

Flower Garden Banks National Marine Sanctuary

Socioeconomics

Management Issue

With recent proposals suggesting the need to change fishing regulations in the Flower Garden Banks National Marine Sanctuary (FGBNMS or Sanctuary) and expanding the number of banks in the Sanctuary, research is needed to understand the economic impacts of the changes on users such as fishermen, the oil and gas industry, and diver operators.

Description

Expansion of Sanctuary boundaries and the creation of research only areas have the potential to displace different uses (e.g. commercial and recreational fishing, SCUBA diving, other wildlife viewing activities, and oil and gas activities). It is important to understand how the lives and livelihoods of people are potentially affected by proposed management strategies and regulations. In addition, a complimentary effort is needed to assess the knowledge, attitudes and perceptions of various management strategies and regulations and their efficacy among different user groups.



SCUBA divers explore the reef cap at the Flower Garden Banks National Marine Sanctuary. *Photo credit: FGBNMS*

Questions and Information Needs

- 1) Who are the commercial and recreational fishermen utilizing the resources of the FGBNMS and Northwest Gulf of Mexico (NW GOM) reefs and banks?
- 2) What is the level of fishing effort at the FGBNMS and NW GOM, by both commercial and recreational fishers?
- 3) What portion of total fishing effort is conducted at the FGBNMS and proposed sanctuary expansion areas?
- 4) What would the economic impact be to the commercial and recreational fishers, if fishing was prohibited or partially closed at the FGBNMS, and proposed sanctuary expansion sites?
- 5) What is the level of current visitor use by recreational divers?
- 6) What would be the impact of partial closures to recreational diving at the FGBNMS and proposed sanctuary expansion sites?
- 7) What would be the impact of limited entry to recreational diving at the FGBNMS and proposed sanctuary expansion sites?
- 8) What would be the impact of sanctuary expansion to oil and gas industry?
- 9) What are the knowledge, attitudes and perceptions of Sanctuary management strategies and regulations for each user group?
- 10) How are the knowledge, attitudes and perceptions of Sanctuary users changing over time?

Scientific Approach and Actions

- Use of existing National Marine Fisheries Service (NMFS) commercial fishing catch data by statistical area grid, species/species groups, and gear type (e.g. hook-and-line versus non hook-and-line) for estimating baseline levels of sustainable catch.
- Use of existing Texas Parks and Wildlife (TPW) and NMFS Head-boat data on estimating the baseline sustainable levels of recreational fishing effort.
- New data collections on spatial uses at finer spatial resolution (1-minute by 1-minute cells) for the NW GOM; socio-demographic profiles of users; costs-and-earnings of commercial fishing and for hire recreation operations; and knowledge, attitudes & perceptions of management strategies and regulations. Initial efforts will focus on commercial fishing operations and recreational for hire operations that take people out for recreational fishing, SCUBA diving, and other wildlife viewing activities using peer reviewed and U.S. Office of Management and Budget Approved questionnaires and survey sample designs.

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Scientific Approach and Actions *(continued)*

- Initial efforts on spending by those who access via recreational for hire operations, existing spending profiles from survey data by NMFS and TPW will be used.
- Initial efforts for those who access the NW GOM via household boats will be done using an “expert panel”, satellite imagery data, and NMFS and TPW information to make “best estimates” of the amounts and spatial distribution of uses.
- Future efforts will expand surveys to cover passengers onboard for hire recreational operations and those who access the FGBNMS via household boats to obtain use and socioeconomic profile information.
- Assessment and comparison of current MMS regulations and proposed sanctuary regulations at proposed sanctuary expansion sites.

Potential Key Partners and Information Sources

Minerals Management Service; Commercial and recreational fishermen; Gulf Diving, Inc.; Spree Expeditions, Inc; True Blue Watersports; National Marine Fisheries Service, Southeast Fishery Science Center; Texas A&M University; Sea Grant; Gulf States Marine Fisheries Commission; Louisiana Department of Wildlife and Fisheries

Management Support Products

- ArcView GIS tool with spatial use information linked to Excel Workbooks to assess socioeconomic impacts of different spatial alternatives.
- Expanded ArcView GIS tool with biogeography information for assessing socioeconomic impacts of spatial alternatives that meet all criteria for a research area.
- Reports with maps of uses and profiles of user groups.
- Recommended oil and gas coordination



Fishers enjoying a calm day at Stetson Bank. *Photo credit: FGBNMS*

Planned Use of Products and Actions

- Design of Research Only Areas.
- Assessments of Research Only Area Alternatives.
- Establishment of Final Selected Research Only Area Alternative.
- Baselines for monitoring and management of human activities.
- Development of Education & Outreach products.
- Account for human values and direct financial impacts of expenditures by Sanctuary users (lives & livelihoods).
- Socioeconomic assessments of management strategies and regulations.
- Resolving conflicts between user groups.

Program References

FGBNMS Management Plan Review Process

- Public Scoping Reports

FGBNMS Condition Report

- 4, 8, and 14

Other Documents

- 2002 ONMS Science Needs Assessment

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