal programs by requiring agencies to set performance goals and to annually assess their success at achieving them. NOAA maintains seven performance goals:

- Build sustainable fisheries.
- Sustain healthy coasts.
- Recover protected species.
- Advance short-term warnings and forecasts.
- Implement seasonal to interannual climate forecasts.
- Predict and assess decadal to centennial change.
- Promote safe navigation.

NOAA uses measures within each goal to assess the programs and activities of its five line offices: the National Ocean Service; National Marine Fisheries Service (NMFS); Office of Oceanic and Atmospheric Research (OAR); National Weather Service; and National Environmental Satellite, Data, and Information Service (NESDIS). From this assessment, NOAA generates the performance results reported in the *PAR*. Congress, the Office of Management and Budget (OMB), and other decision makers can use this information to evaluate the federal government's investment in these programs; agency officials use it to improve program outcomes.

However, performance results enable such assessment and improvement only to the extent that the data reported is reliable, and GPRA therefore requires agencies to verify and validate performance data to ensure its reliability. The General Accounting Office (GAO) has defined verification as the "assessment of data completeness, accuracy, and consistency, and the related quality control practices." It defines validation as the "assessment of whether the data is appropriate for the performance measure."⁶

⁵ The Department's other two strategic goals are (1) provide the information framework to enable the economy to operate efficiently and equitably, and (2) provide infrastructure for innovation to enhance American competitiveness.

⁶ U.S. General Accounting Office, July 30, 1999. *Performance Plans: Selected Approaches for Verification and Validation of Agency Performance Information*, GAO/GGD-99-139. Washington D.C.: U.S. General Accounting Office.

This audit report, the third on NOAA performance measures,⁷ details our findings and recommendations regarding NOAA procedures for collecting, verifying, and presenting performance data for three goals—build sustainable fisheries, recover protected species, and predict and assess decadal to centennial change.

Table 1. NOAA Goals and Measures Covered

As presented in table 1, the Department reported three performance measures for each of these goals in the Department's FY 2002 PAR.⁸ With respect to the performance goal on building sustainable fisheries, NOAA reports measures to assess the sequence of events associated with sustaining or rebuilding fisheries over time. For the performance goal on recovering protected species, NOAA reports measures reflecting efforts to prevent the extinction of species identified as threatened and endangered⁹ and to increase the number of commercial fisheries

Performance Goals	Associated Measures
Build Sustainable Fisheries	<ul style="list-style-type: none"> • Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007 • Reduce the number of major stocks with an "unknown" stock status to no more than 98 by FY 2007 • Increase the percentage of plans to rebuild overfished major stocks to sustainable levels
Recover Protected Species	<ul style="list-style-type: none"> • Reduce by 10 (from a FY 2000 baseline of 27) by FY 2007, the number of threatened species at risk • Increase the number of commercial fisheries that have insignificant marine mammal mortality • Reduce by 11 (from a FY 2000 baseline of 29) by FY 2007, the number of endangered species at risk of extinction
Predict and Assess Decadal to Centennial Climate Change	<ul style="list-style-type: none"> • Assess and model carbon sources and sinks throughout the United States • Assess and model carbon sources and sinks globally • Determine actual long-term changes in temperature and precipitation throughout the United States

that do not have adverse impacts. As for the goal concerning the prediction and assessment of decadal to centennial change, NOAA reports on the development of the observing systems that will be used to provide policymakers with the scientific information and expert assessments necessary to make decisions on long-term global and regional environmental issues. The first two goals are supported by NMFS activities; the third goal by OAR and NESDIS.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our purpose was to (1) assess the collection and reporting of FY 2002 performance information in documentation submitted to meet GPRA requirements, and (2) determine whether NOAA's internal controls are sufficient to ensure that data is accurate, consistent, and reliable. The Department and NOAA reported FY 2002 results only for "predict and assess decadal to centennial change" in the FY 2002 PAR because data for

⁷ *National Oceanic and Atmospheric Administration: Improvements Needed in the Reporting of Performance Measures Related to Promoting Safe Navigation and Sustaining Healthy Coasts*, Audit Report No. FSD-14998-3-0001, February 2003, and *National Oceanic and Atmospheric Administration: Improvements Needed in the Reporting of Performance Measures Related to Goals for Advancing Short-Term Warnings and Implementing Seasonal to Interannual Climate Forecasts*, Audit Report No. FSD-15643-3-0001, September 2003

⁸ The Department and NOAA reported FY 2002 results only for "predict and assess decadal to centennial change" in the FY 2002 PAR. Therefore, for the remaining two goals, we assessed the FY 2001 data contained in the report as this was the latest performance data available.

⁹ Threatened species are species likely to become endangered in the foreseeable future while endangered species are those species determined to be in imminent danger of extinction.

the remaining two was unavailable. Therefore, for those goals, we assessed the FY 2001 data contained in the report. (FY 2002 results for these two goals were subsequently provided in the FY 2003 PAR.)

To pursue our audit objectives, we reviewed pertinent federal guidance and legislation,¹⁰ interviewed NOAA officials responsible for generating, maintaining, and reporting performance data; identified and tested internal controls; subjected data to validation and verification procedures including the recalculation of reported results; and evaluated the clarity and usefulness of explanations provided for each measure in the FY 2002 PAR. We further tailored our audit procedures to each measure under review, as presented in table 2. We did not test the reliability of computer-generated data for the performance measures, as such data was not essential to our audit objectives.

