Gulf & South Atlantic Fisheries Foundation, Inc.

February 21, 2008

Dr. Roy E. Crabtree
Regional Administrator
National Marine Fisheries Service
263 13th Avenue South
St. Petersburg, FL 33701

RE: Request for Exempted Fishing Permit

Dear Dr. Crabtree:

The variance and error estimates surrounding the stock assessments of various snapper and grouper species within the South Atlantic is large. To augment the current pool of data available to stock assessment scientists for "data poor" species, the Foundation anticipates being granted funds to continue a currently funded program to allow the placement of fishery observers aboard commercial bandit rig fishing vessels (vertical hook-and-line) to characterize catch and discard mortality within the South Atlantic. Once aboard a cooperating vessel, the fishery observer will collect data outlined within the Protocols for Bandit Reel Characterization (NMFS/NOAA Fisheries – Southeast Fisheries Science Center, Galveston Laboratory).

To allow adequate time for the fishery observer to collect, enumerate, weigh, and identify all samples/species brought aboard a cooperating fishing vessel, the Foundation is requesting the renewal of an Exempted Fishing Permit from the National Marine Fisheries Service. After all necessary data are collected and recorded, legal sized fish will become part of the commercial catch and sub-legal fish will be returned to the water. However, to verify that species are correctly identified, we request authorization that will allow for the retention of marine species (vertebrates and invertebrates) until further processing can be conducted (e.g., until more accurate/extensive literature can be referenced or experts can be successfully contacted). The number of specimens that may be acquired on any given trip is highly variable, and specifying the number of individuals that will be retained is difficult, however, we anticipate approximately 500 sublegal and/or legal fish could be retained throughout the course of the study, for continued onboard examination or returned to shore for lab analysis. No species retained for scientific purposes will be sold commercially.

Lincoln Center, Suite 740 / 5401 West Kennedy Boulevard / Tampa, Florida 33609 / (813) 286-8390 / Fax: (813) 286-8261

The Foundation's current Exempted Fishing Permit expires on May 31, 2008. The anticipated award is scheduled to be effective July 1, 2008 through June 30, 2009, however a one-year no cost extension is also anticipated. One hundred and twenty five (125) at-sea days have been anticipated for this study. Current Foundation contracted observers, Regional Coordinators and authorized personnel include: Frank Helies, Gary Graham, Michael Jepson, Konstantin Kopylov, Russell O'Brien, Lindsey Parker, Daniel Parshley, Robert Timmeney and John Wiswell. Additional observers will be contracted during the course of this project.

Please note that contracted personnel who have undergone sea turtle training may handle threatened and endangered sea turtles that are encountered during normal fishing operations. Foundation observers are considered NMFS-designated agents while conducting work under National Marine Fisheries Service funded research grants (correspondence attached – extension in this regard is also anticipated) and as such, are authorized to handle sea turtles encountered during the course of Foundation studies. There would not be any impacts to marine mammals or endangered species that have not been considered in the Biological Opinions for the South Atlantic Fishery Management Council's Snapper Group Fishery Management Plan.

A list of vessels available to cooperate in this research has been submitted to the National Marine Fisheries Service. Of the vessels identified, a sub-sample will be selected to participate in this project. Additional vessels may be identified throughout the course of the project and will be submitted to NMFS for approval.

Results of tests conducted will be provided in the final report for the Cooperative Agreement issued.

Thank you for your assistance. Should you need any further information, please don't hesitate to contact us.

Regards,

Judy L Jamison
Executive Director

Attachments: Cooperative Research Proposal - Statement of Work
August 23, 2006 Correspondence from Dr. Crabtree

Cc: Robert Mahood (w/attachments)
Board of Trustees

Title:

A Continuation of the Catch Characterization and Discards within the Snapper Grouper Vertical Hook-and-Line Fishery of the South Atlantic United States

Introduction:

In 2006, the Foundation was funded to conduct a pilot study to characterize the catch and fate of discards within the Snapper Grouper vertical hook-and-line fishery of the South Atlantic (NA06NMF4540059). The project has been highly successful with cooperation of the snapper grouper fleet throughout the South Atlantic. Beginning in late 2006, two fishery observers were trained and began onboard observation. So far, this research has placed observers on board over 19 different commercial fishing vessels and accumulated over 130 observed sea days. Although formal data analysis has not begun, preliminary analysis shows an average of 7 days per trip and 55 sets per trip. However, there was considerable variance depending upon the size of the vessel with a range of trip length from 2 to 11 days and number of sets from 14 to 113. Analysis of catch and discard fate will most likely begin in Fall of 2007 at the end of onboard observation. The project is currently slated to end in May 2008 and results will be presented to the South Atlantic Council.

The South Atlantic Fishery Management Council recently finalized regulatory measures for snapper grouper species (Federal Register 2006) and because they are considering more (SAFMC 2007), it becomes critical that stock assessments contain the best possible data. Collection of discard rates was a priority research item identified in recent stock assessments (SEDAR 2007). Such deficiency creates a vital need for more and detailed data within the snapper-grouper complex, both fishery independent and dependent.

In order to alleviate these deficiencies in data for the snapper grouper fishery, the Foundation is proposing to continue for another year the characterization of catch and discard for the snapper grouper vertical line fishery in the South Atlantic.

Identification of the Problem:

Stock assessments are a critical tool for evaluating and monitoring the status of fish stocks. Like all models, stock assessments have an associated level of uncertainty resulting from the use of inaccurate catch statistics, natural, environmental, and anthropogenic variability, and nuances and assumptions associated with individual model types (NMFS 1999). This uncertainty (broad confidence intervals and biological reference points) was evident following the assessments of South Atlantic vermilion snapper stocks (SAFMC 2006).

