



Regional Priorities for
Social Science Research on
Marine Protected Areas:

South Atlantic

Final Workshop Report



*The Marshall House, Savannah, GA
December 2 - 4, 2003*

The National Social Science Research Strategy, developed in August 2003, identifies high priority needs for social science information that are fundamental to the planning, management and evaluation of MPAs at a national level. It also recommends practical ways to meet these needs through research, assessment, capacity building and leveraged funding. For the full text of the National Social Science Research Strategy please visit: http://www.mpa.gov/virtual_library/Publications/Strategy_11504.pdf

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I. INTRODUCTION

This document is the result of the second regional social science research workshop, which covered the U.S. South Atlantic: north of Miami Dade County, Florida through Virginia.

The workshop was held at The Marshall House in Savannah, GA from December 2 to 4, 2003 and included 26 participants from federal and state agencies, academic institutions, regional governing bodies and non-profit organizations.

II. WORKSHOP GOALS: Crafting a Regional Research Plan

The National Marine Protected Areas (MPA) Center was established in late 2000 by the National Oceanic and Atmospheric Administration (NOAA), in partnership with the Department of the Interior. The mission of the National MPA Center is to facilitate the effective use of science, technology, training and information in the planning, management and evaluation of the nation's system of MPAs.

In an effort to strengthen our understanding of the human context of MPAs, the National MPA Center Science Institute developed the National MPA Social Science Research Strategy and subsequent regional MPA social science research plans. The National MPA Social Science Research Strategy is a conceptual piece that reflects, at the national level, the growing interest in the application of social science information in the planning, management and evaluation of MPAs. The Strategy identifies the following six priority research themes that encompass a broad range of disciplines and address pressing social science needs for MPAs:

- 1. Governance, institutions and processes:** This theme covers the formal and informal institutions (federal, tribal, state, local and non-governmental) responsible for managing the resources in marine protected areas. Component research topics include determining and assessing these institutions' respective capacities, funding sources, jurisdictions, management strategies and implementation approaches, as well as the role of social capital in each institution's interactions with the public and other institutions.
- 2. Use patterns:** This theme addresses the ways stakeholders use resources in and around marine protected areas. It includes extractive uses such as harvesting fish or invertebrates, and non-extractive uses such as boating and diving.
- 3. Attitudes, perceptions and beliefs:** This theme covers the underlying motivations that may influence human preferences, choices and actions. It examines the factors that shape human behavior and how these behaviors affect and are affected by marine protected areas. It includes constituents' and stakeholders' social and cultural attitudes, values, beliefs, perceptions and preferences related to MPA issues.
- 4. Economics:** This theme deals with economic conditions and trends associated with marine protected areas. Subjects of interest include, but are not limited to, market and non-market values, costs and benefits, and positive and negative impacts associated with marine protected areas.

5. Communities: This theme examines the characteristics of geographic and stakeholder communities associated with marine protected areas and the ways these communities function, particularly as they relate to the use and conservation of marine resources.

6. Cultural heritage and resources: This theme covers the historical and traditional artifacts within marine protected areas. These may include, but are not limited to, artifacts of nautical history (wrecks, replicas, etc.), maritime infrastructure (piers, lighthouses, locks, ports, forts, etc.), and historical documents (books, photographs, music, recipes, etc.) of MPAs. This theme addresses primarily the physical manifestation of historical and traditional uses of marine resources; their social and cultural underpinnings are addressed by other themes.

Recognizing the need for more detailed, locally oriented research plans, the National MPA Center Science Institute designed a series of workshops to prioritize social science information needs at the regional and local level and create regional social science research plans to address those needs. Workshop results include:

- A list of priority social science research projects for each region; and
- Mechanisms for building regional capacity through the identification of potential partners and funding resources to promote and establish coordination within the region among agencies, social scientists and stakeholders

These results are intended to inform MPA managers, agency decision-makers, researchers, funding sources and affected stakeholder groups about priorities for social science research. These workshops are also designed to stimulate and encourage collaboration and coordination within the region among agencies, social scientists and stakeholders.

III. WORKSHOP PROCESS

The National MPA Center Science Institute developed the following process, to be used for all regional workshops:

WHEN	ACTION	WHO
<i>Pre-Workshop</i>	Compile the following background documents: list of existing social science research efforts, list of MPA-related resources and institutions, and regulatory framework within/pertaining to each region	MPA Center
	Coordinate logistics: Develop worksheet templates, budget, invitations, etc.	MPA Center
<i>At Workshop</i>	Identify priority information needs (research questions) for each relevant research theme, across each phase of the MPA cycle	Workshop participants
	Determine strategies (research projects) to address each information need	Workshop participants
	Develop project details for high priority projects	Workshop participants
	Discuss methods for building and strengthening the regional capacity	Workshop participants and MPA Center
<i>Post Workshop</i>	Compile and post/publish/distribute information for each region	MPA Center and facilitators

In preparation for each workshop the National MPA Center Science Institute compiles the following background documents for each region: a list of existing social science research efforts (see Appendix C); a list of research institutions and information resources (see Appendix D); and a regional regulatory framework with a list of statutes and regulations related to MPAs (see Appendix E). The list of current and existing research is presented during the workshop to encourage discussion about the research that has already been done in the region and to stimulate the participants to think about information gaps and priority research needs. The list of local institutions and resources provides a basis for the discussion on building the regional capacity as it identifies potential partners and funding sources for the implementation of proposed social science projects. Finally, the regulatory framework serves primarily to show the MPA policy structure within which each region functions.

During the workshop, participants address the six thematic priorities outlined in the National Social Science Research Strategy on a regional level. Figure 1 illustrates the transition from the broad national thematic priorities, to the identification of regional research priorities.

