UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

Papahānaumokuākea Marine National Monument
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# FINDING OF NO SIGNIFICANT IMPACT

## Use of 'Surprise Net' Technology to Decrease or Eliminate Predation of Pre-weaned Hawaiian Monk Seal Pups by Sharks in the Northwestern Hawaiian Islands, Pacific Islands Fisheries Science Center, Hawaiian Monk Seal Research Program, Honolulu, Hawaii (Permit no. PMNM-2010-014)

The National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), Pacific Islands Fishery Science Center (PIFSC) prepared a supplemental environmental assessment (dated April, 2010) to evaluate the impacts of allowing the NOAA NMFS, PIFSC to utilize "Surprise Net" technology to lethally remove sharks exhibiting predatory behavior on pre-weaned Hawaiian monk seal pups within Papahānaumokuākea Marine National Monument (PMNM or Monument). The activities to take place in the PMNM require a conservation and management permit from NOAA's Office of National Marine Sanctuaries, the United States Fish and Wildlife Service, and the State of Hawaii, Co-Trustee management agencies for the PMNM. NOAA's Office of National Marine Sanctuaries reviewed the supplemental environmental assessment prepared by NMFS and has utilized it as a basis for this finding of no significant impact for its issuance of a Monument conservation and management permit.

NOAA Administrative Order (NAO) 216-6 (revised May 20, 1999) provides eleven criteria for determining the significance of the impacts of a proposed action. These criteria are discussed below with respect to the proposed action. Based on the analysis in the adopted supplemental environmental assessment, the PMNM finds that:

*1. Are there both beneficial and adverse impacts of the proposed action that when combined result in a net benefit?*

There are both beneficial and adverse impacts of the proposed action that when combined result in a net benefit. The impacts of the activities permitted would primarily relate around lethal removal of Galapagos sharks within a limited area within the PMNM (3 islets) at French Frigate Shoals. The surprise net will be deployed over sandy substrate; well away from live coral habitat and monitored at all times by NMFS personnel to avoid unintentional entanglement of non-target animals, including sea turtles and monk seals. Short term responses from shark removal activities are not likely to have a measureable effect on the surrounding ecosystem, or Hawaiian monk seal productivity, foraging, or other essential biological functions. Removal of Galapagos sharks exhibiting predatory behavior on pre-weaned Hawaiian monk seal pups will have a direct net benefit as the activities are expected to improve the survival of seal pups.

*2. What is the degree to which public health or safety is affected by the proposed action?*

The surprise net will be deployed in remote areas (islets around French Frigate Shoals) which are not accessible to the public and will be monitored at all times, so there is no chance that any of the materials could be transported into public areas.

*3. Are there unique characteristics of the geographic area in which the proposed action is to take place?*

The proposed action will take place at three islets (Trig, Gin and Little Gin) within the French Frigate Shoals Special Preservation Area, primarily along sandy shoreline and within shallow water, on sandy substrate. The surprise net would be deployed over sandy substrate in water no deeper than 5 meters and would be monitored at all times.

*4. What is the degree to which effects on the human environment are likely to be highly controversial?*

None of the effects on the quality of the human environment are controversial. As noted, the proposed action involves small-scale, short-term gear deployment in restricted, remote areas, and will have no significant or controversial effects on the human environment. The removal of sharks may be considered controversial by constituent groups that oppose human intervention to benefit one species over another. Nonetheless, the risks of failing to control this known source of monk seal pup mortality to a species that is highly endangered exceed the risks of removing a small number of sharks from the population. This EA was posted on the Monument website (http://hawaiireef.noaa.gov) for public comment for fifteen days (5/4/2010-5/19/2010). The comment period yielded no comments.

*5. What is the degree to which effects are highly uncertain or involve unique or unknown risks?*

The surprise net has been developed and used successfully for capture of marine mammals in other locations. The PIFSC adaptation and modification of the net to capture sharks likely presents few unknown risks and these should not be significant. PIFSC is taking action to mitigate any potential risks by developing protocols to avoid risks (i.e. entanglement of non-target species including humans, injury risk related to capturing sharks, entanglement on coral, destruction of habitat). Moreover, deployment of the net has been tested successfully in controlled environs without the presence of sharks prior to any use in the NWHI.