The snapper-grouper unit is comprised of 73 different species, including fishes within the Lutjanidae, Serranidae, Malacanthidae, Carangidae, Sparidae families (SAFMC 2006). Although many snapper-grouper species exhibit spawning migration patterns (Reilinger 1999; Robins and Ray 1986), snappers and large groupers species typically display localized movement patterns, thus making the species especially prone to localized fishing pressures.

The snapper-grouper management unit within the South Atlantic United States is managed by the South Atlantic Fishery Management Council under the snapper-grouper Fishery Management Plan, a multi-species plan. The first Fishery Management Plan (FMP) for the snapper-grouper fishery of the South Atlantic Region was prepared by the South Atlantic Council in 1983 (SAFMC 2006). Since the drafting and implementation of the original FMP, subsequent amendments have increased size limits, decreased the total allowable catch, limited commercial fishing gear, required logbooks, and limited access to prevent overfishing and help rebuild stocks (SAFMC 2006). Unfortunately, some stocks within the snapper-grouper complex are still considered overfished and overfishing is occurring, as a result, the Council reduced the quotas for several species (SAFMC 2006) and is considering further harvest restrictions (SAFMC 2007).

This information has troubled commercial snapper-grouper fishermen within the South Atlantic. Many of the fishermen participating in the snapper-grouper fishery were economically dependent on red porgy stocks. Based on the results of several stock assessments, successive iterations of the snapper-grouper FMP resulted in more stringent regulations regarding red porgy harvest. Finally, the fishery was closed (SAFMC 2006). This resulted in a redirection of commercial fishing effort to other fisheries within the snapper-grouper complex With data suggesting populations of many snapper-grouper stocks still in decline, many fishermen are concerned that the regulations governing the red porgy stock will be implemented within other species specific fisheries, thereby decimating the snapper-grouper commercial fishery within the South Atlantic. Contrary to what has been reported in many of the snapper-grouper stock assessments (particularly black sea bass and vermilion snapper), commercial fishermen have expressed that catches are larger than historic averages and that many large fish remain within the fishery and therefore are signs that indicate healthy stocks. Nevertheless, the Council reduced quotas for several species with Amendment 13C (SAFMC 2006).

Although there are sustained data collection programs (fishery independent) within the South Atlantic United States, these programs are limited in the types of data they collect (landings data via trip tickets and dealer invoices; length frequency data via port agents, etc.). Although data generated by the fishery independent programs are drastically needed for stock assessments, funding has limited spatiotemporal coverage within the South Atlantic and raised criticism. Additionally, the authors of this proposal are unaware of any on-going fishery dependent data being collected within the snapper-grouper fishery of the South Atlantic that quantifies bycatch and discard fate.[1] Although logbooks can report fishery dependent catches, and to a limited extent discards, these data cannot be independently verified, have been criticized as underreported, and only gather a limited amount of data needed by scientists (Lewison et al. 2004). As a result, the South Atlantic Sustainable Fisheries Association, Inc. (SASFA), an industry group comprised of commercial snapper-grouper fishermen, has asked the Gulf & South Atlantic Fisheries Foundation, Inc. (Foundation) to continue the observer based program within the snapper-grouper fishery to increase the universe of fishery dependent data available to stock assessment scientists. More specifically the purpose of this project is to:

[1] Perot Systems implemented a limited one year program to test electronic logbooks on 7 snapper grouper vessels in the South Atlantic (Perot 2006).

1. Continue the observer program within the snapper-grouper vertical hook-and-line fishery of the South Atlantic United States;

2. Utilize previously trained or contract and train fishery Observer to collect data to quantify total catch, effort, and discards (including fate) within the fishery; and

3. With assistance of the South Atlantic Sustainable Fisheries Association, Inc., continue to actively solicit the participation of cooperating vessels to ensure a sufficient sample of vessels is included in the study, and disseminate the results of data collected subsequent to the program completion.

Materials and Methods:

The Fishery, Vessel Selection, and Vessel Compensation –

Over 1,700 snapper-grouper vessels reported landings between 1999 and 2003; although the limited entry program has reduced the number of snapper grouper permits to less than 800 with the majority (630) being Permit 1 classified (trip-unlimited permit) from the states of Florida, North Carolina, South Carolina and Georgia (SAFMC 2007). The average fishing vessel within the snapper-grouper fishery is between 20 and 39 feet in length and utilizes a variety of gears to harvest snapper-groupers with the majority landed by hook and line (SAFMC 2007).

The vertical hook-and-line gear most used by snapper-grouper fishermen are 'bandit rigs'. These devices are mounted on the gunwale of the vessel and consist of a davit and mechanically operated reel, which sets and retrieves the fishing line. Vessels participating within the snapper-grouper fishery average 4-6 bandit rigs per vessel (SAFMC 2006). Anecdotal information relayed by industry indicates that ~40 boats account for the majority of commercial hook-and-line landings within the snapper-grouper fishery. Further discussions have suggested that trip length is variable, however, the average trip from data collected so far is 7 days with an average of 55 sets, therefore an "average" vessel will likely conduct ~29 trips per year. This equates to ~200 days fished per vessel per year (29 trips/year x 7 days/trip = 203 days/year). Therefore, we proposed 200 at-sea days of observer coverage as needed to accurately quantify the snapper-grouper vertical hook-and-line fishery in this follow-up project. Due to budget constraints, however, we have reduced this number to 125 days to coincide with the reduced budget.