Table 2. OIG Audit Procedures by Measure

Goals	Measures/Audit Procedures
Build Sustainable Fisheries	<ul style="list-style-type: none"> • Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007. We reviewed supporting documentation for 12 stocks to ensure that they were appropriately categorized as overfished. • Reduce the number of major stocks with an "unknown" stock status to no more than 98 by FY 2007. We compared the base number of unknown and undefined stocks to the list of stocks declared overfished to ensure that no duplication existed. We also determined the number of major stocks that are undefined. • Increase the percentage of plans to rebuild overfished major stocks to sustainable levels. We recalculated the reported results for FY 2001. Also, we obtained supporting documentation to support the status of rebuilding plans for overfished major stocks.
Recover Protected Species	<ul style="list-style-type: none"> • Reduce by 10 (from a FY 2000 baseline of 27) by FY 2007, the number of threatened species at risk of extinction. We reviewed supporting biomass documentation for the species claimed as improved for the reporting period. • Increase the number of commercial fisheries that have insignificant marine mammal mortality. We reviewed supporting documentation for the claimed reductions in marine mortality. • Reduce by 11 (from a FY 2000 baseline of 29) by FY 2007, the number of endangered species at risk of extinction. We reviewed supporting biomass documentation for the species claimed as improved for the period reported.
Predict and Assess Decadal to Centennial Change	<ul style="list-style-type: none"> • Assess and model carbon sources and sinks throughout the United States. We reviewed documentation supporting the identified tracks, and researched other means for collecting this data. • Assess and model carbon sources and sinks globally. We reviewed documentation supporting the identified sites and researched alternative means for collecting this data. • Determine actual long-term changes in temperature and precipitation throughout the United States. We reviewed the methodology for calculating contiguous U.S. temperature and precipitation trends, and obtained a high-level understanding of the computer program used in this calculation.

We conducted our fieldwork from June 2003 to February 2004 at NOAA headquarters in Silver Spring, Maryland. We performed this audit in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States, and under authority of the Inspector General Act of 1978, as amended, and Department Organization Order 10-13, dated May 22, 1980, as amended.

¹⁰ GPRA; the Chief Financial Officers Act; OMB Circular A-123, *Management Accountability and Control*; OMB Circular A-11 Part 6, *Preparation and Submission of Strategic Plans, Annual Performance Plans, and Annual Program Performance Reports*; and GAO Standards for Internal Control in the Federal Government.

FINDINGS AND RECOMMENDATIONS

I. Performance data for NMFS-supported goals—"Build Sustainable Fisheries" and "Recover Protected Species"—was compromised by unclear measures, weak procedures to ensure reliable data, insufficient documentation, and inadequate explanations

The Department and NOAA listed three performance measures for the performance goal "Build Sustainable Fisheries" and three for the performance goal "Recover Protected Species" in the *FY 2002 PAR*. However, because FY 2002 results were not reported in the *FY 2002 PAR* for any of the measures, we assessed FY 2001 results (FY 2002 data was unavailable as the issue went to press, but was subsequently presented in the *FY 2003 PAR*).

We found that the collection and reporting of NOAA's performance information for both of the goals can be improved. Specifically, we found titles of certain performance measures unclear, management procedures to ensure the reporting of reliable data to be weak, as well as associated explanations and verification details to be incomplete and at times inaccurate. The deficiencies diminish the usefulness of the data.

A. Performance measures are unclear

GOAL: BUILD SUSTAINABLE FISHERIES

a. Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007

Major stocks identified as overfished are ones in which the biomass of a given fishery's stock is below a prescribed threshold. With respect to this performance measure, NMFS stated that stocks are eliminated as an "overfished major stock" only when a stock is fully rebuilt in accord with the Magnuson-Stevens Act requirements of an approved rebuilding plan. However, NOAA stated that depending upon the definition contained in a rebuilding plan, a stock could be determined as not overfished when it reaches one half of its rebuilding biomass target. As such, NMFS has set a high standard for reporting results and it does not articulate all of its progress towards rebuilding stocks. Officials agreed that the measure, as currently worded, does not adequately convey the full range of NMFS' efforts in this area. Suggestions for addressing this issue could be to include additional disclosures specifying the fact that results for the measure reflect only fully rebuilt major stocks and that progress is being made with respect to other stocks.

GOAL: RECOVER PROTECTED SPECIES

a. Reduce by 10 (from a FY 2000 baseline of 27) by FY 2007, the number of threatened species at risk of extinction

c. Reduce by 11 (from a FY 2000 baseline of 29) by FY 2007, the number of endangered species at risk of extinction

Threatened species are species likely to become endangered in the foreseeable future while endangered species are

those species determined to be in imminent danger of extinction. NMFS officials

explained that they are reporting their success for these measures at stabilizing or improving the status of a species, actions that could ultimately lead to their removal from the threatened and endangered lists in future years. But, the titles of the measures suggest otherwise.

The two measures improperly suggest that reported results represent the delisting of threatened and endangered species—that is, an improvement in their status to a nonrisk category. In fact, it often takes 15 to 30 years to improve a species to the point of delisting as either threatened or endangered. NMFS officials informed us that in the past 30 years, only one species—the California grey whale—has been delisted, and none are likely to be delisted in the near future. None of the species reported as successes for FY 2001 (two threatened species and three endangered species) are at the point of being delisted.

For threatened species, the reported results indicated that the number of threatened species at risk dropped by two in FY 2001. However, the two species claimed—the Johnson's Sea grass and Snake River Fall Chinook—have not been delisted. While there has been some improvement (not enough for delisting) in recent years with the Snake River Fall Chinook, the threatened status of the Johnson's Sea grass has not changed in 28 years.

For the endangered species measure, reported results indicated that three were ready for delisting—the Snake River sockeye, Kemp's Ridley sea turtle, and Sacramento winter river run salmon. However, the Snake River sockeye population decreased in FY 2001, and that of Kemp's Ridley sea turtles remained constant. Finally, while adult salmon returning for the Sacramento winter river run salmon has generally been increasing since 1996, the species has not improved to the point of delisting.

Again, for these measures, NMFS officials explained that they are reporting their success at stabilizing or improving the status of a species, actions that could ultimately lead to delisting in future years. But this is not what the wording of the measures indicates they are tracking. Officials agreed that the measures, as currently worded, do not agree with what they are actually reporting.