Figure 1: Identification of regional social science research priorities



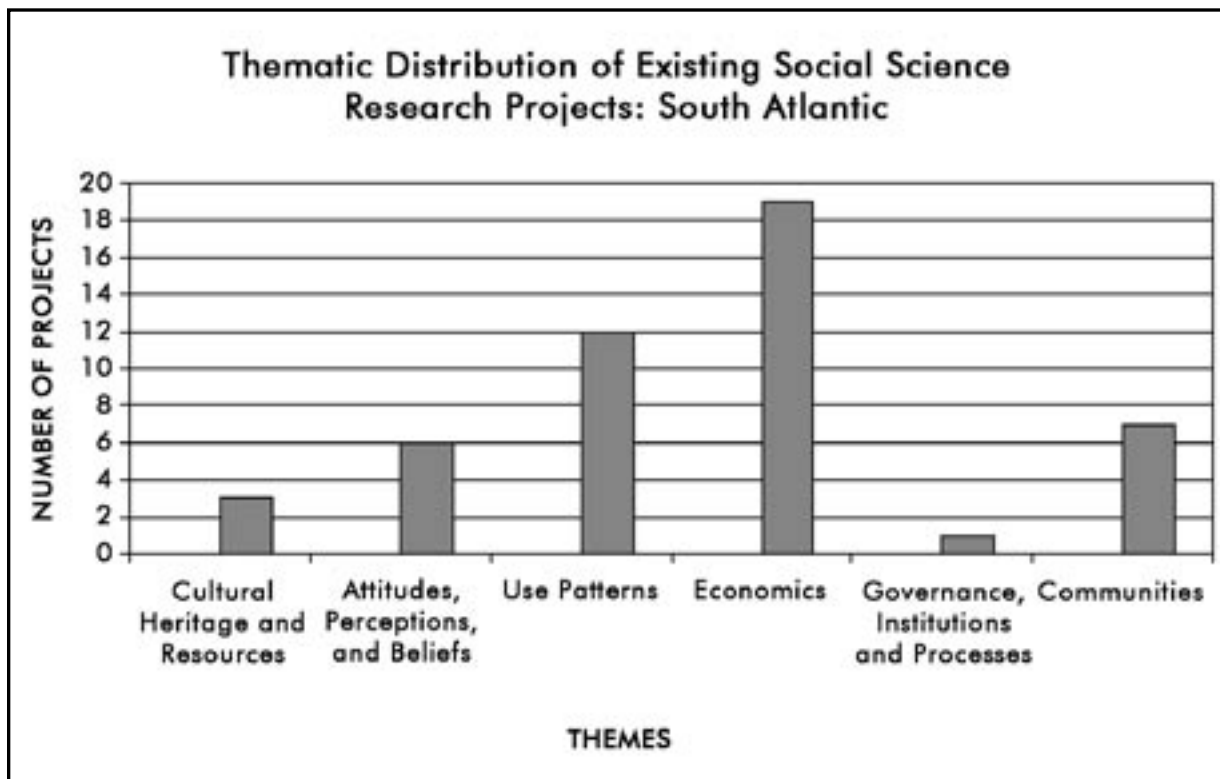
Workshop participants generate an initial list of priority needs and issues in the form of research questions for each theme (see Appendix B), ultimately choosing the twelve most pressing questions. Strategies, in the form of projects, are then developed to address the priority research questions (see Appendix A). These research projects are developed in detail and include information such as geographic coverage, applicability to MPA policy cycles (planning, management and/or evaluation), expected outcomes/ outputs, challenges, estimated duration, estimated cost, potential partners, and linkages with existing efforts and natural science.

IV. SUMMARY OF EXISTING SOCIAL SCIENCE RESEARCH IN THE REGION

Prior to the Savannah workshop, the National MPA Center Science Institute compiled a list of existing social science research efforts that relate to MPAs in the region in order to stimulate discussion on information gaps and research needs. Whenever possible, the principal investigators of the projects were contacted to ensure complete and accurate information. For the South Atlantic region, it is important to note that of the 41 existing social science research projects, only five focused directly on MPAs; six were related to marine areas that are managed for or include specific uses such as oil and gas activities, and the remaining 30 looked at a variety of uses and activities in marine and coastal areas that are not currently managed.

Figure 2 summarizes the thematic distribution of the existing research within the region (see Appendix C for details for each of these projects). The existing efforts in this region focused on the following themes: economics and use patterns. Studies ranged from impact and use assessments of non-living resources such as oil and gas, to socioeconomic studies of coastal communities and how they affect patterns of use in coastal areas.