The Foundation's Regional, South Atlantic Regional, Observer/Vessel, and Industry Coordinators will again actively solicit the cooperation of fishing vessels and captains willing to participate in the observer program. Only vessels with valid snapper-grouper permits (Permit 1 only, unlimited permit), exclusively fishing bandit rigs, will be asked to participate in this program. Although vessel selection will be non-random (e.g., voluntary participation solicited by Coordinators), all efforts will be made to increase the total number of vessels cooperating in the project, and the universe of vessels to which an observer can be assigned. Although previously, random vessel selection was attempted under the pilot program, it quickly became obvious because the list of cooperating vessels grew over time that each vessel did not have the same probability of being selected each time. In fact, by soliciting participation in the project and not mandating participation the process can not be random. Furthermore, to efficiently

utilize observer and observer coordinator time, the selection of vessels will not be random but focus on ensuring adequate coverage of all areas and as many different vessels as possible. Cooperating vessels carrying an observer will be asked to fish under "normal" conditions and will not be instructed on when, where, or how to fish.

Because crew size is dependent upon the number of bandit rigs installed on the vessel, one crew member will be displaced to allow space for the fishery observer during a fishing trip. The Foundation will make available to cooperating fishing vessels funds that will cover or offset the costs associated with the displacement of the crewmember (e.g., equivalent daily catch) and the materials (food) associated with the performance of this project. Cooperating fishing vessels will be compensated $500/day for each day an observer is aboard a vessel. Additionally, vessel liability insurance will be secured and funded by the Foundation to protect the vessel in the event of a catastrophic incident resulting in injury.

Fishery Observers –

All contracted fishery observers will have undergone specific and detailed training prior to their deployment on any commercial fishing vessel. It is the responsibility of the Observer/Vessel Coordinator to schedule and train all fishery observers. Training details all administrative and programmatic procedures necessary to conduct the proposed research and includes (but is not limited to): overview of the data collection protocols, review and identification of all fauna harvested during hook-and-line fishing, handling of sea turtles, description and measurements of fishing gear, and best practices while aboard a commercial fishing vessel (classroom and at-sea education). In addition, all observers and the Observer/Vessel Coordinator will undergo marine safety training that outlines procedures on how to respond properly and promptly to a variety of situations that could be encountered during fishing operations (e.g., man overboard drills, firefighting, radio communication, etc.). Each observer is also required to complete a First-Aid and CPR course. At the conclusion of observer training, individual observers will be outfitted with the necessary sampling (baskets, fish boards, etc.) and safety (personal EPIRBs, lifejackets, etc.) gears, and certified by the NMFS. Observers will be responsible for collecting and verifying all data collected during fishing operations.

Data Collection –

The purpose of this project is to quantify effort, total catch, and discard mortality within the snapper-grouper vertical hook-and-line fishery of the South Atlantic United States. Sampling will occur year-round with effort proportionately distributed by season. Sampling methodologies are borrowed and modified from protocols already in existence (Gitschlag and Renaud 1994; MRAG Americas 1999). Only one fishery observer will be deployed per cooperating vessel to collect data. Where feasible, the fishery observer will solicit the assistance of the vessel crew to assist with data collection. This will include, but is not limited to, the verbal identification of fish caught, the condition of discarded fish, hooking location, and method of release.

Prior to the collection of catch data, the observer will complete a vessel characterization/trip report form that will outline the specifics of the vessel, gear used, and dates fished. This will include information such as vessel name, vessel length, vessel identification number, year of

construction, hull material, gross tonnage, horsepower and number of engines, crew size (number of individuals fishing), number of bandit rigs and position of each, means of line retrieval (manual, electric, hydraulic), vessel owner's name and address, captain's name and address, trip dates (departure and return), number of at-sea days, port of departure, and home port.

After this information has been collected, the observer will then number each of the bandit rig stations (rigs), starting with the forward starboard side and continuing clockwise, until all rigs have been numbered. These positions will remain constant for the entirety of the fishing trip. The observer will then fill out a gear specification form for each rig fished, and will include: the number of hooks per rig, size and type of hook used (e.g., 5/0 circle hook, 2/0 J-hook, etc.), leader length and strength, mainline length and strength, bait type, amount and number of weights per line, means of line retrieval (manual, electric, hydraulic), davit type and size (aluminum, steel, etc.; length and width), spool type and size (aluminum, steel, plastic, etc.; diameter and width), and maximum retrieval speed (m/s). This information will be assumed constant for the entire fishing trip or unless a variable is altered (e.g., new hook, line, or weight is added), at which time the observer will then fill out a new form specifying the time, date, and the alteration made to the fishing gear.

While on-site and actively fishing, the observer will then complete a catch characterization form. This form will record the total catch brought aboard the vessel and general information regarding fishing practices. The following information will be recorded: set number, bait type, species identification (species or genus), length of all fish caught (TL, FL, etc., measured in mm), retention or discard of individuals, area hooked (maxilla, gill, esophagus, other), release method (hand, dehooking device, etc.), depth fished, structure fished, latitude and longitude fished, line retrieval speed, and soak time per rig (measured from the time the hooks enter the water until the time of retrieval). Additionally, the condition of snapper when brought onboard will be categorized as follows: Live – normal appearance; Live – stomach protruding; Live – eyes protruding; Live – combination of stomach and eyes protruding; Dead on arrival; Not Determined.

At each station that is fished, the observer will fill out a station sheet. This will record information about the time spent on station (measured from the time the first rig is set to the last rig retrieved), latitude and longitude of station, structure fished, number of rigs fished, number of sets per rig, time of day, sea state, and presence of predators.

To quantify discard fate, the observer will be tasked with recording the fate of all fish discarded from one bandit rig on the vessel. The rig will be randomly chosen by the observer and discard fate data recorded for the entire time the station is fished. A new rig will be randomly selected at each newly fished station. Fish discarded from this rig will have had data collected and recorded in the catch characterization form. An extra column on the datasheet will allow fate of individual fish to be recorded as: Fish kept; Fish kept as bait; Discarded alive or Discarded Dead. Additionally, data will be collected on the approximate speed of line retrieval (measured in m/s). All animals brought aboard at the selected rig will be quickly dehooked, measured, and released. Efforts will be made to minimize the physical impact to the harvested fish while collecting all necessary data in a timely manner. After all information have been collected on an individual fish, it will be immediately discarded and the fate recorded.