B. Assessing performance against a baseline does not clearly convey NMFS' progress

While using baselines to demonstrate success against a specific universe of items can be instructive, NMFS' use of this convention for measures under both goals precludes effective assessments of its success because the defined universe is not stable but is always changing. NMFS officials noted that baselines enable them to track progress with a particular species. However, the FY 2000 baseline does not account for subsequently declared overfished stocks, threatened species, or endangered species. Consequently results for these subsequently identified species would not be represented in reported results for these measures. Nor do the current measures account for subdivisions within species.

GOAL: BUILD SUSTAINABLE FISHERIES

a. Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007

The FY 2000 baseline NMFS established for this measure contained nine stocks that were already in worse categories (i.e., threatened or endangered), one stock in which fishing was halted completely, as well as one stock that did not fall under NMFS' jurisdiction. The nine stocks were reclassified under the Endangered Species Act during FY 2001. Also, six new stocks were added to the overfished category: the redfish, white hake, black sea bass, greater amberjack, darkblotched rockfish, and widow rockfish. Because NMFS measured its achievements against stocks identified in FY 2000, any successes against these six species would not be reflected in the reported performance data for this measure. One possibility to address this issue would be to modify the performance measure as a percentage of the baseline. Such a modification, which would evaluate the net progress over time, would create a measure that would provide meaningful information while still accommodating the addition or removal of stocks.

GOAL: RECOVER PROTECTED SPECIES

a. Reduce by 10 (from a FY 2000 baseline of 27) by FY 2007, the number of threatened species at risk of extinction

c. Reduce by 11 (from a FY 2000 baseline of 29) by FY 2007, the number of endangered species at risk of extinction

Again because of a shifting baseline, NMFS reported results for these measures do not reflect any progress made with species declared threatened or endangered in years after the establishment of a baseline. For

example, the shift in categorization from a species considered threatened to endangered would not be reflected in results. Even the FY 2000 baseline was incomplete: NMFS declared the Northern California steel head threatened in June 2000, but this was not added to the 2000 baseline. In addition, the right whale, which was in the baseline, was subsequently subdivided into three species, but the baseline and performance data only considered it as a single species. NMFS agreed with this finding and noted in its response that the measures could be modified to measure a percentage of the baseline.

C. NMFS lacks a rigorous process for ensuring data reliability

NMFS lacks sufficient procedures over data collection, documentation, verification, and reporting to ensure the reliability of reported performance, and reporting entities seem to set their own standards and procedures for determining what data to submit and when. This lack of consistency means that data within measures is not strictly comparable in terms of how, why, and when it was collected, or what basis justifies its inclusion.

GOAL: BUILD SUSTAINABLE FISHERIES

Clear criteria for defining accomplishments are lacking. The Magnuson Stevens Act requires eight fishery management councils to develop rebuilding plans for stocks that

c. Increase the percentage of plans to rebuild overfished major stocks to sustainable levels

have been declared overfished. The councils have 18 months to work with NOAA, state and local

officials, and other interested parties to develop the plans. The plans are then submitted to NOAA for approval and implementation. NOAA would count the plans in support of the measure once it has approved them and they are in place. Sometimes, however, a plan is struck down by court order or becomes outdated in response to changing conditions and is therefore in need of revision. NOAA does not remove such plans from its achieved results under the measure because, NMFS explained, protective measures such as fishing limitations contained in the earlier plan remain in place. Further limiting the usefulness of reported data is the fact that the councils use different criteria for deciding when to report a plan as completed. One council, for example, reported plans that had been revoked by court order. Another counted as implemented a plan for rebuilding the canary rockfish before the official plan had been approved, although measures to preclude overfishing had been put in place. Other councils only counted plans that had been approved and implemented.

For performance data to be useful, the criteria for its inclusion must be clear and consistently applied. To ensure such clarity and consistency, NOAA should strictly define the stage at which a rebuilding plan can be reported by the councils and should only count those plans that meet this criteria.

Adequate supporting documentation not maintained.

NMFS could not initially provide documentation for any of the three measures supporting this goal. As such, NMFS had to search for supporting documentation. It subsequently produced adequate documentation for measures a and b, but not for c. As a result, we were able to recalculate reported results for measures a and b, but not measure c.

- | |
|--|
| <p>a. Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007</p> <p>b. Reduce the number of major stocks with an "unknown" stock status to no more than 98 by FY 2007</p> <p>c. Increase the percentage of plans to rebuild overfished major stocks to sustainable.</p> |
|--|

Data collection not confined to set time frame. For all three measures, NMFS had not set a date beyond which it would no longer accept data for inclusion in the FY 2001 *PAR*. NMFS officials explained that data received months after September 30, 2002 and prior to issuance of the *PAR* was counted as received, without regard to fiscal year-end or other deadline—which means results for the measures do not cover the exact same duration and therefore are not strictly comparable. In the absence of adequate supporting documentation, we could not determine how results might have differed had a cutoff date been enforced.

Additionally, NMFS did not disclose its open-ended collection policy in the *PAR* or the potential ramifications on the data's reliability. Subsequent to our review, NMFS established a uniform cutoff date of August 1 for FY 2001 data to be included in the FY 2003 *PAR*. We commend NMFS for its action and suggest that this date be disclosed in the *PAR* so that readers know the data does not span the entire fiscal year.

GOAL: RECOVER PROTECTED SPECIES

Reported results not supported.

b. Increase the number of commercial fisheries that have insignificant marine mammal mortality.

