

F. Essential Fish Habitat

1. Determine the effects of fishing gears (e.g., trawls and traps) and practices (e.g., gear retrieval and anchoring) on essential fish habitat (EFH), with emphasis on benthic habitats within the EEZ of the Caribbean, southern U.S. Atlantic, and Gulf of Mexico regions.
2. Develop scientific data to allow the identification and refinement, as appropriate, of EFH designations for the various life stages of Federally managed species.
3. Develop scientific data to allow the identification and refinement, as appropriate, of Habitat Areas of Particular Concern (HAPC) designation for the various life stages of Federally managed species.
4. Develop GIS mapping protocols and tools to allow the presentation of EFH, HAPC, fishery distribution information, and other relevant data for the southeastern United States, including Puerto Rico and the U.S. Virgin Islands.

G. Economic and Sociocultural Studies

1. Development and application of models to evaluate the economic impacts of bycatch reduction. The models should explicitly consider the impacts on the directed fishery and gains to the bycatch fishery. The models should be developed for fisheries in general and for major fisheries (e.g., shrimp and red snapper). The models should describe criteria for determining the economically and socially efficient level of bycatch reduction.
2. Development of economic incentives and other innovative alternatives, including bycatch quotas, to gear and season/area restrictions as ways to reduce bycatch. The project should contrast the relative costs, potential gains, and level of bycatch reduction associated with traditional methods and any innovative alternatives addressed by the project.
3. Evaluation of vessel logbook data for monitoring fishery performance and providing economic information for management.
4. Estimation of demand models for recreational fishing trips when the target species include a single species, an aggregate of related species, or all species combined. Studies using new data from the Southeast economics additions to Marine Recreational Fisheries Statistics Survey are highly encouraged. Studies can be proposed on species such as, red drum, king mackerel, Spanish mackerel, red grouper, gag, black grouper, dolphin, wahoo, vermilion snapper, yellowtail snapper, and Atlantic black sea bass. Fishing quality (stock size, catch per unit effort, average fish size) as a determinant of fishing demand should be emphasized.
5. Identification of the motivational factors behind the selection of specific charter types by recreational anglers. These include but are not limited to cost, duration (half day versus full day), time of day, size of the charter (number of passengers), services offered, etc.
6. Determination of the value and economic impact of recreational angling in the headboat fishery. This will require the collection of data to generate recreational trip demand equations for fishing in general and for various key species. Economic impact assessment will require the collection of appropriate expenditure data and imputation using standard impact assessment software.
7. Design and evaluation of limited access options for recreational fisheries with specific emphasis on modes of fishing and jurisdictional issues. Key species of emphasis are red snapper, king mackerel, red grouper, gag and black grouper.
8. Estimation of fishing behavioral models, and effort supply and production functions for the commercial and for-hire sectors. Specific attention should be given to species target behavior, time and space decisions, and whether profit maximization is an appropriate motivational assumption for the supply of fishing effort. This intent of this research is to determine the basis upon which fishermen make their fishing related decisions (e.g., when to fish, where to fish, how much to fish, what species to target, what gear to use, etc.)
9. Description of the social, cultural, and /or economic aspects of establishing fishery reserves. Studies should employ accepted data collection methods. Various management alternatives should be considered in the studies, e.g., exclude all users, all consumptive users, varying the size of the reserve, anchoring rules, and other relevant management tools.
10. Comparison of the expected economic and social impacts of previously implemented fisheries regulations with realized impact for all regulated species. Attempts should be made to identify and isolate behavioral causes of divergence as opposed to environmental causes.
11. In-depth community profiles of communities previously identified by NOAA Fisheries as fishing communities in the South Atlantic. Profiles to include descriptions of the community, commercial and recreational fishing-related activities and businesses,

historical information on fishing related activities, community structure and social ties based on fishing, and changes in the community due to federal regulations on the fisheries. The project should also focus on demographics of people in the community to determine the relative income and poverty index for the community and potential of employment outside the fishing industry.

12. Non-market valuation of protected species and other marine resources.

13. Examination of the feasibility and efficacy of vessel and/or license buy-back programs. Key fisheries are the shrimp and reef fish fisheries (red snapper, vermilion snapper, king mackerel, red grouper, gag).

14. Evaluation of alternative effort control management measures in federally managed commercial fisheries. Analyses should include a comparison of potential economic, social, cultural, and ecological impacts at the vessel, individual, and community level, and examine the desirability of single species versus multiple species approaches. Depending on the fishery and its current management structure, possible alternatives include but are not limited to: control dates for permits; limited entry; transferable or non-transferable individual catch, individual effort, community catch, or community effort quotas; and cooperatives or other forms of co-management. For catch and effort quotas, the efficacy of initially allocating and segmenting quota markets by gear, vessel fishing power capacity, and by state or community should be explicitly addressed.

15. Evaluation of the extent and impact of recreational sales (all species, by species) on recreational harvests, commercial closures and demand for recreational fishing.

16. Evaluation of the transference of fishing opportunity between commercial, recreational, and conservation sectors under a transferable rights program. Key fisheries are the red snapper, vermilion snapper, king mackerel, Spanish mackerel, red grouper, and gag fisheries.

17. Development of improved methods and procedures for transferring technology and educating constituency groups concerning fishery management and conservation programs. Of special importance are programs concerned with controlled access and introduction of conservation gear.

18. Research that examines the effects of factors other than fishery management on the welfare of the Southeast's fishermen and fishing communities, including but not necessarily limited to: domestic and