Figure 2: Summary of existing social science research efforts by theme

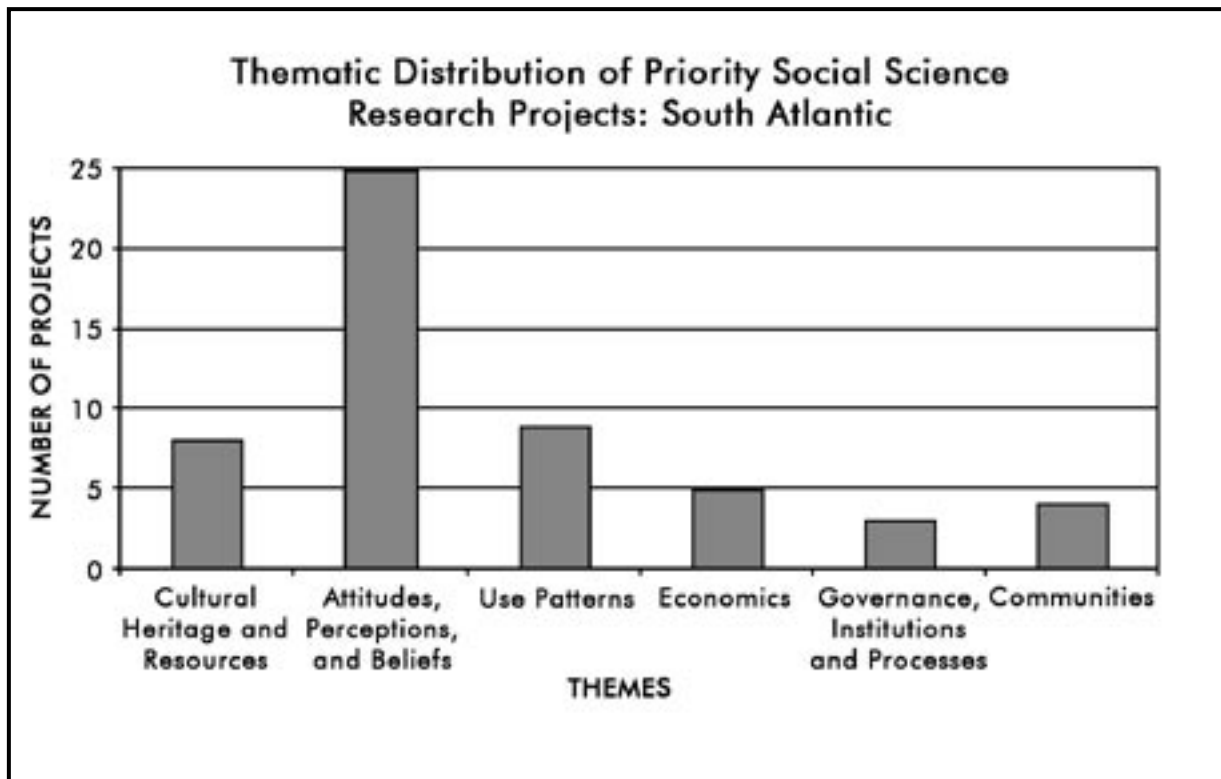


NOTE: Some projects cover more than one theme. Of a total of 41 current and existing research projects in the region: 27% are ongoing, and 73% are complete.

V. PRIORITY RESEARCH QUESTIONS AND PROJECTS

At the Savannah workshop, participants identified twelve research questions and 54 projects as priority social science information needs in the region. Figure 3 summarizes the distribution of these projects by the broad research themes laid out in the National Social Science Research Strategy.

Figure 3: Summary of priority social science research projects



While few research efforts exist in this region under the attitudes, perceptions and beliefs theme, workshop results point out this theme as a high priority for future MPA social science research efforts. The next two research themes identified as priority needs for this region include cultural heritage and resources and use patterns. Many existing projects already fall under the use patterns theme, but workshop results indicate the need for more information related to traditional use patterns.

Following is a list of all questions and projects by theme:

Governance, Institutions and Processes

What are the government structures at regional levels? What are overlays with underlying ecological/human patterns? What governance processes or modifications are needed to implement MPAs?

- Developing a catalogue of various management authorities and jurisdictions in the South Atlantic region, in relation to MPAs.
- Assessing management strategies, by agency, for protecting “social” resources.
- Exploring interrelations between ecological patterns and governance structures in the U.S. South Atlantic: an interdisciplinary study.

Use Patterns

What drives change in use and non-use of MPAs?

- Drivers of use in MPAs (Phase I): Identifying the factors that drive use/non-use of MPAs.
- Drivers of use in MPAs (Phase II): Surveying users and non-users of MPAs.
- Drivers of use in MPAs (Phase III): Assessing regional and temporal trends in MPA usage based on site level baseline studies.

What are historical use patterns as they relate to an existing or potential MPA?

- Determining the effects of harvest-oriented technologies on living resources, ecosystems and related human communities.
- Exploring social – ecological history of existing and potential MPAs up to the present.
- Use and misuse: Investigating the social and environmental impacts of user groups in relation to MPAs.
- Determining the effect on utilization of MPA resources of efficient vehicular access to communities that serve as points of departure for MPA access.
- Developing site-specific discrete choice models for the bottom fisheries in the South Atlantic region.
- Determining spatial resource uses in an area of potential MPAs in order to make informed choices and minimize adverse socioeconomic impacts.

Attitudes, Perceptions and Beliefs

What is the local knowledge (specific to locations) about resource quality, use, access and protection?

- Documenting local perceptions and beliefs about enforcement at an MPA (Oculina Banks); examining how local knowledge impacts what enforcement strategies will work.
- Exploring perceptions of the relative condition of South Atlantic marine resources (VA to FL), compared to available scientific information.
- Investigating change in coastal populations, resource knowledge and demography as they impact MPAs.
- Describing historical changes in infrastructure and marketing (changes in fishery and shoreside activities).
- Documenting elder fishermen knowledge about high value sites and changes in fishing resources through time.
- Inventorying current oral history projects in the South Atlantic – gap analysis (of use to MPA planners and managers).

How can education, outreach and communication about MPAs affect attitudes, perceptions and beliefs of various stakeholder groups?

- Determining the differences in perceptions, beliefs and values between management and communities regarding MPAs.
- Assessing community benefits of MPAs (analyzing differences across regions and role of education, outreach and communication).
- Reviewing social science literature and practices used in achieving objectives of terrestrial protected areas over a broad constituency base.
- Exploring MPA educational program effectiveness in addressing attitudes, perceptions and beliefs: How can education, outreach and communication about MPAs affect attitudes, perceptions and beliefs of various stakeholder groups?
- Assessing how or whether stakeholder involvement/experience influences attitudes, perceptions and beliefs about MPAs as a management tool.
- Determining if education, outreach and communication positively affect compliance with regulations or affect stewardship/self-governance in MPAs.
- Determining how important education is to a locally successful MPA: a review of local education programs in South Atlantic MPAs.

What are public participation methods and do they/how do they affect perceptions of the MPA process and outcomes of the process?

- Determining the best mix of methods: How can we determine best methods to ensure initial and continued involvement of communities of interest in the MPA process?
- Analyzing public participation requirements in the MPA process: A comparative study of what is required vs. what has been done, what should be done in state and federal MPAs.
- Correlating MPA process satisfaction to outcome satisfaction.
- Does individual perception of process correlate to perception of outcome? Compare previous experiences in agencies leading MPA involvement and locally identify perceptions among communities of agencies.
- Determining how non-governmental organizations (NGOs) influence the MPA process and how they affect an individual's participation in the process.
- Determining the barriers to participation in the MPA process (e.g., time, space, culture, language, trust, access, etc.).
- Determining how stakeholder involvement affects perceptions of involvement in the MPA process: The role of cooperative research in affecting continued stakeholder involvement in the MPA management process.

What is the perception of ownership of the commons between users and non-users in relation to potential or existing MPAs?

- Determining who is moving to the South Atlantic region and what they think about existing or potential MPAs.
- Identifying and correlating differences of perceptions of ownership, and ethics of use, between traditional users and new arrivals; Identify each group's perception of the other.
- Assessing MPA public resource manager perception of ownership and linkage to decision-making.
- Determining what causes people to feel ownership in relation to MPAs and potential MPAs.