On January 22, 2001, implementing regulations for the large whale take reduction plan went into effect. According to NOAA, the regulations required conservation measures in commercial fisheries

based on several years of species monitoring, gear research, and public dialogue to determine that this measure would reduce interactions in the mid-Atlantic lobster trap-pot fishery and drift gillnet fishery. We were told that once measures are implemented, it takes several years of monitoring to ensure they are effective. NMFS claimed that for FY 2001 it was successful in helping 2 fisheries keep marine mammal mortality at insignificant levels. However, NMFS officials explained that such prompt results would be unlikely given that the related regulations had been in effect for only part of the fiscal year. And we learned that during FY 2002 and FY 2003, marine mammals (i.e., right whales) continued to suffer significant mortality levels after getting caught in fishing gear.

Supporting documentation not maintained. For all three measures, NMFS could neither initially provide support for FY 2001 results nor identify who calculated them. NMFS staff had to go back and review records to determine which particular species were included in the reported results. Acknowledging the problem, NMFS officials agreed that parties responsible for generating and reporting future performance results should sign their reports and maintain appropriate documentation.

D. Additional disclosures would enhance usefulness of results

NOAA had the opportunity to clarify confusion over its performance data in the "Explanation of Measure" sections of the PAR, but did not do so. For each of the measures we reviewed, pertinent details that would enhance understanding were not included. In addition, the verification methods described did not provide the appropriate quality check of the data.

GOAL: BUILD SUSTAINABLE FISHERIES

NMFS' role in reported outcomes not sufficiently explained. For all three measures supporting this goal it is difficult, if not impossible, to determine the extent to which NMFS' actions actually had an impact, or whether reported improvements resulted from natural phenomena. Without qualifying NMFS' role in achieving the results, the data's usefulness as a measure of the agency's performance is limited.

Described verification procedures are inadequate. For all three measures, the verification procedures described—stock assessments and peer reviews—are methods for ascertaining the scientific quality of the data rather than the accuracy of the numbers. NMFS needs to detail its methodology for ensuring the data accurately reflects its progress toward meeting performance goals.

Key details omitted. For FY 2001, NMFS reported having reduced the number of overfished stocks to 46—one short of the goal—and noted that its original baseline of 56 stocks had been reduced by 10 that no longer met overfishing criteria. Not mentioned is the important fact that 9 of the 10 were reclassified because their status had deteriorated. NMFS continued to report an FY 2002 target of 55. No explanation of this is offered in the *PAR*.

a. Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007.

Differences in data not explained. The measure tracks NMFS' progress in assessing the status of major stocks against defined levels of healthy biomass. For FY 2001, NMFS claimed it reduced the number of stocks whose status was unknown to 120. However, biomass had not been defined for 15 of these stocks—which means they were not candidates for assessment yet and thus were not comparable with the remaining 105 stocks in the group. Because greater effort is needed to determine the health of stocks for those without a defined biomass, NMFS should differentiate the two in its reporting or in its explanation of the measure.

b. Reduce the number of major stocks with an "unknown" stock status to no more than 98 by FY 2007.

Cumulative nature of results not disclosed. According to NMFS officials, the results for these two measures reflect progress against a base year (FY 2000). But nowhere in the explanations is it noted that the data is cumulative, leaving the reader to assume the results represent NMFS' success for FY 2001 only.

a. Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007.
c. Increase the percentage of plans to rebuild overfished major stocks to sustainable levels.

Our audit tests confirmed that the data was cumulative, and in some cases went beyond the base year: for the measure on increasing the percentage of plans to rebuild overfished major stocks to sustainable levels, for example, we found that rebuilding plans for the red grouper and black sea bass were implemented in 1990 and 1996, respectively, yet NMFS took credit for them in FY 2001.

GOAL: RECOVER PROTECTED SPECIES

As with the goal on building sustainable fisheries, we found that for all three measures under the protected species goal, NMFS' role in reported outcomes is not sufficiently explained and described verification procedures inappropriately focus on scientific data quality rather than data accuracy.

Key details omitted. We noted that key details were omitted from the discussion of the commercial fisheries measure: the explanation states that "By definition, insignificant levels mean that total mortality or rate of death is no more than 10 percent of the maximum number

b. Increase the number of commercial fisheries that have insignificant marine mammal mortality.

of marine mammals that could die from human-caused mortality.” The meaning of this statement is unclear, and no information is provided to qualify the potential population killed by “human-caused” events. NMFS officials told us that this is a “working definition,” which is likely to change significantly in the future. However, this does not preclude the need for clarification, and the fact that the definition is subject to change should also be disclosed.

Cumulative nature of results not disclosed. NMFS claimed 2 successes with threatened

a. Reduce by 10 (from a FY 2000 baseline of 27) by FY 2007, the number of threatened species at risk of extinction.

species for FY 2001: the Johnson’s sea grass and Snake River fall chinook salmon. Yet in documentation for the Johnson’s sea grass, it noted the following: “the results of our sampling and that of Gelber et al. (2000) indicate that there has been”

little or no change in the southern distribution limit of *H. johnsonii* (i.e., Johnson’s Sea grass) over the past 28 years.” In the case of Snake River fall chinook, numbers improved in calendar years 1998 through 2000. Within the *FY 2002 PAR*, NMFS did not disclose that some of the reported results occurred in FY 1999 and FY 2000, providing the impression that all results were initially achieved in FY 2001. Although the last quarter of calendar year 2000 equates to the first quarter of fiscal year 2001, we believe that crediting the chinook increase in FYs 1999 and 2000 to NMFS FY 2001 activities gives the incorrect impression that the entire success was achieved in FY 2001. In its response, NMFS noted that it would prefer to use long-term trends on species distribution and abundance, rather than a single annual amount to determine whether the risk of extinction has been reduced or increased. For its reported results to be meaningful, NMFS should disclose (1) that performance results are cumulative if it uses long-term trends in determining the status of a species and (2) when reported improvements in the species were initially identified.

c. Reduce by 11 (from a FY 2000 baseline of 29) by FY 2007, the number of endangered species at risk of extinction.

