

Finding of No Significant Impact

Issuance of a Scientific Research Permit to the National Marine Fisheries Service Southeast Fisheries Science Center for Resource Assessment Surveys and Conservation Engineering Research

National Oceanic and Atmospheric Administration Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality regulations at 40 C.F.R. §150S.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1) Can the proposed action be reasonably expected to jeopardize the sustainability of any target species that may be affected by the action?

No. The research is not expected to jeopardize the sustainability of any target species in the action area. Research activities are expected to result in short term, negligible, adverse impacts to fish populations. For species that are targeted by commercial fisheries, mortality due to research surveys is much less than one percent of commercial harvest. These same activities provide the scientific foundation for sustainable fisheries management and therefore have long-term beneficial effects on target species populations (described in section V of the Environmental Assessment (EA)).

2) Can the proposed action be reasonably expected to jeopardize the sustainability of any non-target species?

No. The research is not expected to jeopardize the sustainability of any non-target species. The amount of invertebrate and non-target species caught during the research surveys is negligible compared to population levels and is not expected to jeopardize the sustainability of these stocks. As is the case with fish, the Southeast Fisheries Science Center (SEFSC) conducts research and provides stock assessment advice for several species of invertebrate species with valuable commercial fisheries, such as brown shrimp and blue crab. The SEFSC research is important for the scientific and sustainable management of these fisheries, helping to prevent overfishing on the stocks (described in section V of the EA).

Endangered Species Act (ESA) listed animals are incidentally captured but considered separately under factor #5.

3) Can the proposed action be reasonably expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs?

No. The affected environment includes the ocean and coastal habitats within the watersheds of the Gulf of Mexico, South Atlantic, and Caribbean Sea and its tributaries. The activities being proposed are considered scientific research and therefore fall in accordance with guidelines set forth under the qualifying criteria for Essential Fish Habitat (EFH) General Concurrence. This general concurrence classification is used for the types of activities that will likely result in no

more than minimal adverse effects to habitat, both individually and cumulatively. Methods used during all research activities will limit effects to EFH to the greatest extent possible. Trawl and longline gear will not be set in areas known to contain natural hard bottom. Trawl gear will additionally be outfitted with a weak link in the tickler chain. While the footprint is minimal, the scientific knowledge gained will contribute to continued health of the marine habitats.

Ichthyoplankton surveys are conducted exclusively in pelagic open ocean areas using surface trawl gear and other water sampling equipment; thus, there will be no contact with the ocean bottom and, because of the physical characteristics of the pelagic habitat, no other gear effects. Although there will be an effect of a prey source removal, the amount of take is extremely small and therefore there will be no significant effect to coastal habitat and/or EFH (described in section V of the EA).

4) Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?

No. While the proposed research does involve hazardous materials, they would not have a substantial adverse impact on public health and safety. The Chief Scientist of each research cruise is responsible for complying with FEC 07 Hazardous Materials and Hazardous Waste Management Requirements for Visiting Scientific Parties (or the OMAO procedure that supersedes it). By Federal regulations and NOAA Marine and Aviation Operations policy, the ship may not sail without a complete inventory of all hazardous materials by name and quantity, MSDS, appropriate spill cleanup materials (neutralizing agents, buffers, or absorbents) in amounts adequate to address spills of a size equal to the amount of chemical brought aboard, and chemical safety and spill response procedures. Documentation regarding those requirements will be provided by the Chief of Operations, Marine Operations Center, upon request.

The proposed research could result in potential injuries to researchers as they collect the needed samples. To minimize these hazards, the researchers are provided with and required to use personal protective equipment while following strict safety protocols (described in section V of the EA).

5) Can the proposed action be reasonably expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?

Yes. Although negligible in terms of scope some of the activities conducted in the research program have been documented to have the potential to adversely affect listed species. The NMFS Southeast Regional Office (SERO) is conducting an ESA Section 7 consultation, and is in the process of completing a Biological Opinion on all fisheries independent monitoring activities in the Southeast region. All proposed actions being considered for this SRP are being analyzed as a part of that consultation. The SERO completed an ESA Section 7(a)(2) and Section 7(d) memorandum determining that the research activities proposed under the SRP would not jeopardize the continued existence of any endangered or threatened species during the ESA consultation process. The potential impacts of the research activities for the period between the initiation of the research activities and the completion of the opinion, summer of 2015, are outlined in this memo and included in Appendix 1.

Since inception of the resource assessment surveys in the early 1970s, 69 interactions have occurred with ESA listed species, one of which was lethal. Out of the thousands of trawls conducted, two marine mammal interactions have occurred with one being lethal. These numbers are minimal and have negligible adverse impacts to listed species populations and their habitats. Additionally, a variety of mitigation measures for each survey are in place and have proven to be effective for minimizing potential impacts to protected species (described in section VII of the EA).

6) Can the proposed action be expected to have a substantial impact on biodiversity and ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

No. The proposed research program would not involve any substantial impacts to the ecosystem or biodiversity associated with both target and non-target species. The research being conducted impacts a relatively small number of organisms overall. These research activities provide valuable information on three major marine ecosystems and data are provided to the Fishery Management Councils for stock assessments conducted in the South Atlantic, Gulf of Mexico and Caribbean Sea.

7) Are significant social or economic impacts interrelated with significant natural or physical environmental effects?

