MARINE
RECREATIONAL INFORMATION
PROGRAM

FY Project Plan

Cooperative design of a logbook reporting program for the Gulf of Mexico

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1. Overview

1.1. Background

A recent study of marine angler expenditures nationwide demonstrates the economic importance of recreational fishing to the Gulf of Mexico region, with Florida ranked first ($16.7 billion), Texas ranked second ($3.2 billion), and Louisiana ranked fourth ($2.9 billion) in the nation for annual expenditures (Gentner and Steinback, 2008). The Gulf of Mexico supports large recreational fisheries, and significant portions of total recreational landings are attributed to the for-hire sector (Table 1). Two important species complexes, reef fish and pelagic fish, are highly sought by recreational anglers. These species are assessed and managed as unit stocks throughout the region, and many of these stocks are either overfished or recovering from overfishing. Recreational fisheries for these species are tightly regulated with seasons, size limits, daily harvest limits, and gear specifications. There is a critical need in this region to improve the timeliness and accuracy of recreational fishing statistics. In recent years, the length of the recreational season has been adjusted in response to unanticipated recreational harvest levels that exceeded management targets. The recreational fishing season for red snapper was open six months in federal waters until as late as 2006, reduced to four months in 2007, and reduced again to two months in 2008. Fishery managers still await final statistics for 2008 to determine the length of the season for 2009. For for-hire fisheries that rely on fixed seasons to plan their business and book trips in advance, this type of fisheries management has devastating economic impacts.

In 2006, the National Research Council conducted an independent review of recreational fisheries survey methods (NRC 2006). The NRC review recognized that in regions such as Alaska and the Gulf of Mexico, the magnitude of the for-hire sector and the potential scale for fishery removals warrants the use of mandatory logbooks as the source of catch and effort data for the for-hire sector. The NRC recommended essential elements for this type of reporting system to meet acceptable standards for data collection. First, reporting should be mandatory for continued operation in the fishery, and they highly favored reporting requirements that are tied to permit renewal for continued participation in the fishery. This census-style reporting system is expected to minimize the need for under-coverage adjustments in catch and effort statistics. Second, the reviewers recognized that data collected through logbook programs will be reliable only if there are strict verification and enforcement components of the program. They recommended that self-reported information collected on both CPUE and effort be verifiable. Thirdly, the reviewers recommended that information collected in a logbook program should be made available in a timely manner.

In 2009, a more detailed review of for-hire data collection methods in the United States supported the NRC recommendations (MRIP in progress). In addition, the reviewers provided a list of best practice recommendations for collecting and verifying self-reported logbook data (see Appendix A attached). In the Gulf of Mexico, the reviewers recommended that complete logbook coverage for for-hire data collection be phased in as soon as possible, and that all applicable best practice

recommendations should be applied in the region.

In the Gulf of Mexico, for-hire vessels must have federal permits to fish for reef fish and pelagic fish in the EEZ, and they are required to participate in at least one approved regional data collection program as a condition for permit renewal. There is currently a moratorium on the issuance of new federal permits, and the loss of privilege is strong incentive to comply with reporting requirements. Vessels without federal permits may legally fish for these species in state territorial seas; however, in states where territorial seas extend 3 nautical miles (AL, MS, LA), federal permits are essential to participate in these fisheries. In Texas and Florida, state territorial seas extend 9 nautical miles from shore and it is plausible that for-hire vessels may fish for reef fish and pelagic species in state waters, with or without federal permits.

Vessels with federal permits must participate in one subsequently approved appropriate data collection system*. Currently, there are three approved regional programs in the Gulf of Mexico that collect data from for-hire fisheries:

1. The Southeast Headboat Survey, which includes large capacity headboats operating in the Gulf of Mexico from Texas through Florida. Vessels included in this survey are required to report catch and effort on paper logsheets for each trip and submit trip level data monthly to National Marine Fisheries Service.

2. The For-Hire Survey, which includes all for-hire vessels operating in the Gulf of Mexico from Louisiana through Florida that are not already reporting in the Southeast Headboat Survey. These vessels are required to report all trips taken during selected weeks (effort only) whenever they are randomly selected to participate in the survey. Vessel operators are contacted by telephone to collect this data. Catch data are collected in a separate dockside intercept survey, and there is no requirement for these vessels to participate in that portion of the survey.