For the endangered species measure, NMFS reported success with the Sacramento winter river run chinook salmon, but the species began coming back in FY 1997. Actual results were not listed for this measure in the *FY 2002 PAR* for FY 1999 or

FY 2000 giving the impression that the success regarding this species initially occurred in FY 2001. As such, this does not provide readers of the performance information with a clear picture that the determination of results reflects a long-term trend and that some of the reported success may have predated the established baseline period.

NMFS also reported improvement in the status of the endangered Snake River sockeye salmon as a FY 2001 success under this measure. However, supporting documentation showed that adults returning to the river had increased from 7 in 1999 to 257 in 2000, but declined to 26 in 2001. Once again, it would be useful for NMFS to identify that the measure is cumulative and when improvements in the species were first identified.

E. Recommendations

To improve performance reporting under both goals, the Under Secretary for Oceans and Atmosphere should ensure that the following actions are taken:

- (1) Performance measures clearly convey the outcomes that are being assessed.
- (2) Procedures are strengthened to ensure that reported data is accurate, fully supported, and collected over a clearly defined, consistent time frame. Such procedures would include defined activities and responsibilities for oversight, maintenance of supporting documentation, and data verification.
- (3) Accurate and complete disclosures are provided in the explanations and validation/verification discussions for all measures, and all restated values are presented in future reports.

F. NOAA Response

In response to the draft report, NMFS concurred with all the recommendations for both the "build sustainable fisheries" and "recover protected species" goals. It also provided detail for corrective actions that have been taken or planned with respect to the goal on recovering protected species. For this goal, NMFS also identified the new measures it will begin using in FY 2006, and provided information on the process to be implemented for determining progress with respect to certain species.

While NMFS acknowledged that shifting baselines, insufficient documentation and verification of data, and inadequate explanations of the reported results caused problems with the measures in place for FY 2001 and FY 2002, they did take issue with certain statements and conclusions within the report. With respect to the goal "build sustainable fisheries," NMFS noted that in reporting the results of this measure, success is only reported when a stock is fully rebuilt even though depending on the definition contained in a particular rebuilding plan, a stock could be determined as not "overfished" when it reaches one half of its rebuilding biomass target. Also, NMFS stated that a 2000 baseline of overfished stocks for this goal was established.

With respect to the "recover protected species" goal, NMFS respectfully disagreed with our conclusion that the FY 2001 performance reporting on Johnson's sea grass and Snake River fall chinook salmon for the measure "Reduce by 10 (from a FY 2000 baseline of 27) by FY 2007, the number of threatened species at risk of extinction," is not supported. For the measure on increasing the number of commercial fisheries that have insignificant marine mammal mortality, NMFS also stated that the OIG had incorrectly referred to "laws" that took effect on January 22, 2001 when in fact what we described were implementing regulations for the Marine Mammal Protection Act. NMFS also disagreed with our conclusions that for the measure "Reduce by 11 (from a FY 2000 baseline of 29) by FY 2007, the number of endangered species at risk of extinction," Sacramento winter

run Chinook salmon and the Snake River sockeye salmon should not have been claimed as a success for FY 2001. With respect to baselines, NMFS noted that a measure could be modified to measure a percentage of baseline, as species were added to, or removed from the list of threatened or endangered species.

G. OIG Comments

We are encouraged by the NMFS actions taken or planned with respect to these performance goals. Consequently, we are looking forward to receipt of the NMFS action plan to address the three recommendations.

For the measure "Reduce the number of overfished major stocks of fish from 56 to 45 by FY 2007" supporting the goal "build sustainable fisheries" we revised the report to note that stocks are eliminated as an "overfished major stock" only when a stock is completely rebuilt. We also noted that depending upon the definition contained in the rebuilding plan, a stock could be determined as not overfished when it reaches one half of its rebuilding biomass target. As such, we noted that NMFS should make sure that readers of performance measures are clear as to when a stock's progress is considered a success. We still believe the use of a baseline as used for this number is problematic and suggest that if NMFS continues to use a baseline that it modify the measure to a percentage of baseline. Such a measure would compensate for the addition or removal of stocks from the category of overfished major stocks.

With respect to the NMFS disagreement with our conclusions that results for the two measures "Reduce by 10 (from a FY 2000 baseline of 27) by FY 2007, the number of threatened species at risk of extinction" and "Reduce by 11 (from a FY 2000 baseline of 29) by FY 2007, the number of endangered species at risk of extinction" were not supported, we modified the report to clarify our position that crediting success for FY 2001 in the *FY 2002 PAR* gave the improper impression that the results were entirely achieved during FY 2001. Consequently, we modified the text to clarify our position that NMFS should have disclosed the cumulative nature of results and when results were initially determined. We moved this discussion from the section of the finding entitled "NMFS lacks a rigorous process for ensuring data reliability" to the section "Additional disclosures would enhance usefulness of results." Also, we added the NMFS suggestion that a measure could be modified to measure a percentage of baseline, as species were added to, or removed from the list of threatened or endangered species. For the measure on increasing the number of commercial fisheries that have insignificant marine mammal mortality, we modified our discussion to acknowledge that the implementing regulations for the Atlantic large whale take reduction plan came into effect on January 22, 2001 and that it required conservation measures based on several years of monitoring, gear research, and public dialogue.

II. Performance reporting for OAR/NESDIS goal—"Predict and Assess Decadal to Centennial Climate Change"—needs stronger oversight to ensure data reliability and enhance understanding

The Department and NOAA listed three performance measures to support this goal in the *FY 2002 Performance and Accountability Report* and reported meeting two of them¹¹— assess and model carbon sources and sinks globally, and determine the actual long-term changes in temperature and precipitation over the United States. As a proxy, NOAA reports the establishment of observing systems to achieve this goal.

We found the clarity, accuracy, and usefulness of reported data in assessing OAR and NESDIS' performance under this goal was lessened by weaknesses in the presentation of the three measures.