No. There are no significant social or economic impacts interrelated with significant natural or physical environmental effects. The impact of the proposed research program is expected to contribute to management decisions about fisheries that would potentially have positive social or economic impacts and aide in the recovery and conservation of protected species. The more data available regarding the health of these fish stocks and protected resources, the better NMFS is able to maintain a productive and sustainable fishery balanced with ecosystem needs (described in section V of the EA).

8) To what degree are the effects on the quality of the human environment likely to be highly controversial?

The proposed research is conducted offshore and is not controversial. The results of these continuing studies help managers assess fish and crustacean stocks, better understand fish life history and species associations with habitat, resolve aging discrepancies from previous studies, provide updated information for stock assessments, and develop methodologies to reduce fishery bycatch. Managers depend on these studies and will continue to do so in the future to develop sound scientifically defensible management measures to allow fish populations to grow, improve recreational fishing opportunities for the public, and provide greater food production for the nation.

9) Can the proposed action be reasonably expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?

No. This action is not likely to result in direct, indirect, or cumulative effects to unique areas, such as significant scientific cultural, or historical resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas as the proposed action is to sample fishery resources in southeastern U.S. and U.S. Caribbean waters (described in section VI of the

EA), where such areas do not generally exist. To the extent that research will occur in ecologically critical areas, such as some coral reef communities, activities are limited to avoid having adverse effects, such as not trawling or deploying longline gear.

10) To what degree are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

These surveys and studies use standard collecting techniques designed to minimize impacts to the human and ecological environments. The various methods of collection and the types of data to be collected are well established and documented. There are no unique or unknown risks involved.

11) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

No. The proposed action would allow the SEFSC to continue to provide fishery independent indices for stock assessments, such as the Southeast Data, Assessment and Review (SEDAR) process. The purpose of SEDAR is to monitor population trends for managed stocks in the Gulf of Mexico, South Atlantic, and U.S. Caribbean. These assessments provide the basis for evaluating stocks relative to legally-mandated biological reference points to determine stock condition. In addition, these assessments serve to help fishery managers develop catch limits, targets and performance indicators for setting allowable fishing levels. Without the proposed action, limited information would be available for assessments and would limit the ability of fishery managers to evaluate the performance of stocks in response to fishing (described in section VI of the EA).

12) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

No, the proposed action does not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. The action should have no impact on historic shipwrecks. The SEFSC's research activities may occur near wrecks; however, the effects of those activities are minimal. The proposed action is expected to have a negligible risk of loss or destruction to any significant scientific, cultural, or historical resources in the affected area (described in section IV of the EA).

13) Can the proposed action be reasonably expected to result in the introduction or spread of a non-indigenous species?

No. This action is used to collect information to support stock assessments and provides information for effective management of marine resources. The current and anticipated continuation of this research program is not expected to introduce or spread non-indigenous species to areas outside of the proposed study area. The sampling activities under this SRP may collect lionfish (*Pterois miles* and *P. volitans*), an invasive species to southeastern reef habitat. If these fish occur in samples, they will be sacrificed for biological research examining the colonization of these species (described in section V of the EA).

14) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

No. This research program has been ongoing since the early 1970s, the methods and data collected are well established, and the use of data in stock assessment models is not new. The collected data will be used to avoid taking future actions with adverse consequences. Therefore, this action is not likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

15) Can the proposed action be reasonably expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

No. This action does not threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment. All research activities to be conducted are in furtherance of federal and state fishery requirements, and will be conducted pursuant to the required permits and procedures applicable to them.

16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?


No. In terms of fisheries, understanding the cumulative impacts that human activities and trends in the natural environment have on the marine environment over time is critical to understanding the importance of NMFS' role in fisheries management. The need for the research conducted by the SEFSC is in large part the result of past actions that contributed to impacts on fish stocks from overfishing, pollution of ocean areas from accidental and intentional discharges, runoff of agricultural and industrial waste into the ocean, and degradation of habitat from commercial fishing and other activities. Federal efforts within the last 40 years to reduce pollution and effectively manage commercial and recreational fishery harvests have reversed some of these trends. Populations of a number of important fisheries species have been restored to healthy levels and others are in the rebuilding process.

The SEFSC research activities would have minor to negligible adverse effects on the various resource components of the physical and biological environments. Because SEFSC research activities involve such a small number of vessels compared to other vessel traffic and collect relatively small amounts of biomass compared to commercial and recreational fisheries, the contribution of the research plan to cumulative adverse effects on fish, marine mammal, and other species and resource areas is very small. The research activities contribute in major ways to the science that supports federal fishery management measures aimed at rebuilding and managing fish stocks in a sustainable manner. They also contribute to understanding the nature of changes in the marine environment and adjusting resource management plans accordingly, and help meet international treaty research obligations. These research activities help alleviate adverse cumulative impacts on the biological and socioeconomic environments, resulting in a beneficial contribution to cumulative effects.

DETERMINATION

Based on the information contained in this EA and summarized here, the proposed action will not significantly affect the quality of the human environment, with specific reference to the criteria contained in the Council on Environmental Quality regulations at 40 C.F.R. §1505.27 and in Section 6.02 of NOAA Administrative Order NAO 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act (NEPA). In addition, all impacts to potentially affected areas, including national, regional and local, have been addressed

to reach the conclusion of no significant impacts. Accordingly, the preparation of an EIS for the proposed action is not necessary.



Bonnie Ponwith, Ph.D.
Director, SEFSC

2-26-15
Date