

FINDING OF NO SIGNIFICANT IMPACT

The Council on Environmental Quality (CEQ) Regulations state that the determination of significance using an analysis of effects requires examination of both context and intensity, and lists ten criteria for intensity (40 CFR 1508.27). In addition, the Companion Manual for National Oceanic and Atmospheric Administration Administrative Order 216-6A provides sixteen criteria, the same ten as the CEQ Regulations and six additional, for determining whether the impacts of a proposed action are significant. Each criterion is discussed below with respect to the proposed action and considered individually as well as in combination with the others.

1. Can the proposed action reasonably be expected to cause both beneficial and adverse impacts that overall may result in a significant effect, even if the effect will be beneficial?

The proposed action (preferred alternative) is to evaluate the nursery function and role(s) of *Sargassum* for fisheries in the Gulf of Mexico (GOM) ecosystem, with a focus on recruitment of economically important fish species. Activities analyzed in the Environmental Assessment (hereafter referred to as the EA) include the collection of *Sargassum* and juvenile fishes and invertebrates associated with *Sargassum* and non-*Sargassum* habitats using Neuston nets, Methot frame trawl, plankton purse seines, light traps and opportunistic hook-and-line sampling with Sabiki rigs)(Section 2.0 Pp. 6-11). The EA analyzed the impact of these activities on the physical and biological resources in the project action area (Section 4.0 Pp. 21-30). The proposed activities would occur on three subsequent cruises within the Gulf of Mexico in water depths from 40 to 200 meters. In 2017 one cruise, using similar methods was completed, however, two additional cruises are proposed in 2018 (May/June) and one in 2019 (May/June). Therefore, only three cruises are analyzed in the EA.

The proposed action (activities) are not expected to cause adverse impacts resulting in a significant effect to the physical or biological resources, within the region, for the following reasons: A limited number of cruises (3) is proposed, each of short duration (~2 weeks). The in-water sampling with nets are restricted to a limited tow period within surface waters, during day-time hours. Further, the Methot trawl will only be used within non-*Sargassum* areas, thus, minimizing the potential for adverse effects to ESA-listed species, marine mammals and to benthic resources. However, due to the potential for sea turtle 'take' in *Sargassum* habitat (critical habitat for sea turtles) National Marine Fisheries Service (NMFS) determined that the activities 'may' affect juvenile sea turtles and issued a Biological Opinion (BiOp) and an incidental harassment authorization (IHA) for the incidental capture of one (1) sea turtle per cruise for the lifetime of the project (ending in 2019). The IHA covers the following species; Northwest Atlantic distinct population segment (DPS) loggerhead, one North Atlantic DPS green, one hawksbill, and one Kemp's ridley sea turtle for the lifetime of the project (2018 – 2019). Further, NMFS states:

"....it is NMFS' biological opinion that the proposed action is not likely to jeopardize the continued existence of North Atlantic green, Northwest Atlantic Ocean loggerhead, hawksbill, or Kemp's ridley sea turtles or to destroy or adversely modify Northwest Atlantic Ocean loggerhead designated critical habitat" (EA, Section 4.1.2.4 Sea Turtles Pg. 28).

“.....We anticipate that all sea turtles expected to be incidentally captured over the life of the permit will undergo short term harassment and/or minimal injury from being released from nets.” (EA, Section 4.1.2.4.1.1 Amount or Extent of Take, Pg. 29)

While collections of fishes managed under the Magnuson-Stevens Fishery Conservation Act will likely occur. NMFS has issued Letters of Acknowledgement and Scientific Research Permits authorizing the collection and holding of managed fish species (see question 4, 12 &13 below)

Finally, National Centers for Coastal Ocean Service (NCCOS) has determined that there are no beneficial environmental impacts from these activities other than providing critical data to NMFS to make informed management decisions about the functional role of *Sargassum* as a nursery habitat.

Therefore based on the context and intensity of the proposed activities, NCCOS determines that no significant adverse impacts may result.

2. Can the proposed action reasonably be expected to significantly affect public health or safety?

No, the proposed action is not expected to affect public health or safety. The proposed activities are routinely conducted aboard the R/V Point Sur owned by the University of Southern Mississippi and operated by the Louisiana Universities Marine Consortium (LUMCON). LUMCON vessels adhere to all Federal and state regulations to protect public health and safety, including the safety of the ship and crew. As a result, NCCOS does not expect any impact to public health or safety.

3. Can the proposed action reasonably be expected to result in significant impacts to unique characteristics of the geographic area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas?