3. The Texas Parks and Wildlife Survey, which is a field-intercept survey of boat-based fishing, including for-hire vessels. This survey estimates fishing effort and catch (harvest only) on a seasonal basis.

While the requirement for federally permitted vessels to report in one of the approved data collection methods carries potentially severe consequences for non-compliance, not all of these data collection systems were initially designed to support mandatory reporting requirements. In the Southeast Headboat Survey, all large capacity headboats are selected to participate and vessel operators are required to report 100% of their vessel trips. This data collection method places responsibility for submitting required information directly on the permit holder, and compliance is monitored and enforced. The obligation to report is periodically reinforced via certified letter to each permit holder. In contrast, the For-Hire Telephone Survey was designed to be a voluntary survey and the agent conducting the telephone interviews is responsible for collecting trip information from vessel operators. To enforce the mandatory reporting requirement in the For-Hire

Telephone Survey, permit holders who refuse the survey over the phone are notified by letter of their obligation to report as a condition for permit renewal. However, it is impossible to identify permit-holders who are evading the survey by refusing to answer the phone. Contact rates in the For-Hire Telephone Survey vary by wave (2 month sample period) and by state and region, and the percent of selected vessels that are unable to be contacted by phone is quite high in some strata. For example, during wave 3, 2007, 32% of vessels selected in the Florida Keys and 27% of vessels selected in the western peninsula region of Florida could not be contacted in the telephone survey (GSMFC 2007).

1.2. Project Description

The For-Hire Telephone Survey estimates close to half of all for-hire angler trips in the Gulf of Mexico spend the majority of fishing time in the EEZ. Because for-hire effort estimates are generated by area fished (inland, state waters, and EEZ), achieving 100% reporting compliance for federally permitted vessels would increase precision and reduce potential non-response bias in effort estimates for the EEZ. However, improving survey response rates for vessels that take more fishing trips in the EEZ, but not making the same improvements in the survey response rates for vessels that take more trips in inland waters and state territorial seas, could result in a higher proportion of survey respondents reporting trips in the EEZ. Since these proportions are used to expand estimates for all vessels in the survey frame, this would result in an overestimate of the proportion of trips taken in the EEZ. Therefore, it is important to implement some form of follow up with non-respondents who participate voluntarily in the survey to identify and account for this potential bias.

The Texas Parks and Wildlife Survey samples vessels fishing in inland, state, and federal waters. In 1991 Texas increased sampling for vessels fishing in the Gulf of Mexico and there are plans to increase state sampling efforts in the future for vessels operating in federal waters (P. Campbell, pers. comm.). Estimates from this survey are not directly comparable with the For-Hire Survey. The Texas survey estimates harvest for two sample periods, “high use” and “low use” fishing seasons, which are not easily converted to monthly or calendar year estimates. Because the Texas survey does not collect data on numbers of fish discarded, discarded fish for regional stock assessments must be estimated for Texas using proportions from data collected by the For-Hire Survey in other states.

Industry support for a universal logbook reporting method in the Gulf of Mexico has been building throughout the region in recent years, particularly from vessels that participate in federally managed fisheries. The increasing public testimony supporting a change to logbook reporting has spurred recent actions at state and regional levels. At the request of the for-hire industry, the Louisiana Department of Wildlife and Fisheries was mandated by legislation to develop and implement a voluntary electronic logbook reporting system in 2009. The state reporting system will be in addition to existing regional data collection programs that federally permitted vessels are required to participate in, and currently there are no means for validation of self-reported effort and

catch data in the state logbook. Potential differences in catch and effort numbers from the alternative data collection programs may not be readily explainable to industry participants and could erode confidence in the existing regional data collection programs. In addition, the Gulf of Mexico Fishery Management Council has been presented with multiple industry-supported logbook data collection proposals over the past year, and these groups are urging the Council to implement a regional logbook reporting system specifically for red snapper before the opening of the recreational season in July, 2009. One of those proposals is funded by the non-profit group, the Environmental Defense Fund, and includes the development of licensed computer software for real-time electronic reporting with a vessel monitoring system (VMS) to track vessel activity and fishing locations. Some for-hire industry groups are opposed to mandatory use of VMS, citing the high cost and limited utility for validation of fishing activity, and have offered alternative proposals for the Council to consider. Among the supporters for each plan, there is general agreement that self-reported logbook data must be validated; however, there is no consensus for how to accomplish this. In response, the Gulf Council made a motion at their January, 2009, meeting to request guidance from the NMFS Southeast Fisheries Science Center and the Marine Recreational Information Program (MRIP) on protocols for validation of self-reported recreational data, and recommended that MRIP establish pilot projects to evaluate and ground truth these protocols. Furthermore, they requested a review of industry-supported proposals in the Gulf of Mexico as they relate to validation of self-reported data.