Because commercial fishing practices on individual vessels is variable, in the event that an observer cannot sample the total catch brought aboard by all bandit rigs (e.g., too many rigs per vessel to allow the observer to accurately record all necessary data), the observer will subsample the total catch by focusing efforts on individual rigs chosen at random. For example, if 8 rigs are present on a cooperating vessel and the observer knows that he can only adequately sample 4 rigs per station, he will randomly choose 4 of the 8 rigs and only sample those rigs. Of the subsampled rigs, one will be selected as the discard fate station. To decrease the likely hood of a side or gear bias, rigs will be randomly chosen at each newly fished station.

Data Review, Entry and Analysis –

As stated above, fishery Observer will be tasked with collecting all data. At the end of each fished station, the observer and vessel captain will verify the accuracy of the collected data by signature. At the conclusion of a fishing trip, the fishery observer will thoroughly review all data sheets and verify that all data are legible and accurate. The Observer/Vessel Coordinator will then debrief the observer and verify that all data sheets are legible and accurately/completely filled out. At this time, the Observer/Vessel Coordinator will also inquire into any problems encountered during the trip that could have increased variance within the collected data. If any abnormal problems were encountered, the Observer/Vessel Coordinator will consult with the Foundation's Program Director to discuss the experimental design and proper procedures necessary to alleviate the problem.

After the Observer/Vessel Coordinator has thoroughly reviewed the data, he will then make copies of the original data. He will keep all photocopies and forward the original data to the contracted Data Manager. The Data Manager will then review the data and enter it into a relational database that will be easily accessible to Foundation Contractors and NMFS. After all data have been entered and backed-up, the data (both electronic and hard copies) will be archived at the Foundation's office in Tampa, FL where it will be available for use by interested parties.

The dataset created during the performance of this award is not intended to be considered a standalone, but is meant to augment existing datasets and assist scientists in the development of formal stock assessments for the snapper-grouper complex. As a result, the majority of data analyses for this project will be descriptive and include, but is not limited to: number of trips sampled, number of vessels sampled, average number of sets per station, species specific CPUE, species specific length-frequency distribution, mean depth per trip and station, the ratio of retained vs. discarded catch, synopsis of hooking area, distribution of effort, proportional discard mortality rate, and proportional condition of catch by depth.

Additionally, due to the discontinuous or categorical nature of the variables being recorded, a limited number of logit models/tests will be utilized (described in Floyd 2001). Most importantly, is the effect of depth, seasonality, and line retrieval speed on the discard fate of finfish incidentally harvested during commercial hook-and-line fishing operations. In the simplest example, the model for the statistical analysis can be expressed as:

(depth, season, line retrieval) -> (discard fate)

This model assumes that discard fate is dependent on depth, season of harvest, and the speed of line retrieval. The resulting data array, if we assume 3 categories each for depth (shallow, mid, deep) and line retrieval (slow, medium, fast), will result in a 3 (depth) x 4 (season) x 3 (line retrieval) x 4 (discard fate) array. The resulting model will then become:

$$m_{ijkl} = n \times p_i \times p_j \times p_k \times p_l$$

where m denotes the expected cell count in cell m_{ijkl}, n is the total sample size, and p (all variables) is the marginal proportion in row-x (e.g., the odds ratio of the event). m is then represented as a linear function and log transformed (simply multiply ln by each of the variables). To test for significance, the logarithmic odds ratio will be divided by the asymptotic standard error, and the results compared against the standard normal distribution (Floyd 2001). However, to simplify the analysis description, pre-existing SAS codes (Floyd 2001) will be utilized for data analyses (example SAS code provided in Scheiner and Gurevitch 2001).

Dissemination of Results –

Information and results of this project will be disseminated through a public presentation convened in conjunction with a South Atlantic Fishery Management Council meeting (to be announced at a later date). By coordinating the public presentation in conjunction with the Council Meeting, we will maximize participation by commercial fishermen, fishery managers, and the concerned public. This public presentation will highlight the data collection methods for the project and the results derived from the analyses, with implications for data use during stock assessment. Not only will this presentation act as a forum to discuss the relevance of the project, but will also provide insight into fisheries management and the science behind stock assessment analyses.

Additionally, cooperating fishing vessels will be provided with regular updates and a copy of the Foundation's final project report. Summary reports of the project's findings will also be published as part of the "Foundation Project Update" section of the "Gulf and South Atlantic News", the quarterly publication of the Gulf & South Atlantic Fisheries Foundation, Inc. This newsletter is distributed to over 300 organizations and individuals throughout the region. An electronic version of this newsletter (PDF) is also included in the regular updates to the Foundation's website (www.gulfsouthfoundation.org).

Expected Results and Discussion:

Serving as the only regional research and development organization aimed at assisting the commercial fishing industries of the Gulf of Mexico and South Atlantic, the Foundation has developed a high level of credibility among the commercial fishing industry of the southeastern United States. The funding of this project will allow the Foundation to directly assist the commercial snapper-grouper fishing industry through (1) increased efforts to introduce cooperating industry members to fisheries management, and (2) dissemination of project results to increase project awareness and illuminate the need for increased data available for inclusion in stock assessments.