The proposed action will have no significant impact on geographic areas with unique characteristics. The project action area includes the near surface waters in depths of 40 to 200 m within the Gulf of Mexico with transit to Gulfport MS. The area to be sampled is either open-water with *Sargassum* or open-water without *Sargassum*. Therefore, with the exception of *Sargassum* habitat, activities would not be conducted within geographic areas with unique characteristics such as park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. Further, in-water activities and routine vessel operations would have no impact on historic or cultural resources and no activities would be conducted in National Marine Sanctuaries or Habitat Areas of Particular concern (HAPC). A de-minimus amount of *Sargassum*, approximately 200 grams per Neuston or purse seine tow would be collected, with the vast majority returned to the water (EA, Section 2.1.2. Pg 9). Ensuring no impact to the overall biomass of *Sargassum* within the Gulf of Mexico.

4. Are the proposed action's effects on the quality of the human environment likely to be highly controversial?

The proposed action's effects on the human environment are not likely to be highly controversial. The proposed activities are routinely conducted by NMFS (SEFSC DPEA April 2016) and the information collected are beneficial to the management of natural resources in the region. The likelihood of controversy is further reduced by the results of informal (EFH) and formal

consultations (ESA Section 7) with NMFS that concur with NCCOS determinations. Further Grant recipients (researchers) will have valid NMFS Special Research Permits (SRPs) to collect and hold Highly Migratory Species (HMS) and a Letter of Authorization (LOA) to collect and hold species managed under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). Researchers and vessel operators will employ Best Management Practices (BMPs) as applicable to project activities (EA, Appendix A. Pg 38-39).

5. Are the proposed action's effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

The proposed action's effects on the human environment are not highly uncertain, nor do they involve unique or unknown risks. Further, the proposed activities are routinely conducted by NMFS (SEFSC DPEA April 2016) and the information collected are beneficial to the management of natural resources in the region.

6. Can the proposed action reasonably be expected to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?

The proposed activities are routinely conducted by NMFS (SEFSC DPEA April 2016) and other researchers in the region and the information collected are beneficial to the management of natural resources in the region. Therefore, they do not set a precedent for future actions or represent a decision in principle about a future consideration.

7. Is the proposed action related to other actions that when considered together will have individually insignificant but cumulatively significant impacts?

Cumulative effects is defined as:

"the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 C.F.R. § 1508.7)

There are a number of stressors that NCCOS considered in the cumulative effects analysis that comprise the environmental baseline (past and present conditions) in the GOM region, including; habitat degradation from underwater noise, marine debris (entanglement), pollutants from marine and terrestrial sources, annual "hypoxic zones", oil spills, vessel operations that result in strikes (e.g. marine mammals, sea turtles) and climate change (EA, Section 5.0).

Further, the proposed action is similar to other actions conducted within the GOM, most notably, as part of the *Southeast Area Monitoring and Assessment Program (SEAMAP)*. SEAMAP activities include collection of fisheries independent data through a variety of methods, such as, ichthyoplankton sampling, trawls, longlines, digital video camera arrays and vertical hook and line (SEFSC DPEA April 2016).

The magnitude and significance of these current, and past threats and activities are anticipated into the reasonably foreseeable future. Therefore, based on the best scientifically available information NCCOS determines that the potential for significant cumulative impacts when the proposed action

is combined with the past, present and reasonably foreseeable future actions are insignificant. This determination is based on the limited duration and sampling frequency of the cruises and the limited scope (e.g. near surface waters) of the proposed activities. In addition, any future activities that could result in significant effects would undergo further environmental compliance and NEPA analysis on a case-by-case basis.

Further NMFS Office of Protected Resources (OPR) has issued a BiOp stating that activities will not have any cumulatively significant impacts (on ESA resources) when considered with related activities or with reasonably foreseeable activities.

8. Can the proposed action reasonably be expected 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?

Proposed activities are conducted aboard a research vessel in open-water areas of the Gulf of Mexico from 40 to 200 meters. In-water gear is used in near-surface waters to target juvenile fishes and invertebrates in *Sargassum* and non-*Sargassum* habitats. Therefore, there is no potential for project activities to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural, or historical resources

9. Can the proposed action reasonably be expected to have a significant impact on endangered or threatened species, or their critical habitat as defined under the Endangered Species Act of 1973?