A. Titles of measures and targets do not precisely characterize reported data

- | |
|---|
| <p>a. Assess and model carbon sources and sinks throughout the United States</p> <p>b. Assess and model carbon sources and sinks globally</p> |
|---|

The U.S. carbon sources measure applies to observing systems deployed within the United States. The observing systems provide data used in assessing and modeling carbon storage in the ocean and atmosphere. For FY 2002, NOAA reported that it had identified five new pilot atmospheric sites and

four new oceanic carbon tracks when reporting on the measure "assess and model carbon sources and sinks throughout the United States. The five new pilot atmospheric profiling sites that NOAA reports having established are within U.S. borders. However, the reported results also include ocean tracks that involve sailing vessels that travel globally, and these would thus be more appropriately included in the second performance measure—"assess and model carbon sources and sinks globally." NOAA officials concurred.

<p>c. Determine actual long-term changes in temperature and precipitation throughout the United States</p>
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The temperature/precipitation measure covers only the 48 contiguous states. Although this fact is noted in the explanation, the title should also specify "throughout the contiguous United States." NOAA officials agreed that the title should be revised.

Criteria for success need to be defined. For the carbon sources measures, NOAA gauges its success by the number of carbon data collection sites "established," but has not strictly defined what "established" means, so sites counted in support of the measure could be at different stages of development. NOAA officials told us that an established site could be one whose location has been tentatively identified, has been agreed upon, or is operational. Hence, data reported for these measures may not be comparable, and the reader may think "established" means in place and operational.

¹¹ All three measures were new in FY 2002.

The U.S. carbon sources measure stipulated its target as “establishing” pilot sites and reported having “tentatively identified” new sites that in some cases were specific cities and in other cases were states. The latter suggests that the location had been narrowed down but not specifically chosen. NOAA officials concurred that they need to report data consistently and to the same level of detail.

B. Documentation to support results should be maintained, *PAR* explanations need to be clear and accurate, and verification procedures are needed

Our review of *PAR* results, narratives, procedures, and supporting documentation revealed a general absence of rigorous oversight of the entire process, and a consequent reporting of data that is unclear and at times inaccurate.

Adequate supporting documentation not maintained. NOAA officials could not initially provide supporting documentation for performance data reported under any of the three measures. Also, what they eventually provided did not always match claimed results for both the U.S. and global carbon sources measures. The documents we reviewed indicated that FY 2002 results were likely understated in the *PAR* for both of the measures.

a. Assess and model carbon sources and sinks throughout the United States

As a proxy for the assessment and modeling of carbon sources and sinks, NOAA uses the establishment of data collection sites. For the U.S. carbon sources measure, we were initially provided with supporting documentation identifying three specific sites (cities) and several preliminary sites (states). At our request, NOAA reassessed the year-end status of sites and provided documentation supporting that, as of the close of FY 2002, it was further along than reported. NOAA reported in the *FY 2002 PAR* that as of the end of FY 2001, five carbon profiling sites and four new oceanic carbon tracks had been identified. However, two aircraft, using NOAA equipment, were already providing data, work had started on collecting data from another aircraft, and four aircraft and one tall tower site had been tentatively identified. We also found that the Atlantic Oceanographic and Meteorological Laboratory (AOML) began collecting data from a ship operating in the Caribbean in March 2002.

b. Assess and model carbon sources and sinks globally

For the global measure, NOAA reported the establishment of three new sites, but could not readily produce documentation substantiating these results. At our request, NOAA reassessed the fiscal year-end status of its observation systems, and again found that it was further along than it had reported: it had begun receiving data from one land-based site (Pallas, Finland), two ships, and deployed two CO₂ sensors located on ocean moorings by the end of FY 2002. Also, NOAA was developing a second land-based site (Ochsenkopf, Germany), and was in discussions for 2 other sites. The NOAA official responsible for reporting on the oceanic and carbon tracks and global background sites recognized the deficiencies in supporting data and the need for improvement in this area.

c. Determine actual long-term changes in temperature and precipitation throughout the United States

NOAA did not maintain documentation supporting results for the temperature/precipitation measure, but was able to produce corroborating data from its system that tracks temperature and precipitation trends.

Although the measure was recalculated within a few minutes, doing so required the availability of personnel with the knowledge and expertise to perform the recalculation. With the potential for retirements and reassignments, there is no guarantee that the personnel necessary to perform the calculation will always be available. NOAA should maintain current, readily available records supporting the results it submits to the Department for publication in the *PAR*.

Explanations not consistent with actual events. Our audit found that the explanations accompanying certain measures contained inaccurate information.

a. Assess and model carbon sources and sinks throughout the United States

While NOAA properly notes that the U.S. carbon measure was not met, its discussion of the results incorrectly identifies two ocean tracks for ships equipped with CO₂ sensors. We found that the reported Newark,

Delaware, to Bermuda track actually was to begin in Newark, New Jersey (the ships ultimately sailed from Norfolk, Virginia); the California to the Far East track actually runs from California to Australia/New Zealand. It also discussed AOML and Pacific Marine Environmental Laboratory (PMEL) data collection but did not include this data in the results, and reported a planned atmospheric profiling site in North Carolina (South Carolina was ultimately chosen instead).

b. Assess and model carbon sources and sinks globally

The explanation for this measure only mentions that a sampling site has been established in Ochsenkopf, Germany, and that discussions for other sites are under way. However, supporting documentation we reviewed indicated that NOAA

had begun receiving data from sites in Pallas, Finland, and an ocean track as of the end of FY 2002.

Documented verification procedures not in place and inappropriately described. For all measures, NOAA does not have procedures or an established chain of command at the program level for verifying the accuracy of collected data and related explanations. For example, NOAA informed us that officials responsible for the ocean track data under the U.S. carbon sources measure were not given the opportunity to review the accompanying explanation, which had been written three years earlier and was thus in need of update. Incorrect route information was consequently reported.