Commercial fishermen are typically dubious of assisting in the collection of fisheries related data because they believe this information will be used to further restrict harvest within their fishery. Due to the limited amount of data available within the snapper-grouper complex, fishermen are becoming more aware that management regulations based on insufficient and incomplete datasets can have effects (e.g., stocks being considered overfished when they are healthy). As a result, industry members want to become more involved in cooperative research and fisheries management. By increasing industry participation, fishermen are cognizant of the methods used to collect data and are more trusting of the stock assessment results that utilized the data they help collect. This is no more apparent than in the shrimp fishery of the Gulf of Mexico. Shrimp fishing effort allocation by NMFS overestimated the magnitude of red snapper bycatch and the impact of the fishery on the red snapper stock. After the Foundation completed several projects, with the cooperation of industry, aimed at accurately recording effort in time and space (electronic logbooks), the 2004 stock assessment of red snapper (SEDAR-7) indicated that the directed red snapper fishery had the greatest impact on the stock resource and not shrimp trawl bycatch (although shrimp trawl bycatch is still considered a problem). Through dissemination of project results to industry, cooperation increased markedly during subsequent projects. These same results could be attained within the snapper-grouper fishery of the South Atlantic. For instance, if fishermen are aware of the specific use of the data they help collect the effect of this data on management regulations, this increases their "buy-in" into additional cooperative research and data collection projects both within the snapper-grouper and other fisheries.

Although the data collected during the performance of this project are fishery dependent, they will provide much needed data to stock assessment scientists. Collection of discard rates was a priority research item identified in recent stock assessments (SEDAR 2007). Central to any stock assessment is knowing where effort is allocated and knowing the quantity of fish exploited. Although these data can be gained through trip ticket and landings information (gathered through dealer invoices, and other data collection programs administered through state and federal agencies), the data collected in this project can serve as a benchmark to compare and contrast the accuracy of historic data collection methods and increase the precision of collected data. Additionally, accurate estimates of spatiotemporal catch-per-unit-effort can be derived.

Perhaps the most important data collected during this project are those regarding discards and discard fate (e.g., mortality). These data are not typically logged by fishermen or logbooks [although recent pilot studies using electronic logbooks in the South Atlantic have been attempted (Perot Systems 2006)] and can have a significant impact on the stock status of a fishery. Inaccurate estimates of discard mortality can lead to an over- or under-estimate of the impact of the fishery (either commercial or recreational) on the population, thereby leading to misinformation and false outputs by the stock assessment models. This information would only lead to inappropriate management actions and place extreme burden on resource users within the fishery.

As fish stocks increase under new and sustained management regulations, there is an increased need to assess the effectiveness of management regulations. With the national programmatic goal of reducing bycatch mortality, an increase in the accuracy of reported discards and the fate of these discards can allow for an analysis of management strategies. Recent concerns about the

discard mortality associated with the snapper-grouper complex within the South Atlantic has led to a reevaluation of size limits. Concerns have been raised as to the feasibility of size limits within a mid- to deep-water fishery, due to the physiological damage to the fish when brought to the surface (e.g., low probability of survival for fish harvested at deep depths). This is problematic considering the increasing biomass assumed to be acquired under increased management regulations. If a large proportion of undersized fish are harvested and discarded alive, then size limits are a feasible management options. But if undersized fish are discarded dead or post release mortality is high, then this severely impacts recruitment of fish into the commercial fishery and decreases future harvests. There is also an associated ecosystem impact on faunal assemblages with cascading effects within top-down and bottom-up controlled systems that impact both population and foodweb dynamics. With the information derived from this project, the South Atlantic Fishery Management Council and NOAA Fisheries can assess the impact of size limits on the snapper-grouper fishery. For example, the Council and NMFS could contemplate the feasibility of allowing the first 2000 pounds of vermilion snapper to be landed, as compared to the first 2000 pounds of vermilion snapper of a certain size.

Justification for Federal Support:

This project will address several national priorities set forth by the Magnuson-Stevens Act, priorities outlined within the FY2007 Cooperative Research solicitation (e.g. Section 1. Commercial Finfish; a. Characterize Total Catch; (1) Projects needed to collect detailed information on the composition and disposition of bycatch and discards), and those outlined within the Cooperative Bycatch Plan for the Southeast United States (NOAA 2004). Further, U.S. fisheries resources and marine ecosystems are a public commodity and, as such, are managed by the United States Government. The research outlined within this proposal has the potential of impacting the commercial fishing industry, state and federal fisheries management agencies, seafood consumers, recreational anglers and the public-at-large. Given the extent of the benefits gained from this project by interest groups, it is fair and reasonable to ask for federal assistance to conduct this study.

Project Management:

Principal Investigators:

Ms. Judy Jamison, Executive Director
Dr. Michael Jepson, Program Director

Foundation Staff:

Ms. Gwen Hughes, Program Specialist
Ms. Charlotte Irsch, Grants/Contracts Specialist
Ms. Catherine Bowker, Administrative Assistant

Overall project quality control and assurance will be assumed by the Gulf & South Atlantic Fisheries Foundation, Inc. through its office in Tampa, FL. Foundation personnel will each spend 20% of their time over the course of the 12-month project period in the performance of

this award. A project of this magnitude is time consuming and requires the direct and constant attention of each Foundation employee. Qualifications of the Principal Investigators are highlighted in the attached resumes.

The Foundation's Executive Director, Ms. Judy Jamison, has ultimate responsibility for all Foundation administrative and programmatic activities, with oversight by the Foundation's Board of Trustees. She ensures timely progress of activities to meet project objectives and confirms compliance of all activities with NOAA/NMFS.

The Foundation's Program Director, Dr. Michael Jepson, has overall responsibility for all technical aspects of Foundation projects and coordinates performance activities of all project personnel, including contractors. He confirms and evaluates the effectiveness of projects and subcontracts and ascertains timeframe and funding limitations for the project. Should alterations to the described experimental design or data collection protocols be necessary, he confirms that all data are collected in a scientifically rigorous manner to ensure the usefulness of all collected data. Additionally, he coordinates all analytical efforts, prepares all progress and final reports concerning project performance, and drafts the Foundation's quarterly newsletter.