There are twenty-three (23) ESA-listed species potentially found within the Gulf of Mexico region. Six (6) marine mammal, five (5) fish, seven (7) coral and five (5) sea turtle species (EA: Table 2, 3, 4, and 5) With the exception of the West Indian manatee all species are under the jurisdiction of NMFS. NCCOS made effects determinations for the ESA-listed species and initiated an informal consultation with NMFS on May 23, 2017. NCCOS determined that activities would either have 'no effect' or would 'not likely to adversely affect' all ESA-listed species that may occur in the region with the exception of sea turtles. Given the potential for sea turtle take during deployment of Neuston net tows and purse seines, within near-surface *Sargassum* habitats NMFS requested a formal consultation, for which NCCOS complied. On July 20, 2017, NMFS issued a Biological Opinion (BiOp, EA Encl 1) and an IHA "take" of juvenile sea turtles.

In the BiOp, NMFS also concurred that no other ESA-listed species was likely to be adversely affected by project activities, with the exception of juvenile sea turtles. The IHA covered the incidental capture of one (1) sea turtle per cruise, for the total lifetime of the project (2018 – 2019). The following species were included: Northwest Atlantic distinct population segment (DPS) loggerhead, one North Atlantic DPS green, one hawksbill, and one Kemp's ridley sea turtle). NMFS states:

"....it is NMFS' biological opinion that the proposed action is not likely to jeopardize the continued existence of North Atlantic green, Northwest Atlantic Ocean loggerhead, hawksbill, or Kemp's ridley sea turtles or to destroy or adversely modify Northwest Atlantic Ocean loggerhead designated critical habitat" (EA, Section 4.1.2.4 Sea Turtles Pg. 28).

“.....We anticipate that all sea turtles expected to be incidentally captured over the life of the permit will undergo short term harassment and/or minimal injury from being released from nets.”
(EA, Section 4.1.2.4.1.1 Amount or Extent of Take)

BMPs such as protected species observers, maintaining minimum approach distances will be employed to further reduce the potential for adverse effects (EA, Appendix A).

Sargassum has been designated as critical habitat for loggerhead sea turtles because of its importance in support of reproduction, development, and foraging activities in juveniles (EA, Table 6). Specifically the Sargassum critical habitat designated as LOGG-S-02 overlaps with the proposed project area. However, proposed activities (vessel and in-water research activities) would not affect the essential features of the designated critical habitat, because the activities would not affect oceanographic conditions, water depth or temperature, prey availability, passage conditions, densities of reproductive loggerheads, or any other identified essential features for loggerhead critical habitat. The amount of Sargassum collected would be insignificant as most would be returned to the water. NMFS concurs with this determination of no affect to Sargassum critical habitat (BiOp Section 10.6, pg.60).

Finally, NCCOS reinitiated consultation with NMFS on November 28, 2017 due to a proposed gear sampling change: the addition of the Methot trawl in non-Sargassum habitat (EA Encl 2). NCCOS determined that ESA-listed species including sea turtles was not likely to be adversely affected. NMFS issued its' concurrence with the determination Feb 16, 2018 (EA Encl 3).

10. Can the proposed action reasonably be expected to threaten a violation of Federal, state, or local law or requirements imposed for environmental protection?

NCCOS does not expect the proposed action to threaten a violation of Federal, state or local law or requirements imposed for environment protection. Further, all agencies that administer the environmental resource statutes with the potential to be affected (i.e. ESA, EFH provisions of the MSFCMA) were consulted and provided concurrence. All sampling and shipboard activities will be conducted in accordance with Federal, state, or local law.

11. Can the proposed action reasonably be expected to adversely affect stocks of marine mammals as defined in the Marine Mammal Protection Act?

There are twenty-four (24) species of marine mammals potentially found in the project action area. Six (6) of these species are ESA-listed species which are referenced above (see criteria 9). Similar to the analysis for ESA-listed species, NCCOS does not expect the proposed action to adversely affect stocks of marine mammals such as the eighteen (18) non-ESA listed species (EA, Table 2). BMPs such as protected species observers, maintaining minimum approach distances will be employed to further reduce the potential for adverse effects (EA, Appendix A). Further, the MMPA allows that action proponents (NCCOS in this case) may determine without concurrence that the action does not have a reasonable likelihood of resulting in the incidental take of marine mammals.

12. Can the proposed action reasonably be expected to adversely affect managed fish species?

NMFS issued a Letter of Acknowledgment (LOA, EA Encl. 7) to the grant recipients on June 19, 2017 acknowledging that proposed scientific research activities for cruises, in 2017 to 2019, are likely to collect *Sargassum* and the following managed fish species: *Rachycentron canadum* (cobia), *Serbia durneriii* (greater ambeijack), *S. fasciata* (lesser amberjack), *S. zonata* (banded rudderfish), Lutjanidae (snappers), Scombridae (mackerels), and *Balistes capriscus* (gray triggerfish); however, larvae and juveniles of other federally managed species may also be collected.