For all three measures, the verification procedures described—quality assurance, calibrations, and simulation—are methods for ascertaining the scientific quality of the data rather than the accuracy of reported numbers. NOAA needs to detail its methodology for ensuring the data correctly reflects its progress toward meeting performance goals.

C. Recommendations

To improve performance reporting under this goal, the Under Secretary for Oceans and Atmosphere should ensure that the following actions are taken:

- (1) Performance measures and targets are revised to clearly convey the activities and outcomes that are being assessed.
- (2) Incorrect or unclear results are restated in future performance reports.
- (3) Management procedures to ensure that reported data is accurate, fully supported, and adequately explained and verified are strengthened. Such procedures would include defined activities and responsibilities for oversight; maintenance of supporting documentation, and data verification.
- (4) Explanations and validation/verification discussions provide all appropriate information needed to fully understand the meaning of reported results.

D. NOAA Response

In response to the draft report, NOAA concurred with all four recommendations. NOAA discussed the following actions that had been taken or were planned to address the recommendations: (1) revision of performance measures for the FY 2006 Annual Performance Plan, (2) the development of more rigorous reporting standards and improvement in explanations of supporting text, (3) the establishment of a performance measure data base for the climate program, and (4) strengthening of future explanations and validation/verification discussions.

E. OIG Comments

We are encouraged by the NOAA actions taken and planned with respect to this measure and look forward to receiving their action plan.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
CHIEF ADMINISTRATIVE OFFICER

JUL 22 2004

MEMORANDUM FOR: William F. Bedwell, Jr.
Acting Deputy Assistant
Inspector General for Auditing

FROM: William F. Broglie *for [signature]*

SUBJECT: *Improvements Needed in the Reporting of Performance for
NOAA Goals — Build Sustainable Fisheries, Recover
Protected Species, and Predict and Assess Decadal to
Centennial Climate Change*
Draft Audit Report No. FSD-15989-4-0001/June 2004

Attached is the National Oceanic and Atmospheric Administration's (NOAA) response to the Office of Inspector General's draft audit report on NOAA's reporting of three performance goals and their associated measures in the *Department of Commerce FY 2002 Performance and Accountability Report*: (1) "build sustainable fisheries," (2) "recover protected species," and (3) "predict and assess decadal to centennial climate change." This response was prepared in accordance with Department Administrative Order 213-3.

We concur with all seven recommendations and appreciate the opportunity to respond to your draft audit report.

Attachment



**NOAA Comments on the Draft Office of Inspector General Report Entitled
"Improvements Needed in the Reporting of Performance for NOAA Goals –Build
Sustainable Fisheries, Recover Protected Species, and Predict and Assess
Decadal to Centennial Climate Change"
(Draft Audit Report No. FSD-15989-4-0001/June 2004)**

General Comments

The National Marine Fisheries Service (NMFS) generally concurs with the findings and recommendations of the report, with certain exceptions noted below. Shifting baselines, insufficient documentation and verification of data, and inadequate explanations of the reported results indeed caused problems with the measures in place for fiscal years 2000 and 2001.

The problem of shifting baselines is inherent in the complexity of natural resource management, as circumstances within the environment and ecosystems are constantly changing. Not only are the resources themselves in constant flux, but so is our knowledge of them. There is no perfect solution to this problem. Data collection, verification, and explanation are also difficult tasks given the complexity of the systems being described.

The performance measures evaluated in this report represent NOAA's first attempt at outcome-based performance management and reporting. Outcome-based performance measurement is extremely difficult, especially given the complexity of the natural environment and the ecosystems with which NMFS mission is concerned. It is therefore not surprising that this first attempt was met with unforeseen difficulties and inadequacies. Valuable lessons have been learned from this experience.

Specific Comments

Page 4, paragraph 1, line 3: The report states that "because FY 2002 results were not provided for any of the measures, we assessed FY 2001 results." This is inaccurate with respect to the "Recover Protected Species" goal. Performance was summarized and documented for both FY 2001 and FY 2002. Both years' performance was provided at the Office of Inspector General's (OIG) request.

Page 4, paragraph 3: The report states that the "Build Sustainable Fisheries" measure "...implies the elimination of major stocks from consideration as being overfished. As such, this measure gives an inaccurate description of what is being measured." In fact, only when a stock is fully rebuilt in accord with the Magnuson-Stevens Act requirements of an approved rebuilding plan is it eliminated as an "overfished major stock" for reporting success under this measure. Depending upon the definition contained in a rebuilding plan, a stock could be determined as not "overfished" when it reaches one half of its rebuilding biomass target. However, for the purpose of reporting success under this measure, we determined not to report success until a stock is fully rebuilt. Therefore, the current measure more than accurately reflects progress toward the goal of reducing the number of stocks that are overfished.

Page 5, paragraph 6, and page 6, paragraph 2: "NMFS' use of this convention for measures ... precludes effective assessments of its success because the defined universe is not stable but is always changing."

The "Recover Protected Species" goal established a 2000 or 2001 baseline for the five-year period believing that reviewers would be able to clearly measure progress. For example, the target of reducing by 11 the number of endangered species at risk of extinction could be measured against a baseline of 29 species in FY 2000. Such a measure could be modified to measure a percentage of the baseline, as species were added to, or removed from the list of threatened and endangered species.

Similarly, a 2000 baseline of overfished stocks for the "Build Sustainable Fisheries" goal was established to avoid the problem highlighted by the OIG of having a baseline that is always changing. There was a one-time change in the baseline in 2002 for overfished stocks to take into account 11 stocks no longer subject to the rebuilding requirements of Magnuson-Stevens Act. The agency has consistently tracked the status of these stocks since that time. In addition, the status of all stocks is tracked in the Annual NMFS Status of Stocks Report to the Congress.