The Grant/Contracts Specialist, Ms. Charlotte Irsch, is responsible for maintaining general financial accounting of all Foundation funds including all Cooperative Agreements and contracts, as well as communicating with NOAA Grants Management personnel, and assisting auditors in their reviews. She conducts/documents internal and program (single and desk) audits, prepares backup documentation for fiscal audits, and drafts award extension requests (if applicable). Ms. Irsch provides the Executive and Program Directors with projected budgets concerning program performance and ensures that these budgets adhere to the proposed project budget. Finally, she prepares the annual administrative budget, NOAA Financial Reports, and confirms compliance of all activities with NOAA/NMFS and OMB guidelines.

The Program Specialist, Ms. Gwen Hughes, is responsible for tracking programmatic activities, securing federal and state collection and experimental permits, exempted fishing permits, monitoring funding and distribution of funds. She is also responsible for generating supporting documentation to assist in any and all programmatic audits. Ms. Hughes is responsible for the coordination of all program related workshops and auditing and paying program related invoices. She processes requests for reimbursement to conform with federal guidelines and prepares and maintains all contracts, subcontracts, agreements and amendments. Additionally, she is responsible for maintaining vessel insurance and securing workers compensation certificates on all cooperators, if applicable.

The Administrative Assistant, Ms. Catherine Bowker, is responsible for receptionist/clerical duties, word processing, filing correspondence, dissemination of materials to industry (final reports, press releases, newsletter). She is also responsible for creating and organizing meeting files, processing invoices and maintaining cooperative program files.

Participation by Persons or Groups Other Than Applicant:

A project of this magnitude and importance requires the cooperation and active participation of many organizations and individuals. The Foundation has chosen to sole-source contract with several persons in conjunction with this project. The essential personnel needed to complete the project objects are:

Mr. Lindsey Parker, South Atlantic Regional Coordinator, University of Georgia Marine Extension

Mr.Daniel Parshley, Observer/Vessel Coordinator

Mr. Phil Diller, Data Manager

Dr. Benny Gallaway (LGL Ecological Research Associates) and Staff, Data Analyst

1 Fishery Observer (To be contracted from those below or TBA)

Mr. Robert Timmeney
Mr. Konstantin Kopylov
Mr. Michael Gordon
Mr. J.L. Wiswell
Mr. Frank Helies

Mr. Mark Marhefka, Industry Coordinator; Commercial Fisherman; Interim Director-South Atlantic Sustainable Fisheries Association, Inc.

Dr. Mike Prager, NMFS Cooperator, Beaufort Laboratory

Many of the above individuals have been associated with other, similar Foundation research programs and projects. Their continued involvement will provide stability and allow for a smooth progression into this project from both a management and performance perspective.

Through years of experience, the Foundation has found that working closely with Marine Extension Service personnel (Mr. Lindsey Parker) is an efficient way to achieve rapid communication and cooperation with local fishermen. The Regional Coordinator will act, in cooperation with the Industry and Observer/Vessel Coordinators, as a liaison between the Foundation and vessel owners, relaying information about the project goals and securing vessel participation.

The Observer/Vessel Coordinator will assist the Program Director, Program Specialist, Regional Coordinator, and Industry Coordinator in their day-to-day activities and will coordinate all field efforts through constant communication with Foundation staff and contractors. The Observer/Vessel Coordinator will recruit and train all observers and coordinate field sampling efforts. He will also contact and establish a good working relationship with various cooperating vessel owners, captains and crew, and provide this information to fishery observers. Prior to the deployment of a fishery observer, the Observer/Vessel Coordinator will review with each

observer all established protocols on how and what data to collect while onboard a participating vessel. He will also provide all necessary sampling and safety equipment and is responsible for reviewing all data for completeness prior to data entry.

The Industry Coordinator will work with the Regional and Observer/Vessel Coordinators to assist in securing and increasing vessel participation for this project. Mr. Marhefka is the owner and operator of a commercial bandit rig vessel that targets snapper-grouper within the South Atlantic. He is well respected within the fishery, holds an Advisory Panel seat on the South Atlantic Council, and is widely known. Also, acting as Interim Director of the South Atlantic Sustainable Fishery Association, he has increased awareness within the snapper-grouper commercial fishery for the need to collect more accurate data that can be utilized by stock assessment scientists. His history within the fishery, knowledge of the management process, and personality will increase the universe of vessels participating in the performance of this award.

Only observers that have undergone rigorous NMFS certification training will be contracted by the Foundation. This training will include safety training, turtle training, onboard practices to avoid interference with the participating vessel captain and crew, data collection protocols (both classroom and at-sea training), and administrative protocols. It is the job of the fishery Observer to collect and proof all collected data for completeness and accuracy before being debriefed by the Foundation Observer Coordinator. The Foundation currently has five contracted observers working on complementary projects. Because these individuals possess the skills needed to fulfill the position and have proved themselves under field conditions, the contracted observer position will be offered to these individuals. If additional observers are needed to collect data, a competitive solicitation process will be conducted by the Foundation.

Observer collected data for this project will be electronically entered by a Foundation contracted Data Manager. The Data Manager is responsible for checking and transferring all raw data into a manageable computer database for data archive. A copy of all observer collected data will be made available to the respective NOAA Fisheries division for archive. Once the data are ready, they will then be forwarded to the Data Analyst (LGL Ecological Research Associates, Inc.) and Foundation Program Director.

The contracted Data Analyst will conduct all statistical tests on observer-collected data with overview and direction from the Foundation's Program Director. Statistical tests will be varied, but will mostly focus on describing the fishery to include fishing effort, total catch characterization, and discard fate. The Foundation will rely on the analytical and scientific skills of the Data Analyst to assist in any ancillary statistical tests (i.e., descriptive statistics, spatiotemporal effort, Bayesian tests, etc.) that could be completed during the performance of this award.