6. *What is the degree to which the action establishes a precedent for future actions with significant effects or represents a decision in principle about a future consideration?*

The issuance of a Monument conservation and management permit for these activities is an individual decision and does not set a precedent for any future decisions on activities proposed in the Monument. The purpose of the proposed action is to use more efficient and selective procedures to reduce or eliminate a localized, unique phenomenon. A suite of contingencies has been developed which must be met in order to continue the activity, as well as circumstances which would lead to cessation of predation control measures. The latter circumstances include evidence that shark predation on seal pups were to continue despite deterrent or removal efforts.

The conservation and management activities will not affect any decision towards large scale predator removal, as that activity has already been considered and rejected.

*7. Does the proposed action have individually insignificant but cumulatively significant impacts?*

Issuance of the proposed permit is not related to other actions with individually insignificant but cumulatively significant impacts. The only entity permitted in the past to enter PMNM to remove Galapagos sharks within French Frigate Shoals has been NMFS PIFSC. However, these take activities do not duplicate or overlap with those of the proposed action because lethal removal of Galapagos sharks was last successful in 2005, prior to the designation of PMNM.

As noted in responses to questions above, use of the surprise net is a short-term field activity, minimally affecting existing robust populations of elasmobranchs in the affected geographic areas. Non-target species, including both protected species and other non-target marine organisms, are not anticipated to be affected significantly. Overall, it is anticipated that the proposed action would not have significant cumulative effects.

*8. What is the degree to which the action adversely affects entities listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historic resources?*

The proposed action will occur at great distance from any districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. Similarly, no cultural or historical resources are present at the study site. The procedures will not cause loss or destruction of scientific resources.

*9. What is the degree to which endangered or threatened species, or their critical habitat as defined under the Endangered Species Act (ESA) of 1973, are adversely affected?*

Potential effects of the surprise net on endangered or threatened species and marine mammals have been evaluated and will cause no adverse impact. Mitigation measures will be in place during all activities. Namely, the surprise net will not be deployed if such species (e.g. Hawaiian monk seals, green turtles), are within the arc of the net, either in the water or on the beach. If a protected species should become entangled, use of the surprise net will be terminated until revised methods are developed.

The surprise net will be deployed only when Galapagos sharks are within the arc inscribed by the net, and will therefore not be actively fishing at other times. The area inscribed by the arc of the net is small (<150 $m^2$), and will have very limited bycatch of the few fish species which occur in shallow water (< 5m) habitat over sandy bottoms. The mesh size of the net will be large enough to allow small fish to escape. Finally, the surprise net will be retrieved as soon as it is deployed, and any non-target species remaining in the net will be expeditiously released to prevent mortality. No significant effects on protected species are anticipated (see Question 5, below). No ecosystem-level effects due to this research are anticipated because the project affects a small sample size of individuals in a localized region, therefore minimizing potential effects on a greater geographic scale.

*10. Is a violation of Federal, state, or local law for environmental protection threatened?*

The proposed action does not threaten a violation of federal, state, or local law requirements imposed for the protection of the environment, natural, or cultural resources. NMFS researchers operate with all necessary and required permits and approvals from Federal, state, and local agencies.

*11. Will the proposed action result in the introduction or spread of a non-indigenous species?*

The proposed action is not expected to result in the introduction or spread of a nonindigenous species. The species involved in the proposed action are native to the study regions. Deployment and transfer of both equipment and personnel will be bound by strict quarantine procedures which are delineated as part of the Monument permitting process, to prevent introduction of both terrestrial and marine species. Such procedures have been standard practice for the Protected Species Division for many years within the Monument, as well as within USFWS Refuges prior to creation of the Monument.

**FONSI Statement**

In view of the analysis presented in this document, the supplemental environmental assessment of NMFS for utilization of "surprise net" technology for the lethal removal of Galapagos sharks exhibiting predatory behavior on pre-weaned Hawaiian monk seal pups, dated April, 2010, the proposed action will not significantly affect the quality of the human environment with specific reference to the criteria contained in Section 6.01 of NAO 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act (NEPA). Accordingly, the preparation of an environmental impact statement for the proposed action of issuing a Monument research permit is not necessary.

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Office of National Marine Sanctuaries
National Oceanic and Atmospheric Administration

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