Further, the grant recipients are required to obtain a Scientific Research Permit (SRP, EA Encl. 8, 9) from the Highly Migratory Species Management Division prior to each cruise that authorizes the researchers to collect and retain a specified number of juvenile yellowfin tuna, bluefin tuna, albacore tuna, sharks, juvenile white marlin, swordfish, and juvenile blue marlin. The SRP will also authorize the grant recipients to collect and retain tuna, swordfish, and billfish larvae. When the specified number of juvenile tunas, swordfish, sharks, and bill fish authorized by the permit are collected, activities allowed under SRP will cease.

NMFS did not require additional permits due to the addition of the Methot frame trawl sampling in non-Sargassum habitat.

Therefore as determined by NMFS and under the terms and conditions of the LOA and SRP described above, project activities are not expected to adversely affect managed fish species.

13. Can the proposed action reasonably be expected to adversely affect essential fish habitat as defined under the Magnuson-Stevens Fishery Conservation and Management Act?

Essential Fish Habitat (EFH) is comprised of the waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 U.S.C. § 1802 (10)). The designation of EFH by itself does not confer any protection of the areas from non-fishing or fishing impacts. Instead, it is a tool used by managers to reduce impacts and improve fisheries management.

There are fourteen (14) designated habitat areas of particular concern (HAPC) that are also managed under the MSFCMA and one (1) that is proposed that could be within the project action area. In addition, the following EFH may be found in the action area:

1. Atlantic Highly Migratory Species (EA, Table 1)
2. Coastal Migratory Pelagics (king mackerel, spanish mackerel, cobia)
3. Coral
4. Red Drum
5. Reef Fish
6. Shrimp;
7. Spiny Lobster

NCCOS initiated an informal consultation with NMFS and made a determination that project activities would not adversely affect EFH within the project area. NMFS concurred with NCCOS 'no adverse effects' determination in an LOC received on May 11, 2017 (EA Encl 4). NMFS did not require further consultation due to the addition of the Methot frame trawl sampling in non-Sargassum habitat (EA Encl 5).

14. Can the proposed action reasonably be expected to adversely affect vulnerable marine or coastal ecosystems, including but not limited to, deep coral ecosystems?

Project activities are not expected to adversely affect vulnerable marine or coastal ecosystems for the following reasons: Vessel operations and in-water sampling activities are restricted to near surface and open waters of the GOM with no benthic disturbance of any kind expected, as anchoring is not required for research purposes. However, anchoring may be required for other reasons, such as avoidance of adverse weather conditions or in the unlikely event of an engine malfunction. While the choice of anchoring location is at the discretion of the ship's crew, if anchoring were necessary, vessel operators would select the anchor location based on depth, protection from seas and wind, and bottom type and avoidance of all sensitive habitats.

15. Can the proposed action reasonably be expected to adversely affect biodiversity or ecosystem functioning (e.g., benthic productivity, predator-prey relationships, etc.)?

Project activities are not expected to adversely affect biodiversity or ecosystem functioning for the following reasons: Vessel operations and in-water sampling activities are restricted to near surface and open waters of the GOM, project activities are temporally limited (4 cruises total) over 3 years and collections of *Sargassum*, fishes and invertebrates are de-minimus relative to the total biomass or population size within the GOM. All activities are conducted in accordance with NMFS consultations and permitting terms and conditions (EA Encls. 1, 3, 4, 5, 7, 8, 9)

16. Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species?

The proposed action is not expected to result in the introduction or spread of a nonindigenous species as the research vessel's home port is Gulfport MS. Transits commence from the home port to conduct routine research operations within estuaries, bays and open ocean waters in the GOM. It does not generally travel outside of this region for research. However, if needed, to minimize the risk of aquatic nuisance species introduction, personnel would:

- Clean hull regularly to remove aquatic nuisance species.
- Avoid cleaning of hull in critical habitat.
- Avoid cleaners with nonylphenols.
- Avoid discharge of ballast water in designated critical habitat;
- Use anti-fouling coatings;
- Rinse anchor with high-powered hose after retrieval.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Environmental Assessment prepared for NCCOS RESTORE Act Science Program to fund a project titled "Linking habitat to recruitment: evaluating the importance of pelagic *Sargassum* to fisheries management in the Gulf of Mexico" it is hereby determined that the project titled "Linking habitat to recruitment: evaluating the importance of pelagic *Sargassum* to fisheries management in the Gulf of Mexico" will not significantly impact the quality of the human environment as described above and in the supporting Environmental Assessment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an environmental impact statement for this action is not necessary.


Assistant Administrator, National Ocean Service


Date