All data will be gathered through the cooperation and direct participation of the commercial vermilion snapper fishing industry of the South Atlantic region. Without the cooperation of industry, this project would not be possible. The use of fishing vessels as research platforms, not only reduces the costs associated with this project, but ensures that industry is aware of the research and allows them to be involved in all steps of the scientific and management process.

By allowing fishermen to actively participate in the collection of data, they will be more trusting of the results generated from this research and will be more willing to assist in future research.

The Foundation has historically worked cooperatively with NOAA/NMFS staff and personnel in the performance of research projects. Dr. Mike Prager (NMFS Beaufort Laboratory) has agreed to be this project's NOAA Fisheries Cooperator. Dr. Prager will confirm that all data are collected in a scientifically rigorous manor and will provide feedback on the performance of this project. He will also provide limited input on data analyses conducted by the Data Analyst. The Program Director will keep Dr. Prager appraised of the performance of this project and provide regular updates on any and all progress and/or problems that may occur.

Monitoring of Project Performance:

Given the current controversies and conflicts among various interest groups related to the programmatic concepts outlined here, there is a possibility that one (or more) of these groups will question the validity of the Foundation's findings. For internally conducted studies, Principal Investigators (PIs) will regularly communicate with Observer and Foundation Observer and Regional Coordinators concerning fieldwork. PIs also review data for completeness and accuracy. The Program Director will monitor the data management procedure to ensure that all data entry and analyses meet objectives outlined within the proposal. Additionally, the quality of data collected, and the procedures used to collect those data, will be assured through the use of highly qualified and knowledgeable observers who are experienced in this line of work.

Internal and external monitors will oversee the PIs' activities and responsibilities. The Foundation Board of Trustees, representing various commercial fishing and seafood interests throughout the southeastern United States, oversee the PIs' tasks and are kept aware of and critically review interim and final project reports. This program will be conducted as an award with NMFS and the timely completion of project objectives will be externally monitored by the Program Office of the NMFS Southeast Regional Office, NOAA Grants Management, and a NMFS Technical Monitor. Interim and final progress and financial reports concerning the program will be submitted to NOAA/NMFS, as required, to help the agency track the successful implementation, performance, and completion of the various tasks outlined in this proposal. During the period when analysis of the data is being conducted, the PIs and peer reviewers will discuss data, data analyses, and data interpretation. Only after the analyses have undergone rigorous evaluation will the final report be accepted and printed.

Milestone Table:

Project Activities	2008							2009							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Project Start-up Activities/Contract Negotiations	XX														
Project Coordination/Monitoring	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX			
Observer Training	XX	XX	XX												
Solicit Industry for Participation	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX			
Permit Applications		XX	XX	XX											
Selection of Participating Vessels		XX	XX	XX	XX	XX	XX	XX	XX	XX	XX				
Observer Data Collection		XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX			
Evaluation of Test Results - Data Analysis										XX	XX	XX			
Dissemination of Results/Final Public Presentation										XX	XX	XX			
Project Closeout & Final Report Preparation													XX	XX	XX
Final Report Submission															XX

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SNAPPER GROUPER BANDIT REEL FISHERY – LIST OF PERSONNEL AND VESSELS

VESSEL NAME	OWNER/CAPTAIN	CG DOC #
A Different Drummer	Allen Dale Tatum, NC	904429
Amy Marie	Mark Marhefka, SC	684458
Amy Michelle	Headley, Inc., NC	662419
Atlantic Runner	Lindon G. Mathis, NC	NC9221BA
Big Daddy	Robert Green, SC	613010
Bloody Mary	U.S. Inc., SC	675503
Bonney Anne	J & C Fishing, Inc., SC	666686
Can Do II	Clifford Scott, Jr., FL	625015
Cap'n Boo	Herring Marine, Inc., NC	946409
Capt. Dennis	Capt. Dennis, Inc., SC	293094
Cash Flow III	Jack H. Cox, Jr., NC	NC9782WN
CJR	C&G of Murrells Inlet, Inc., SC	683938
Deep South	Strawberry, Inc., NC	NC3646DD
Denise Marie	E. Gail Scoggins, GA	950066
Ellen	Ellen, Inc., NC	983406
Endangered Species	Milton B. Mathis, NC	NC8029AR
F.E.H.	FEH Fishing, Inc., SC	946197
Gladiator	Matthew Ruby, SC	635623
Goodfoot	Richard F. Chesney, SC	577937
Gready Eady	Jimmie Millard Eady, III, NC	NC4909BF
Grouper Snooper	J & C Fishing, Inc., SC	654327
Gulfstream I	Southport Fishing Center, Inc, NC	1021546
Island Runner	Lindon G. Mathis, NC	661878
Jeanie III	Garris Enterprises, NC	982774
Kimberly L	Head East II Seafood, Inc., GA	663048
Lady Di	D & L Fishing, Inc., SC/DE	DL6337X
Lady Diane	Lady Diane, Inc., GA	651872
Mollie D	Steve Shelley, SC	614717
Mule Train	Donald R. Brown, FL	680763
Patsea	Best Atlantic Seafood Systems, SC	632082
Raw Bar	Kenneth and Randy Fex, NC	654199
Sea Dog	Charles Phillips, GA	674900
Sea Rider	D & L Fishing, Inc., SC	699833
Shelley	Dunnie G. Smith, NC	608083
Split Decision	Triple D, Inc., NC	983372
Triple D	Triple D, Inc., NC	NC6246BN
Warrior III	Matt Ruby & Jackie McGuin, SC	661287

Current Foundation Observers: Francis Helies, Robert Timmeney, Konstantin Kopylov, John L. Wiswell

Current Foundation Coordinators: Daniel Parshley, Russell O'Brien, Lindsey Parker, Gary Graham, Michael Jepson (Foundation Program Director)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701
(727) 824-5312, FAX 824-5309
http://sero.nmfs.noaa.gov