Page 6, paragraph 3: We agree with this overall finding. Performance measured by the Recover Protected Species Program in FY 2000 and FY 2001 was from disparate sources within NMFS. There was no formal mechanism for gathering or submitting data in support of Government Performance Results Act (GPRA) -mandated performance measurement or for regional managers and science center directors to sign off or certify all of the results. While the standards of data gathering and reporting by NMFS regional offices and science centers are rigorous and often peer-reviewed, they were seldom done with the purpose of specific measurement of the GPRA performance measures.

For the "Build Sustainable Fisheries" goal, the data are contained within the Annual NMFS Status of Stocks Report to the Congress. The timing issues noted by the OIG are a result of this report being issued at different points in the year.

Page 8, paragraph 1: NMFS respectfully disagrees with the finding that the FY 2001 performance reporting on Johnson's sea grass and Snake River chinook salmon is not supported by data. In the case of Johnson's sea grass the success was that the species had not declined. Our measure of success in reducing the probability of extinction is to have stable or increasing numbers.

In reference to the Snake River fall chinook, we respectfully disagree with the conclusion that it is inappropriate to use data from 1998 through 2000 to assess performance in FY 2001. We would prefer to use long-term trends in species distribution and abundance, rather than a single annual count to determine whether its risk of extinction has been being reduced or increased.

Page 8, paragraph 2: The OIG has incorrectly referred to "laws" that took effect on January 22, 2001, and concluded they would take years to ensure that they were effective. The law requiring the reduction of marine mammal mortality took effect in 1994 with a re-authorization of the

Marine Mammal Protection Act. The January 22, 2001 "law" is actually an implementing regulation for the Atlantic large whale take reduction plan. The regulation required conservation measures in commercial fisheries based on several years of species monitoring, gear research and public dialogue to determine that these measures would reduce interactions in the mid-Atlantic lobster trap-pot fishery and the drift gillnet fishery. These analyses included Endangered Species Act (ESA) section 7 consultations on the effects of the fisheries on endangered whales and the legal requirement that we remove the likelihood of jeopardizing the continued existence of these species.

Page 8, paragraphs 3 and 4: With respect to your conclusions regarding the Sacramento winter run chinook salmon and the Snake River sockeye salmon, we respectfully disagree with your finding that these should not have been claimed as a success for FY 2001. We refer you to the response above. It is true that the criteria measured the current status versus that at the time of listing to make a determination of whether its risk of extinction was increasing, decreasing, or remaining the same. These chinook and sockeye salmon species were listed in 1994 and 1991 respectively, and our assessment takes into account the longer term data base, rather than relying on the one-year snapshot of status.

Pages 8-9, paragraph 5: We agree in general with this conclusion and agree that parties responsible for generating and reporting future performance results should sign the reports and maintain appropriate documentation.

Page 10, paragraph 4: We agree with this conclusion with respect to defining insignificant levels of marine mammal mortality interacting with commercial fisheries.

NOAA Response to OIG Recommendations

I. Performance data for NMFS-supported goals—"Build Sustainable Fisheries" and "Recover Protected Species"—was compromised by unclear measures, weak procedures to ensure reliable data, insufficient documentation, and inadequate explanations

To improve performance reporting under both goals, the Under Secretary for Oceans and Atmosphere should ensure that the following actions are taken:

Recommendation 1: Performance measures clearly convey the outcomes that are being assessed.

NOAA Response: We concur for both the Recover Protected Species and Build Sustainable Fisheries Programs. With respect to Recover Protected Species (now Protected Species Management) performance measures beginning in FY 2006, they have been revised as follows:

- Increase the number of threatened, endangered and depleted protected species¹ as of

¹Protected species is defined as all marine mammal stocks and those non-marine mammal species listed as threatened or endangered under the ESA.

January 1, 2004 (out of 68) with stable or increasing population levels from 20 in 2005 to 36 in 2009.

- Increase the number of protected species¹ with known impacts by fisheries as of January 1, 2004 (out of 136) for which mortalities are reduced to acceptable levels² from 117 in 2005 to 126 in 2009.
- Increase the number of endangered, threatened, depleted or strategic protected species¹ (out of 78) for which recovery, conservation, and/or take reduction plans are in place from 30 in 2005 to 70 in 2009.
- Increase the number of stocks of protected species³ (out of 230) with adequate population assessments from 60 in 2005 to 200 in 2009.

Recommendation 2: Procedures are strengthened to ensure that reported data is accurate, fully supported, and collected over a clearly defined, consistent time frame. Such procedures would include defined activities and responsibilities for oversight, maintenance of supporting documentation, and data verification.

NOAA Response: We concur for both programs. For the "Recover Protected Species" goal, each NMFS regional office and science center is to provide input on the achievement of our GPRA performance goals for FY 2003 and that reporting be completed in time for reporting to the Department of Commerce by December 31, 2004.

Specifically we requested that each region nominate specific species or fisheries that can be used to justify performance towards the measures for FY 2003. A template was provided (see page 5) for each species/fishery that is nominated. The basic information needed for each species/fishery includes a short description of why it meets the measure, and any documentation that can be used to support the determination. We made it clear that the measures are cumulative in nature and those species/fisheries reported for FY 2002 should not be nominated for FY 2003 unless it is determined that they cannot meet the intent of the performance measure.

We provided guidance for determining whether a species has a lowered risk of extinction; to evaluate the species biology (e.g., abundance, trends, distribution, and diversity) as well as any conservation actions that reduce or remove any significant threats to the species. For example, many of the Pacific salmon species that were reported in FY 2002 had both increased abundance,

²Acceptable levels are defined as take less than the Potential Biological Removal (PBR) for marine mammals, and take authorized through ESA sections 4(d), 7(a)(2), and 10 for listed species.

³Stocks include populations of ESA listed species.