Given the high non-response rates that are unaccounted for in the current survey method, mandatory reporting requirements that are often unenforceable, the need for more complete fishing information and compatible estimates for regional stock assessments, and the urgent need for more timely data for fisheries management, there is strong justification for moving to a new system for for-hire data collection in the Gulf of Mexico. This is reinforced by two recent independent reviews of recreational fisheries data collection methods and the growing support within the for-hire industry in this region.

1.3. Objectives

1.4. References

*Participation means being identified in an active survey frame (i.e., universe of captains or vessels from which persons are randomly selected report) and, if chosen, providing the requested information (GMFMC, 2003).

GMFMC (Gulf of Mexico Fishery Management Council), 2003. Corrected Amendment for a Charter Vessel/Headboat Permit Moratorium Amending the FMPs for: Reef Fish (Amendment 20) and Coastal Migratory Pelagics (Amendment 14). Gentner, B. and S. Steinback, 2008. The Economic Contribution of Marine Angler Expenditures in the United States, 2006. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-F/SPO-94, 301p. MRIP (Marine Recreational Information Program), In Review. Review of For-Hire Recreational Fisheries Data

Collections in the United States. Report to the For-Hire Workgroup. NRC (National Research Council), 2006. Review of Recreational Fisheries Survey Methods. National Acadamies Press, Washington, D.C. 187 pp.

2. Methodology

2.1. Methodology

This proposal for MRIP funding addresses the current need to develop protocols and assess feasibility of implementing a universal logbook reporting program for for-hire data collection needs in the Gulf of Mexico. Specifically, the For-Hire Workgroup will work in collaboration with for-hire industry groups, representatives from state resource management agencies, Gulf States Marine Fisheries Commission, and federal fisheries managers and stock assessment scientists to identify the required data elements and reporting needs; evaluate the cost, benefits and practicality of alternative reporting methods; and identify existing data collection programs that may be integrated into a logbook reporting program for validation of self-reported data and compliance tracking. Contract support is requested to assist with evaluating the usefulness of existing data collection programs for validating self-reported catch and effort data, developing protocols, and recommending modifications to existing data collection or new data collection programs for future use in validation and compliance tracking.

The objectives of this project are to:
• Fund the research and design of a logbook reporting system for federally permitted vessels for region-wide implementation in the Gulf of Mexico. Components of this reporting system will include:
o Trip-level reporting for effort, catch (harvest and discards), and area fished
o Mandatory and enforceable
o Verifiable
o Timely for fisheries management
o Practical and supported by industry
o Cost efficient
o Estimates that are complementary throughout the region
o Satisfies reporting requirements and data needs of multiple data users
o Employs sound statistical methods
o Produces reasonably precise estimates at state and regional (within state) levels for stock assessment and fisheries management
o Complete registry of all federally permitted for-hire vessels with regular updates

• For vessels that currently participate in regional data collection systems on a voluntary basis, explore state-level support for including them in the proposed universal logbook reporting system. Components of this reporting system will match the system for federally permitted vessels, with the exception that participation would be voluntary, and will also include:
o Follow-up for non-response
o Measurement of non-response bias
o Estimates of catch and effort that account for non-response
o Complete registry of all state-permitted for-hire vessels with regular updates

• Explore potential state-level support for a mandatory reporting system.

• Develop procedures to validate self-reported catch and effort data, including:
o address concerns with current intercept survey methods identified by NRC and MRIP reviews
o collect additional data elements necessary for validation of catch and effort data
o adjust raw logbook data and account for misreporting using statistically sound methods

• Produce a follow-up proposal for MRIP Funding to include:
o Outreach to for-hire industry
o Pilot testing
o Benchmarking with existing data collection programs

Components of this study will include:
First, convene up to two workshops (up to two days) to meet with for-hire industry groups; representatives from state resource management agencies; Gulf States Marine Fisheries Commission; and representatives from National Marine Fisheries Service, including the Southeast Regional Office, Southeast Fisheries Science Center, and Science and Technology to:
• identify minimum data elements for a proposed logbook reporting system,
• determine the necessary reporting frequency,
• evaluate, with input from industry, the practicality of reporting methods and requirements,
• determine state-level participation (would states keep participation voluntary or match federal requirements; identify overlapping state reporting programs),
• evaluate the cost and benefits of various reporting options,
• identify existing data sources for potential validation of self-reported data,
• identify methods for tracking non-response/non-compliance,
• develop recommendations and preferred alternatives for a proposed logbook reporting system

Second, using recommendations developed from the workshops, the For-Hire Workgroup will work with MRIP contract support to develop protocols to validate self-reported data and account for non-response/non-compliance, including:
• evaluate usefulness of existing data sources identified by the For-Hire Workgroup, recommend improvements to existing data sources to meet short-term data needs (e.g., increase sample sizes, sample distribution, additional data elements),
• Review self-reported data collected from Louisiana state logbook reporting system and existing headboat program to evaluate methods for using existing data sources for validation,
• recommend new designs and procedures for future MRIP funding consideration (e.g. video monitoring, at-sea observer coverage, or other methods for additional data collection, validation, and non-response/non-compliance tracking),
• develop methods for adjusting raw logbook data for misreporting and under-reporting.

Third, the For-Hire Workgroup will develop a proposal for MRIP funding to begin outreach to

industry and testing implementation of a logbook reporting system in the Gulf of Mexico. This proposal would be developed in August for funding approval in 2009. The scale of the initial testing will be determined after the proposed methods are developed from this project.

Project Closure:
The final product will be the project proposal to the Operations Team, described in the Scope section, to implement a pilot logbook reporting system in the Gulf of Mexico, including protocols for validation of self-reported data, tracking compliance, follow-up for non-response, and adjustment of raw logbook data for misreporting and non-response/non-compliance. The proposal will include funding requests to:
• Hire a contractor to build the reporting system;
• Implement pilot testing and benchmark with existing data collection methods;
• Work with Gulf States Marine Fisheries Commission and National Marine Fisheries Service to establish infrastructure for handling data from multiple states and delivery to multiple users;
• Conduct analysis with NMFS Science and Technology to compare estimates between two methods, evaluate non-response bias in each method, look at rare event species in logbook reports (such as highly migratory species, localized and pulse fisheries), evaluate field intercept sample distribution (are the field intercept samples representative of regional catch rates, species compositions, etc.)

2.2. Regions

2.3. Geographic Coverage

2.4. Temporal Coverage

2.5. Frequency

2.6. Unit of Analysis

2.7. Collection Mode

3. Communications Plan

3.1. Internal

For-Hire Workgroup chair will provide monthly updates to Operations Team Chair during regular conference calls.

Results and recommendations from workshops will be documented and provided to the Operations Team Chair upon conclusion. Results of meetings and work conducted by contract support will be documented and provided to the Operations Team Chair prior to submission of a project proposal for FY2010.

3.2. External

test

4. Assumptions and Constraints

4.1. New Data

4.2. Track Costs

4.3. Funding Vehicle

Gulf FIN Grant

4.4. Data Resources

test

4.5. Other Resources

• assumes participation at industry, state, regional, and federal levels

• assumes Southeast Fisheries Science Center Director will require participation for federally permitted vessels

• mandatory reporting and frequency of reporting may require changes to existing state and/or federal legislation and/or regulations

4.6. Regulations

4.7. Other

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5. Risk

5.1. Project Risk

Table 1: Project Risk

Risk Description	Risk Impact	Risk Probability	Risk Mitigation Approach

6. Final Deliverables

6.1. Additional Reports

6.2. New Data Sets

6.3. New Systems

7. Project Leadership

7.1. Project Leader and Members

Table 2: Project Members

Project Role	Name	Organization	Title

8. Project Estimates

8.1. Project Schedule

Table 3: Project Schedule - Major Tasks and Milestones

#	Schedule Description	Planned Start	Planned Finish	Prerequisites	Milestones

8.2. Cost Estimates

Table 4: Cost Estimates

Project Need	Cost Description	Date Needed	Estimated Cost
TOTAL			$0.00