AUG 23 2006

F/SER31:MCB

Ms. Judy L. Jamison
Gulf and South Atlantic Fisheries Foundation, Inc.
5401 West Kennedy Blvd Suite 740
Tampa, FL 33609

Dear Ms. Jamison:

This letter addresses Gulf and South Atlantic Fisheries Foundation's (GSAFF) projects that may involve observation of incidental capture of threatened and endangered sea turtle species and specifically outlines allowable data collection activities and handling of these species. Currently, GSAFF has three projects where GSAFF personnel may observe incidental captures in the course of the associated commercial fishing activities. These are *An Assessment of Turtle Excluder Devices Within the Southeastern Shrimp Fishery* (NA04NMF4540112), *A Project to Augment the Data Collection and Development of an Electronic Logbook System Used Within the Gulf of Mexico Shrimp Fishery* (NA05NMF4540044), and *Catch Characterization and Discards Within the Snapper Grouper Vertical Hook and Line Fishery of the South Atlantic United States* (NA06NMF4540059).

While conducting work related to the above National Marine Fisheries Service (NMFS) research grants, GSAFF personnel are considered NMFS-designated agents. As outlined in the regulations for endangered and threatened sea turtles at 50 CFR 222.310 and 50 CFR 223.206, an agent may aid and collect data from endangered or threatened sea turtles. These regulations have been previously provided to your staff. Live turtles must be handled, and resuscitation measures must be implemented, according to the enclosed procedures. Whenever possible, live sea turtles shall be returned to their aquatic environment as soon as possible. The regulations specify reporting requirements and the allowable data collection activities for live, incidentally captured turtles. All GSAFF observer personnel have received sea turtle handling and data recording training from the NMFS Southeast Fisheries Science Center (SEFSC). With the exception of skin biopsy sampling, which is not authorized through these regulations and should not be undertaken without a separate permit, following the SEFSC protocols for turtle handling and subsequent turtle data reporting will ensure compliance with the applicable requirements.

If you have any questions regarding this matter, please contact Michael Barnette, fishery biologist, at the number listed above, or by e-mail at michael.barnette@noaa.gov.

Sincerely,

Roy E. Crabtree, Ph.D.
Regional Administrator

Enclosure

SEA TURTLE HANDLING AND RESUSCITATION GUIDELINES

Any sea turtles taken incidentally during the course of fishing or scientific research activities must be handled with due care to prevent injury to live specimens, observed for activity, and returned to the water according to the following procedures:

A) Sea turtles that are actively moving or determined to be dead (as described in paragraph (B)(4) below) must be released over the stern of the boat. In addition, they must be released only when fishing or scientific collection gear is not in use, when the engine gears are in neutral position, and in areas where they are unlikely to be recaptured or injured by vessels.

B) Resuscitation must be attempted on sea turtles that are comatose or inactive by:

1) Placing the turtle on its bottom shell (plastron) so that the turtle is right side up and elevating its hindquarters at least 6 inches (15.2 cm) for a period of 4 to 24 hours. The amount of elevation depends on the size of the turtle; greater elevations are needed for larger turtles. Periodically, rock the turtle gently left to right and right to left by holding the outer edge of the shell (carapace) and lifting one side about 3 inches (7.6 cm) then alternate to the other side. Gently touch the eye and pinch the tail (reflex test) periodically to see if there is a response.

2) Sea turtles being resuscitated must be shaded and kept damp or moist but under no circumstance be placed into a container holding water. A water-soaked towel placed over the head, carapace, and flippers is the most effective method in keeping a turtle moist.

3) Sea turtles that revive and become active must be released over the stern of the boat only when fishing or scientific collection gear is not in use, when the engine gears are in neutral position, and in areas where they are unlikely to be recaptured or injured by vessels. Sea turtles that fail to respond to the reflex test or fail to move within 4 hours (up to 24, if possible) must be returned to the water in the same manner as that for actively moving turtles.

4) A turtle is determined to be dead if the muscles are stiff (rigor mortis) and/or the flesh has begun to rot; otherwise, the turtle is determined to be comatose or inactive and resuscitation attempts are necessary.

Any sea turtle so taken must not be consumed, sold, landed, offloaded, transshipped, or kept below deck.

These requirements are excerpted from 50 CFR 223.206(d)(1). Failure to follow these procedures is therefore a punishable offense under the Endangered Species Act.

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

ROUTING

EXEC. DIR.
ADMIN. ASS'T

NOAA - NMFS
263 13th Avenue South
St. Petersburg, FL 33701

February 04, 2008 F/SER1:EFR
08CRP007

RECEIVED 2/5/08

Judy L. Jamison
Gulf and South Atlantic Fisheries Foundation
5401 West Kennedy Boulevard, Suite 74
Tampa, FL 33609

Dear Ms. Jamison:

I am pleased to advise you that your proposal entitled, "A continuation of the catch characterization and discards within the snapper- grouper vertical hook-and-line fishery of the South Atlantic United States," submitted to the National Marine Fisheries Service under the Unallied Management (UM) Program, has been recommended for funding.

Your proposal must still be reviewed by the NOAA Grants Management Division, the Office of General Counsel, the Office of the Inspector General, and the Department of Commerce Financial Assistance Review Board. You should NOT initiate work on this proposal in expectation of receiving Federal funding until you receive written authorization from the NOAA Grants Management Division. Any costs incurred prior to the issuance of the award document are incurred at your own risk.

You may be contacted in the near future to participate in negotiations to determine the conditions under which the award will be made.

Thank you for your interest in the UM Program.

Sincerely,

Ellie F. Roche
Chief, State/Federal Liaison Branch

Phone: (727)824-5324
Email: Ellie.Roche@noaa.gov

cc: