



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE/NOAA FISHERIES
Pacific Islands Fisheries Science Center
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June 7, 2007

MEMORANDUM FOR: Rodney F. Weiher, Ph.D.
NOAA NEPA Coordinator

FROM: Samuel G. Pooley, Ph.D. *SG Pooley*
Director

SUBJECT: Environmental Assessment: Sea Turtle Bycatch Reduction
Research Activities at the Pacific Islands Fisheries Science
Center

The attached subject environmental assessment (EA) and Finding of No Significant Impact (FONSI) are forwarded for your review. The EA and FONSI have been prepared in accordance with the provisions of: (1) NOAA Administrative Order 216-6, Environmental Review Procedures For Implementing The National Environmental Policy Act; and (2) the Council on Environmental Quality's Regulations For Implementing The Procedural Provisions of The National Environmental Policy Act (40 CFR Parts 1500-1508).

Based on the environmental impact analysis within the attached EA, I have determined that no significant environmental impacts will result from the proposed action. I therefore have approved the FONSI for this proposed action. I request your concurrence with the EA and its FONSI. I also recommend, subject to a request from the public, that you release the documents for public review.

1. I concur. _____

6/20/07

Date

2. I do not concur. _____

Date

Attachments



JUN 21 2007

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: Sea Turtle Bycatch Reduction Research Activities

LOCATION: Pacific Islands Fisheries Science Center, Honolulu, Hawaii

SUMMARY: The Pacific Islands Fisheries Science Center (PIFSC) of the National Marine Fisheries Service (NMFS) is part of the National Oceanic and Atmospheric Administration (NOAA). The PIFSC administers scientific research and monitoring programs that support the domestic and international conservation and management of living marine resources. It conducts a wide range of activities including resource surveys and stock assessments, Fishery Monitoring, economic and sociological studies, oceanographic research and monitoring, critical habitat evaluation, life history and ecology studies, and advanced oceanographic and ecosystem modeling and simulations.

The Fishery Bycatch and Stock Assessment Division conducts state-of-the art research related to the population biology, stock assessment, ecology, and life history of exploited resources and associated species (e.g., prey, bycatch, and protected species) in the central and western Pacific. This Division uses research to improve stock assessments and to advise resource management at both species and ecosystem levels while addressing mandates of the Magnuson-Stevens, Endangered Species, Marine Mammal Protection, and Migratory Bird Treaty Acts. Research programs emphasize population modeling, assessment survey cruises, experimental fishing, determination of vital rates and other life-history parameters, environmental physiology, distributional ecology, and mitigating fishery interactions with protected species.

A major goal of the National Oceanic and Atmospheric Administration's National Marine Fisheries Service is to encourage the adoption of more turtle-friendly gear or methods in both domestic and foreign longline fisheries. As such, the PIFSC has conducted research projects designed to perform exploratory sensory and behavioral research to determine what attracts and deters turtles and to test the effectiveness of alternative fishing gear or fishing methods in an effort to decrease sea turtle bycatch worldwide for many years.

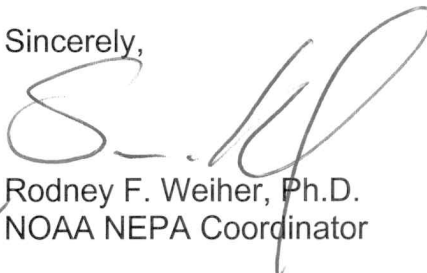
The proposed action is for National Oceanic and Atmospheric Administration and the PIFSC to conduct specific proposed research activities aimed at reducing sea turtle bycatch during the next five years, which include: deployment of satellite archival tags on longline-caught and free swimming turtles and subsequent data

analysis to determine long-term movement patterns to assist in the design of time-area fishery closures; biochemical profiling of incidentally-captured sea turtles; research involving the sensory and behavioral biology of sea turtles; and research on the effects of natural chemical and physical repellents on captive sea turtles.

RESPONSIBLE OFFICIAL: Samuel Pooley, PhD.
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The environmental review process led us to conclude that this action will not have a significant effect on the human environment. Therefore, an environmental impact statement will not be prepared. A copy of the finding of no significant impact including the supporting environmental assessment is enclosed for your information. Although NOAA is not soliciting comments on this completed EA/FONSI we will consider any comments submitted that would assist us in preparing future NEPA documents. Please submit any written comments to the responsible official named above.

Sincerely,



for Rodney F. Weiher, Ph.D.
NOAA NEPA Coordinator

Enclosure

Finding of No Significant Impact
Sea Turtle Bycatch Reduction Research Activities
NOAA Fisheries Pacific Islands Fisheries Science Center
Honolulu, Hawaii

NOAA Administrative Order (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. §1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." The significance of this action is analyzed based on the NAO 216-6 criteria and White House Council on Environmental Quality's context and intensity criteria. The criteria listed below are relevant to making a Finding of No Significant Impact for Alternatives B and C, and have been considered individually, as well as in combination with the others. These include:

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

No. The proposed research activities are not expected to jeopardize the sustainability of target species affected by the action, specifically threatened and endangered sea turtle populations in the Pacific and Atlantic Oceans. The goal of the proposed research activities is to generate new data and information on strategies that have the potential of reducing incidental sea turtle bycatch in pelagic longline fisheries, thus supporting the recovery of sea turtle populations worldwide. Much of the research centers on individuals that have been stranded or caught as bycatch, or that are on naturally occurring nesting beaches or already in captivity, rather than using active capture efforts and as such, combined with mitigation measures in place, should not affect sustainability.

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

No. The proposed research activities natives are not expected to jeopardize the sustainability of any non-target species, including marine mammals, fish, sharks and seabirds. Field research activities focus on individual sea turtles rather than non-target species, and as such are not expected to affect surrounding ecosystems. For example, satellite tagging and biochemical profiling research would be performed on individual sea turtles that have been incidentally caught in fishing gear off of Brazil, short-term spectral sensitivity experiments would be performed on individual adult and hatchling turtles on nesting beaches, and lightstick and scarecrow evaluations would be tested according to turtle CPUE. Additional studies using natural repellents would be performed in captivity and as such would not affect non-target species. The risks of incidentally catching a marine mammal or other marine vertebrate or invertebrates in any of the aforementioned research settings are considered slim, and precautions are in place to avoid such interactions entirely, as explained in section 1.5, Marine Mammals and other Marine Species, of the EA.

3. Can the proposed action reasonably be 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 Fishery Management Plans (FMPs)?

No. All of the proposed research activities involve short term minimally invasive procedures involving individual sea turtles, including: a) removing incidentally caught individual sea turtles from pelagic environments for one to three hours for satellite tagging and blood sampling prior to release, b) exposing individual adult and hatchling sea turtles to short term physiological and behavioral studies on nesting beaches, and c) research involving captive individuals. Because research is limited to individual animals and would not disrupt any other existing habitats in or out of the water, they would not cause any substantial damage to the ocean, coastal habitats, and/or essential fish habitats as defined under the Magnuson-Stevens Act.

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

No. As described in question 2, the proposed research activities are not expected to have substantial impacts on biodiversity or ecosystem function because research is conducted primarily on individual animals rather than at the ecosystem level. Any sampling or involvement at the ecosystem level is extremely limited in time and scope, such as removal of a turtle from its natural environment for a short period of time or utilizing a nesting beach for short term experiments, thus no adverse impacts are expected to occur.

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

No. The proposed research activities are not expected to have any impacts on public health or safety. Any research effort involving areas open to the public ensures that, while members of the public may watch activities involving stranded sea turtles or sea turtle examinations and releases, they are not allowed to assist or get close in any way.

6. Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

No. The proposed research activities are not expected to adversely affect endangered or threatened species, critical habitats, or any other species. Research performed on incidentally caught individual endangered or threatened sea turtles, including tagging, blood sampling, testing the use of natural repellents, and non-invasive physiological and behavioral studies utilize acceptable methods and procedures commonly used in the sea turtle research community and as such will not affect the individuals adversely. Section 4.3.1.1 of the EA specifies mitigation measures in place to reduce the already low chances of any adverse effects that may result from handling sea turtles. The proposed research activities are expected to support and benefit the recovery of all species of threatened and endangered sea turtle populations and as such no adverse impacts to the

sustainability of these stocks would occur. As described in question 2, marine mammals and non-target species are not expected to be impacted adversely as a result of the proposed research activities.

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

No. The proposed research activities are not expected to have any significant social or economic impacts on local communities and/or their economies. Satellite tagging and blood sampling for biochemical profiling would be carried out in pelagic waters off of Brazil, and fishing efforts and local economies that depend on fishing revenue would not be affected by this research. Similarly, physiological and behavioral spectral sensitivity studies on nesting beaches in the West Indies and Costa Rica, and lightstick and scarecrow studies in Baja Mexico would not have any adverse social or economic implications for local communities, as these activities are not expected to interfere with or affect social customs and/or fishing and other related livelihoods of the communities.

8. Are the effects on the quality of the human environment likely to be highly controversial?

No. There are no effects on the quality of the human environment as a result of the proposed research activities that are likely to be controversial. In cooperation with the Marine Turtle Research Program of the PIFSC, there is an active program of public education which allows for the open explanation of various aspects of ongoing research activities.

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

No. The proposed research activities are not expected to result in substantial impacts to unique areas because most of the research activities would not be carried out in any of the aforementioned habitats. The experiments involving lightsticks and scarecrows in Baja Mexico and behavioral spectral sensitivity testing in Costa Rica would take place near or within designated World Heritage Sites, specifically Estero Coyote in Baja Mexico, and Area de Conservación Guanacaste in Costa Rica where protection of turtles and support for conservation and research are primary goals of the National Parks. However, because the proposed research concerns individual sea turtles, essential fish habitats, ecologically critical areas or other habitats as described will not be affected and thus would not be adversely impacted by the proposed research.

As explained in section 1.5 of the EA, the proposed nearshore research in Mexico would not intersect with or impact whales or marine mammals that are protected as part of the Site, as these species occur far offshore from the proposed work. Additionally, nesting beaches in Costa Rica are protected as conservation sites within the National Park and as such are carefully regulated and responsible sea turtle research is encouraged and

supported. As shown in section 4.7, appropriate in-country permits have been obtained to conduct such work in both areas outlined.

10. Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

The procedures, methods, and mitigation measures that are proposed in Alternative C are accepted worldwide in the sea turtle research scientific community and have proven effective in various parts of the world over many years. The same holds true for all of the methods detailed in Alternative B with the exception of the use of semiochemical repellents proposed for evaluation as a deterrent. The effects of such semiochemicals on individual sea turtles have not been fully explored however, as described in sections 2.2.4 and 4.3.1.3 of the EA, studies on other fish and shark species show no adverse effects of semiochemicals and are not expected to jeopardize captive sea turtle individuals after short and long term exposure.

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

No. The proposed research activities are not expected to have adverse cumulatively significant impacts. In conjunction with the conservation goals of other agencies, any cumulative impacts of the proposed research activities would likely be beneficial to sea turtle populations.

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 research activities would not take place at any districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. Similarly, the proposed research activities are not likely to cause any loss or destruction of scientific, cultural or historical resources primarily because the proposed activities will not involve any cultural or historical resources, and any involvement of scientific resources, such as endangered sea turtles, are limited in time and scope, non-destructive, and minimally invasive.

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

No. The proposed research activities are not expected to result in the introduction or spread of non-indigenous species. The species involved in the proposed research activities are native to the study region, and any equipment used is either disposable or sanitized between uses.

14. Is the proposed action likely to establish a precedent for future actions with

significant effects or represent a decision in principle about a future consideration?

No. The purpose of this research is to gather information that may be used to benefit conservation efforts for marine turtle species. The proposed action consists of several primary research activities, the basic methods and procedures for which are widely accepted in the scientific research community and have already been published in peer-reviewed scientific literature. Any new methods to be used in the proposed studies build upon existing techniques or information in an attempt to further improve data collection and analysis and results obtained from the proposed research will be subject to further review and potential modification, which is an integral part of the scientific research process. To the extent that these methods establish a precedent for future studies, the precedent will be based on the quality of the data obtained, and will consider the minimization of the adverse impacts to the resources being studied.

15. Can the proposed action reasonably be expected to threaten a violation of federal, state, or local law or requirements imposed for the protection of the environment?

No. The proposed research activities would only operate with all the necessary and required permits and approvals from Federal, state, local, and foreign agencies and thus are not expected to violate such laws and requirements. For example, permits are in place through the Mexican government (CONANP) authorizing the proposed research within Mexico, and the appropriate Institutional Animal Care and Use Committee (IACUC) approval for other sea turtle related experiments in the Pacific Ocean and in captivity has been obtained. The PIFSC is covered under several permits authorizing scientific research using captive sea turtles at the NOAA facility in Galveston, namely Florida Fish and Wildlife Conservation Commission (FWC Marine Turtle Permit TP#015, expires 1-31-2008), Texas Parks and Wildlife Department (TPWD, SPR-0390-038, expires 3-14-2009), and U.S. Fish and Wildlife Service (USFWS, TE67637904, expires 9-30-2009). A Section 10 (a)(1)(A) permit authorizing sea turtle takes and scientific research under the Endangered Species Act (ESA) is in place through NOAA's Southeast Fisheries Science Center, and 50 CFR 222.310 for threatened and endangered species covers the federal research that opportunistically samples stranded or incidentally captured animals.

Jurisdiction under the ESA for sea turtle research extends up to the territorial limits of another country, such that any research conducted on foreign nesting beaches or offshore within that country's territorial waters is not subject to the provisions of the ESA and thus a US ESA permit is not required for those research activities, although appropriate in-country regulations are upheld and approval for the research has been obtained.

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. The proposed research activities are not expected to result in cumulative adverse effects on target and non-target species for reasons already stated in questions 1, 2, and 6. The goal of the proposed action is to generate new data and information on strategies that have the potential of reducing incidental sea turtle bycatch in pelagic longline fisheries, thus supporting the recovery of sea turtle populations worldwide. Field research activities focus on individual sea turtles rather than non-target species, and as such are not expected to have any adverse cumulative effects on surrounding ecosystems or species inhabiting them.

Finding of No Significant Environmental Impact

The intent of the proposed research activities as described is to support the recovery of threatened and endangered sea turtle species by researching the capabilities of new and improved methods for reducing sea turtle bycatch in fisheries worldwide. The National Oceanic and Atmospheric Administration (NOAA) Fisheries has prepared the attached EA to assess the potential environmental impacts of the major sea turtle bycatch reduction research components to be conducted and supervised by the Pacific Islands Fisheries Science Center. Alternatives B (preferred alternative) and C would not have significant impacts on the environment as evaluated in Chapter 4 of the EA and summarized above, while Alternative A (no action alternative) would have no direct, indirect, or cumulative impacts on most resources; however, its implementation has potentially significant negative impacts on sea turtle populations over time.

In view of the information presented in this document and the analysis contained in the attached EA, it is hereby determined that proposed research activities outlined in Alternative B (preferred alternative) will not significantly impact the quality of the human environment as described above and in the EA. Therefore, preparation of an Environmental Impact Statement for this action is not necessary.



Samuel G. Pooley, Ph.D.
Director, Pacific Islands Fisheries Science Center

JUN 06 2007

Date