Economics

What is the distribution of indirect and direct costs and benefits of MPAs?

- Economic valuation of the effects of proposed MPA sites on recreational and commercial fishing.
- Developing a resource sector-oriented input-output model for the South Atlantic states (including Virginia).
- Developing and implementing a research protocol to measure existence value for planning MPAs.

How can we improve consideration of economic effects on local/traditional economies in MPA planning (including selection) and management?

- Assessing effects on local/traditional economies using a sample of existing MPAs in the South Atlantic region: a comparative case study.
- Developing recommendations for improving and/or mitigating MPA impacts to local/traditional economies based on lessons learned from previous project(s).

Communities

How has community structure changed through time? How might it change? Consider relative risk

- Developing a community/sensitivity scale.
- Identifying coastal counties that have had major demographic/ethnic change for further study.
- Studying oral histories of long-term residents looking at community networking.

Cultural Heritage and Resources

How do we instill a cultural resource ethic among the public?

- Evaluating the extent to which agencies designating and managing MPAs acknowledge and recognize the role of local and traditional cultural heritage and resources (e.g., maritime heritage).
- Surveying public perceptions concerning maritime heritage.
- Inventorying and assessing existing outreach events and methods.

What cultural resources are within the South Atlantic region at potential and existing MPA sites?

- Identifying and prioritizing cultural resources in the South Atlantic region that need to be protected.
- Literature review to identify known maritime cultures and subcultures in the region.
- Applying existing or creating/synthesizing new models to identify high probability locations of cultural resources.
- Inventorying, assessing and managing cultural resources within a designated MPA.
- Analyzing gaps between public perception and professional perception of cultural resources.

VI. BUILDING REGIONAL CAPACITY

The last session at the Savannah workshop consisted of a discussion on building the regional capacity to conduct social science research and incorporating it into the planning, management and evaluation of MPAs. Participants exchanged thoughts on the identification of potential funding sources, the importance of strengthening and developing academic capacity, and the creation of regional networks for information sharing. Following is a brief synopsis of the main points discussed at the workshop:

A. Funding Sources

Research plans accomplish little without funding. The potential sources listed below include grant programs, agencies and offices that may be able to include projects in their annual operating plans, and fellowship programs that may be able to provide individuals to help with research needs. In addition to these potential funding sources, workshop participants also discussed a series of opportunities and strategies to obtain funds for social science research.

Potential Funding Sources

- Federal
 - NOAA National Marine Fisheries Service (NMFS) – MPA funding through cooperative research with users (industrial and recreational fishers)
 - National Parks Service (NPS) – National Parks Foundation, Fish and Wildlife Foundation (Submerged cultural resource unit; Southeast archaeological center)
 - National Science Foundation (NSF) Biocomplexity grants
 - National Endowment for the Humanities
- State (FL, GA, SC, NC, VA)
 - Historic preservation grant funds
- Federal – State
 - Coastal Zone Management (CZM) program
 - National Estuarine Research Reserve System (NERRS) – Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET)
 - Sea Grant
- Non-governmental
 - The Nature Conservancy (TNC) – Smith Post-Doc Fellows program
 - Fisheries Conservation Foundation – American Fisheries Society (AFS)
 - Kellogg Foundation
 - National Trust for Historic Preservation

Opportunities and Strategies for Funding

- Alternative funding sources:
 - Utilize special funds such as fees, fines, damage settlements, etc.
 - Leverage private foundation grants such as Packard, Pew, Moore, Duke, Munson, etc.
- Partnerships:
 - Get involved in cooperative research projects, obtain industry support and develop partnerships
 - Develop tighter relationships between funding agencies and researchers (e.g., Sea Grant provides small amounts of money for graduate students, which can help develop relationships with Sea Grant directors)
 - Encourage the participation of social scientists on agency and foundation project review committees

- Project development and planning:
 - Include MPA social science projects in agency annual operating budgets
 - Know your audience, as well as the potential project reviewers
 - Develop projects following existing institutional focus theme areas, such as Sea Grant's "coastal communities"
 - Propose projects with biophysical and social science components

B. Building academic and institutional capacity

Strengthening the academic capacity of both current and future managers is important to effectively secure the inclusion and use of social science research in the planning, management and evaluation of MPAs. Academic and institutional capacity can be developed through training, and through elevating the importance of social science within agencies by garnering support and enhancing awareness. The workshop participants discussed various mechanisms to build and strengthen academic and institutional capacity. Among the mechanisms discussed were training and education. Comments during the workshop focused on training existing staff to make basic understanding of social science issues part of the institutional culture, and developing specific graduate courses on social science and MPAs.

Additionally, workshop participants discussed building awareness and support within both MPA and the social science communities. To generate interest in MPA issues within the existing social science community it is necessary to hold sessions and do presentations on MPAs at social science and professional association meetings, as well as promote the creation of MPA programs within existing conservation stewardship institutions (e.g., Conservation Biology Society, Smithsonian Conservation Resource Center, Conservation Study Unit of NPS; northeast region). Other mechanisms for building awareness and support include using existing surveys (e.g., National Survey for Fishing, Hunting and Wildlife Watching; National Survey of Recreation and the Environment; and National Recreational Fisheries Statistical Survey) to generate social science information that can be useful for MPA research, as well as for a wider array of management decisions.

C. Network for information sharing

A mechanism or network for information sharing is essential for scientists to coordinate and collaborate with each other and with practitioners, and for managers so that they may include the appropriate research in their annual operating plans. The workshop participants discussed various mechanisms for this purpose, including the development of regional list serves for meetings, funding opportunities and collaborative project ideas. Important elements of this list serve would include the ability to share bibliographic databases, project lists, and lists of social science experts.

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Appendix A. Proposed Priority Research Projects

Governance, Institutions and Processes

This theme covers the formal and informal institutions (federal, tribal, state, local and NGOs) responsible for managing the resources in marine protected areas. Component topics include these institutions' respective capacities, funding sources, jurisdictions, management strategies and implementation approaches, as well as the role of social capital in each institution's interactions with the public and other institutions.

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Theme: Governance, Institutions and Processes							
Question: What are government structures at regional levels? What are overlays with underlying ecological/human patterns? What							
Developing a catalogue of various management authorities and jurisdictions in the South Atlantic (SA) region, in relation to MPAs	Basic identification of the agencies in the SA; statutory analysis of various agencies and authorities and their mandates, requirements for public participation and interagency cooperation; the different functions of government and the identification of the responsible authority regarding permits, planning, research, enforcement, etc.		•	•	•		a. Comprehensive list of agencies and authorities (technical and public) b. Identification of points of interagency cooperation and or points for enhancement
Assessing management strategies, by agency, for protecting "social" resources	This project will delineate the agency responsibilities for protecting "social" resources within designated or potential MPAs. It will identify and differentiate agency management strategies for resources like maritime heritage, maritime culture, and communities, and for sustaining coastal communities.		•	•	•	•	a. List, by agency, of management responsibilities b. Analysis of extent to which management responsibilities protect "social" resources
Exploring interrelations between ecological patterns and governance structures in the U.S. South Atlantic: an interdisciplinary study	Disjunction between the scales and patterns of existing governance structures and underlying ecological and human use patterns will be analyzed by a team of natural, social and political scientists and other experts (managers and resource users) to identify existing problems and possible solutions in order to inform the design of MPA networks in the region.		•	•	•		a. Identification of problems with the current governance structure b. Development and assessment of possible solutions to address these problems c. Assessment of possible solutions by a panel of resource users and other concerned citizens



Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
Theme: Governance, Institutions and Processes												
governance processes or modifications are needed to implement MPAs?												
Information is not easily summarized and it is very time consuming		•					•				a. All agencies: state, local and national b. Universities, research institutes	Questions regarding strategies for “social” resources – existing or lack of
Getting consensual validation within agency of actual responsibilities					•		•				a. Agencies b. National conservation organization c. University political and social science	Government efficiency studies/programs
a. Complexity of the current governance structure b. Diversity of the authorizing legislation c. Lack of baseline data and incomplete understanding of underlying ecological patterns (and basic biology) d. Resource competition for already limited agency staff		•						•			a. Agency staff b. Academic experts c. Users and other concerned citizens	a. South Atlantic Fishery Management Council (SAFMC) fishery management plan (FMP) b. Pew Ocean Commission report c. U.S. Commission on Ocean Policy (USCOP) report d. Reauthorization of Magnuson-Stevens Act, etc.

Use Patterns

This theme addresses the ways stakeholders use resources in and around marine protected areas. It includes extractive uses such as harvesting fish or invertebrates, and non-extractive uses such as boating and diving.

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Theme: Use Patterns							
Question: What drives change in use and non-use of MPAs?							
Drivers of use in MPAs (Phase I): Identifying the factors that drive use/non-use of MPAs	This project involves assessment of drivers of use/non-use in MPAs. Phase I identifies the factors that drive use/non-use of MPAs, including, but not limited to: evolving equipment technology (recreation equipment, fishing gear, navigation); media, marketing and information technology (magazines, TV, web, presentation); enforcement, management and regulations (maps, education); infrastructure (roads, boat ramps, interpretive facilities, restrooms); services (guides, hotels, lodging, gas and oil, provisions, ecotourism); site uniqueness/unique resources; and cost (** This information will be used to develop questionnaires for Phase 2). Multiple methods include: document reviews, observations, and inventories. NOTE: uses and changes in use include: consumptive and non-consumptive; increase or decrease in number of users; frequency of use; composition of users; types of users; and user behaviors.		•	•	•	•	a. Better understanding of range of factors driving use/non-use of MPAs b. "Consistent" set of information for use in collecting baseline data
Drivers of use in MPAs (Phase II): Surveying users and non-users of MPAs	This project involves assessment of potential drivers of change in use or non-use of MPAs. Phase II involves a baseline survey of users and non-users of MPAs and determines which of the following has influenced their specific use of MPAs (area and resources): equipment technology; media, marketing and information technology; enforcement, management and regulations (maps, education); infrastructure (roads, ramps, interpretation facilities, restrooms); site uniqueness; cost; and services (guides, hotels). Other survey questions need to include past experience, demographics, etc.		•	•	•	•	a. List of drivers affecting current use and non-use of existing MPAs b. Development of baseline information on changes in drivers for use in examining trends over time (in relation to application of drivers to achieve management goals)

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
Theme: Use Patterns												
<p>a. Compiling broad array of information into one project</p> <p>b. Compiling information from disparate sources may be difficult to complete as one study (due to scale and number of factors under investigation)</p>		•					•				<p>a. University recreation or tourism programs</p> <p>b. Stakeholder groups</p> <p>c. Agencies (National Marine Fisheries Service [NMFS], Minerals Management Service [MMS], U.S. Fish and Wildlife Service [USFWS])</p> <p>d. Trade organizations</p> <p>e. Tourism or other marketing associations (Destination Marketing Organizations [DMOs], Convention and Visitor Bureaus [CVBs])</p>	<p>Link to other studies such as: National Survey on Recreation and the Environment; recreation trends research; and tourism research</p>
<p>a. Choice of appropriate or reliable survey methodology</p> <p>b. Capturing non-users</p> <p>c. Differences and variety of MPA sites</p>		•					•				<p>a. University recreation or tourism programs</p> <p>b. Stakeholder groups</p> <p>c. Agencies (NMFS, MMS, USFWS)</p> <p>d. Trade organizations</p> <p>e. Tourism or other marketing associations (DMOs, CVBs)</p>	<p>Use of existing survey providers, and existing national surveys; natural surveys and researchers in academia</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Drivers of use in MPAs (Phase III): Assessing regional and temporal trends in MPA usage based on site level baseline studies	This project involves assessment of regional and temporal trends in MPA usage based on site level baseline studies. Analyses will include correlation between users (numbers, frequency, composition) and influencing factors (services, equipment technology, infrastructure, management and media). Additional analyses would or could include temporal studies at site level.		•	•	•	•	a. Published study documenting trends in SA MPAs b. Key information source for management and decision-making regarding influencing factors/uses
Question: What are historical use patterns as they relate to an existing or potential MPA?							
Determining the effects of harvest-oriented technologies on living resources, ecosystems and related human communities	The adoption of harvesting-oriented technologies by various user groups (e.g., recreational fishermen, duck hunters, etc.) is considered critical to understanding historical use patterns and related environmental impacts associated with existing and potential MPA sites, including related communities. The introduction and adoption of new technologies can affect bio-physical and/or economic efficiencies of harvesting due to effects on transportation (e.g., outboard motors), capture techniques (e.g., electric reels), locating targeted species (e.g., GPS), storage (e.g., brine freezers), and other technologies. Historical bio-physical (e.g., geographic isolation), socioeconomic and institutional factors influencing the localized adoption rate of new technologies will be considered in this historical analysis. Research approaches include collection and analysis of secondary information (e.g., literature reviews) and primary data (e.g., oral history interviews).		•	•			a. Identification of time periods (historical turning points) related to adoption of new harvesting-oriented technologies b. Facilitation of the analysis of historical use patterns and related harvest impacts, especially the role of technological changes and adoption rates in local communities associated with existing and/or potential MPA sites

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
<p>a. Multiple sites have to collect comparable data</p> <p>b. Complexity of range/level of variables – factors of influence</p> <p>c. Range and diversity of MPA sites/management structures</p> <p>d. Completely dependent on Phase II being implemented successfully</p>		•				•	•	•			<p>a. University based</p> <p>b. Department of the Interior (DOI)</p>	<p>a. DOI surveys and user info</p> <p>b. Between user patterns and status of natural resource</p>
<p>a. Limited baseline information related to adoption of new technologies especially at the local community level</p> <p>b. Difficulties in disaggregating the effects of technology vs. other factors (e.g., fishing regulations restricting the use of crab traps while allowing use of crab trot lines) on historical harvesting patterns associated with existing and/or potential MPA sites</p>			•					•			<p>a. NOAA and DOI</p> <p>b. State and local government agencies</p> <p>c. Non-governmental organizations (NGOs) and regional universities (e.g., Clemson U, Duke, U of FL, etc.)</p>	<p>a. Historical analysis of commercial fishery landing and effort data (e.g., pre-WWII)</p> <p>b. Coastal oral history projects</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Exploring social – ecological history of existing and potential MPAs up to the present	This project will: construct a regional historic narrative of people and environment and their interactions from first human settlement to the present, relevant to the existing or potential MPA; describe environmental factors and processes, from terrestrial to marine, such as geology, physiography, soils and sediments, plants and animals, ecosystems and climate; Incorporate people and environment, including Native Americans, early Europeans, colonial and more recent cultural adaptations; identify these peoples by location, site and resources, and link them to traditional and modern uses, technologies and ways of life; explain development of political and management boundaries and how they interact; and link historical development of traditions to modern communities and families.		•	•	•		<p>a. Baseline document with data sources, synthesis and evaluation of most important environmental/ social factors for planning and management</p> <p>b. Baseline archive of historic documents, maps, photos, studies, collections, archaeological data, expert contacts, etc.</p> <p>c. The project will provide agency decision makers with a better understanding of the historical/ ecological development</p> <p>d. The project will help avoid the pitfalls of using a static, point-in-time baseline for understanding long-term processes and effects</p> <p>e. The project will link modern communities and families with historical traditions and uses</p> <p>f. The project will identify gaps in knowledge and recommend future research</p>
Use and misuse: Investigating the social and environmental impacts of user groups in relation to MPAs	The purpose of this study is four-fold: First, to identify cultural/ ethnic groups; Second, to determine these groups' use patterns and if they are affected by existing or potential MPAs; Third, to consult and offer mitigation; and Fourth, to attempt to determine how these user groups affect the natural environment through their use patterns.		•	•			<p>a. Literature review</p> <p>b. Community case studies</p> <p>c. Cultural/ethnic group ethnographies</p>

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
<p>a. Some information is difficult to access</p> <p>b. Requires a generalized, rather than a specialized, perspective and skills</p> <p>c. Expensive, lengthy; should be completed early in process of designation or planning or management change</p>			•					•			<p>a. State Historic Preservation Office (SHPO), universities, historical societies</p> <p>b. Trade associations, local families, community leaders, tribal governments</p>	Useful for broader coastal management efforts
<p>The main obstacle will be gaining entry into the community and group</p>			•						•		<p>a. NOAA</p> <p>b. MMS</p> <p>c. State university systems</p>	<p>Linkages exist between this project and existing efforts throughout the U.S. Methodologies can be adapted from other studies. The effects on the human groups as well as their community should be established. The human group practices and how the natural/ physical environment is affected by these practices should be assessed</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Determining the effect on utilization of MPA resources of efficient vehicular access to communities that serve as points of departure for MPA access	This project will evaluate the impacts on resources of MPAs attributable to the transition from boat-only access to a point of departure community, to reliable vehicular access to that community. Examples: more boat fuel available at a reasonable price; easier, faster access to markets; improved access for a wider range of users; economic viability of wider range of harvest species or user activities.		•	•	•	•	a. Comparison of socioeconomic environment between true island communities and “extension of the mainland” communities b. Alterations in harvest volume and composition attributable to improved access c. Alterations in MPA use activities and duration attributable to improved access d. Effects on socioeconomic environment of other point of departure communities of improved access to one community
Developing site-specific discrete choice models for the bottom fisheries in the South Atlantic region	This study’s goal is to develop a model to predict bottom fishing use patterns and resultant changes in effort distribution from different MPA candidate sites in the SA region. The model should utilize information on site characteristics, characteristics of users and other variables that affect site choice.		•	•	•		a. Statistical models to predict changes in fishing behavior from different candidate sites b. Effort changes within a fishery including the probability of displacement to new sites or out of the fishery

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
<p>a. Study could generate or aggravate animosities between communities with and without bridges</p> <p>b. Improved access happens concurrent with other technological and social changes; may be difficult to isolate the access effect</p> <p>c. Comparative isolation from large population centers of otherwise similar communities could make comparisons difficult</p>			•						•		<p>a. State Departments of Transportation</p> <p>b. Local chambers of commerce/tourism councils</p> <p>c. Universities</p>	<p>a. This project is a sub-set of the more general social-ecological history of users of existing and potential MPAs</p> <p>b. Improved human access to MPAs is only one of several variables affecting species abundance and diversity of MPAs</p> <p>c. Other natural science variables (pollution, sedimentation, etc.) need to be accounted for</p>
<p>a. Utilizing existing data and augmenting with information from surveys</p> <p>b. Developing surveys to collect necessary information that is not available</p> <p>c. Linking up with current surveys such as the Marine Recreational Fisheries Statistics Survey (MRFSS), to collect some of this data</p>		•						•			<p>a. NOAA fisheries economists</p> <p>b. South Atlantic Fisheries Management Council (SAFMC) fisheries economists</p> <p>c. University of Florida researchers</p>	<p>Some of the data to feed into the model can come through existing initiatives. The output of the model will link up with economic cost-benefits of candidate and existing MPA sites. The model can be used in other contexts to evaluate "new sites" using a benefits transfer approach. Model output will be important in estimating "effects" on the community (direct and indirect)</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Determining spatial resource uses in an area of potential MPAs in order to make informed choices and minimize adverse socioeconomic impacts	This project will attempt to spatially characterize the different extractive and non-extractive uses in a region in which interest exists to create an MPA whose boundaries have not been determined. The effort will involve quantification month-by-month of the use within established spatial grids. Parameters quantified might be catch, effort, number of people/boats that visit the area, amount of extracted material, etc. Uses might include fishing, boating, mineral extraction, bathing, ecotourism, recreation, maritime transportation, recreational diving, scientific uses, etc.		•	•			<ul style="list-style-type: none"> a. GIS based datasets of quantitative indicators (extraction, catch, effort, visits) of uses in the region of interest b. Maps of uses month-by-month and aggregated for the whole year c. Maps in which grids indicate the greatest use and therefore the greatest potential impact if the use is restricted d. May indicate economic impact of prohibiting use in a given area e. May permit development of alternative MPA shapes that minimize adverse economic impacts

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
<p>a. Determination and selection of the appropriate grid size that would be of use and applicable to the MPA (grid size should be small enough to be useful, taking into account the potential size of the MPA)</p> <p>b. Data collection – Do logbooks and permits provide sufficient information in the appropriate form (time, location, quality of effort and extraction)?</p> <p>c. Data collection – It may be necessary to conduct a survey of the users or a subset of the users (panel) to provide useful information, if logbooks and permits do not give appropriate information</p> <p>d. Confidentiality of use information that may be proprietary – How to guarantee this confidentiality?</p>		•					•	•			<p>a. SAFMC</p> <p>b. NOAA – National Marine Sanctuary Program (NMSP) (in areas surrounding National Marine Sanctuaries)</p> <p>c. State Departments of Natural Resources (DNRs) – if state waters are included</p> <p>d. MMS/U.S. Army Core of Engineers (USACE) – if sand mining or dredge spoil dump sites are included</p> <p>e. National Parks Service (NPS) – perhaps near National Parks or National Seashores</p>	<p>This effort would accompany similar spatial studies of the natural/ cultural resources (benthic habitat, fish, minerals, cultural resources). The decision would consider both the minimization of socioeconomic impact on users, and benefit to the resources of interest. Similar efforts include Channel Islands and Dry Tortugas National Marine Sanctuaries</p>

Attitudes, Perceptions and Beliefs

This theme covers the underlying motivations that may influence human preferences, choices and actions. It examines the factors that shape human behavior and how these behaviors affect and are affected by marine protected areas. It includes constituents' and stakeholders' social and cultural attitudes, values, beliefs, perceptions and preferences related to MPA issues.

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Theme: Attitudes, Perceptions and Beliefs							
Question: What is the local knowledge (specific to locations) about resource quality, use, access and protection?							
Documenting local perceptions and beliefs about enforcement at an MPA (Oculina Banks); examining how local knowledge impacts what enforcement strategies will work	There are two phases to this project: 1) Document the local attitudes, perceptions and beliefs (APBs) about the Oculina Bank MPA as it has been in existence already for 10 years. This will include documenting: a. Perspectives in regulations through time (progressive, more restrictive?); b. Changes in behaviors noted or perceived; c. Has law enforcement improved/ worsened? d. Reactions to infractions vs. "shoulds" (normative vs. actual); e. Social relationships to law enforcement personnel. 2) Develop outreach and education materials for other communities based on research plan from development in phase 1.	•	•	•	•	•	a. Evaluation of the perceptions of effectiveness of law enforcement within an existing MPA b. Aid in development of specific MPA regulations, siting, outreach materials, and practices based on local APBs and in areas without existing MPAs
Exploring perceptions of the relative condition of SA marine resources, VA to FL, compared to available scientific information	The project will involve completion of surveys of various user and non-user groups on resource condition, cross-stratified by geography (Cape Hatteras (CH) north, CH to SC/GA, GA/North FL, Cape Canaveral south) and user status (sport fishing, charter boat, commercial, non-consumptive shore users, and non-users); parallel compilation of scientific information on resource condition.		•	•			a. Identification of gaps in current user and non-user perceptions b. Baseline for future assessments c. Basis for improving long-term management strategies for MPAs
Investigating change in coastal populations, resource knowledge, and demography as they impact MPAs	Shifting populations and demographic changes in the coastal zone alter the composition of coastal communities. The same changes affect knowledge patterns and resources, specifically resource uses. The research will target the nature and degree of the changes in demand and resource use. The purpose is to discover the degree of integration of new and traditional knowledge in different populations affected by the development of MPAs.		•	•	•	•	a. Community descriptions and profiles of populations and demographic changes b. Ascertainment of different resource use and knowledge by different populations c. Information for development of educational and outreach programs

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
Theme: Attitudes, Perceptions and Beliefs												
<p>a. Money for intensive, ethnographic/interview research (time intensive also)</p> <p>b. OK for Oculina Bank but there will be difficulty in replicating this type of study in other communities/locales</p> <p>c. No baseline for the communities impacted by creation of Oculina Habitat Area of Particular Concern (HAPC)/Oculina Experimental Closed Area (OECA) – so it's difficult to compare or verify local perceptions or accounts through time</p>		Phase 1	Phase 2			Phase 1				Phase 2	<p>a. SAFMC (Kathi Kitner)</p> <p>b. NOAA fisheries – Brent Stoffle and employ/train locals to carry out research currently and in the future</p> <p>c. U of FL/ U of GA graduate students</p>	
<p>a. Team identification</p> <p>b. Subject identification</p> <p>c. Apprehension about possible user restrictions</p> <p>d. Resources</p>		•				•					<p>a. Major university/ agency scientists (social and natural)</p> <p>b. NOAA and SAFMC</p>	FMP materials for science baselines (stock assessments, etc.)
<p>a. Closing the gaps in census data/information in coastal populations (e.g., understanding fishermen and minority populations)</p> <p>b. Documenting resources and their use (e.g., subsistence use by minority and poor populations)</p> <p>c. Documenting demand for reallocation of existing resource bases and new uses of resources</p>				•						•	<p>a. Universities</p> <p>b. States/agencies</p> <p>c. NGOs and Foundations</p>	<p>a. Habitat studies</p> <p>b. Tourism and economic development</p> <p>c. Existing efforts – Atlantic Coastal Cooperative Statistics Program (ACCSP), SAFMC, Atlantic States Marine Fisheries Commission (ASMFC), NMFS, FWS, MMS, USACE</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Describing historical changes in infrastructure and marketing (changes in fishery and shoreside activities)			•	•	•	•	a. GIS inventory of currently operating and historical fish houses, processing plants, docks and related businesses b. Maps of marketing channels of seafood products – where fish end up vs. perceptions of harvesters and consumers c. Documentation of changing coastal ecologies
Documenting elder fishermen knowledge about high value sites and changes in fishing resources through time	Elderly fishermen have experiential knowledge about fishing resources that provides a valuable historical perspective on a variety of issues relevant to MPA planning and development. This includes historical knowledge about: habitat types; special fishing sites; relative abundance of species; gear type and use; spawning/aggregation sites; seasonal patterns; and subsistence importance of fishing.		•	•			a. Descriptive accounts of local historical knowledge of fisheries, including accounts of changes through time b. Construction of inventories of changes in the state of coastal fisheries throughout time c. Assessment of the relevance of descriptions and inventories to conservation and MPA planning and management d. Identification of specific historical and contemporary spawning sites for targeting of specific MPAs
Inventorying current oral history projects in the SA – gap analysis (of use to MPA planners and managers)	This project will inventory all existing and ongoing oral histories relating to coastal communities, populations and resource usage by state, coastal county and coastal community in the SA, and review existing oral histories to pinpoint gaps in coverage and/or bias in coverage (e.g., focus on particular occupations or populations). The initial study will be regional in scope; future studies will be site-specific.		•	•	•	•	a. Pre-planning document/ inventory identifying local use, attitude and value patterns in coastal communities/areas for specific social groups b. Identification of social groups/populations which have a stake in MPA planning and management with local knowledge, social values, and resources use overlooked in quantitative surveys c. Ability to pinpoint areas and populations on which no oral history research has been done

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
<p>a. Immensely time consuming with field work and participant observation</p> <p>b. Costly</p> <p>c. Possibly sensitive issues (e.g., recreationally-caught fish sold)</p>					•					•	<p>a. SAFMC – Dr. Kathi Kitner</p> <p>b. NOAA fisheries</p> <p>c. And use of trained locals to carry out current and future research</p>	
<p>a. Lack of adequate baseline data</p> <p>b. Locating knowledgeable elderly fishermen</p> <p>c. Identifying appropriate inducements, including compensation</p> <p>d. Critical need for timely documentation</p>		•	•				•				<p>a. Universities</p> <p>b. Fishing organizations/ community organizations</p> <p>c. NGOs</p> <p>d. State and federal agencies</p>	
<p>Current oral histories are scattered and have been gathered for purposes other than MPA planning and development</p>		•					•				<p>a. Universities/SA college programs/ libraries/museums</p> <p>b. State/ federal agencies</p> <p>c. NGOs/foundations/ professional associations</p>	<p>The oral history project will provide the “flesh on the bones” of natural and social science assessment projects on MPAs</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Question: How can education, outreach and communication about MPAs affect attitudes, perceptions and beliefs of various stake-							
Determining the differences in perceptions, beliefs and values between management and communities regarding MPAs	<p>Phase 1: Self-reported survey to determine perceptions in beliefs, values and perceptions of MPA managers (state and local), natural resource managers, and general population weighted per capita with additional data collected from communities located near or that provide access to MPA sites.</p> <p>Phase 2: Select local groups (both management and public) for educational, outreach and communication treatments. Provide, service and reassess APBs. Education, outreach and communication treatments will include responses to concerns from original participants surveyed.</p>		•	•	•		<p>a. Description of APBs of managers about MPAs</p> <p>b. Description of APBs of public, both regionally and separated locally</p> <p>c. Analysis of differences between a & b</p> <p>d. Identification of method that more closely aligns a & b</p> <p>e. OVERALL – greater understanding of needs of managers and public to align their APBs through education, outreach and communication</p>
Assessing community benefits of MPAs (analyzing differences across regions and role of education, outreach and communication)	This project will comprise an assessment of community perceptions of benefits derived from the presence of an MPA in select locations across the region. The project will also attempt to identify the influence of education, outreach and communication efforts of community perceptions. Once variability of perceptions and influence of education, outreach, and communication efforts are identified, managers could use this information for establishment or improvement of future education, outreach and communication efforts.		•	•	•	•	<p>a. Greater understanding of how communities perceive or associate benefits (non monetary and monetary) to their community derived from the presence of an MPA</p> <p>b. Understanding of the role of education, outreach and communication efforts on community perceptions of benefits derived from the presence of MPAs</p> <p>c. Identification of variability across the region of community perceptions of derived benefits from MPAs and the influence of varied education, outreach and communication efforts to those perceptions</p>
Reviewing social science literature and practices used in achieving objectives of terrestrial protected areas over a broad constituency base	A broad range of public lands/common property resources involving varied, diverse constituencies have been studied by social scientists. These studies have developed methodologies to determine their APBs which may be applicable to MPAs.		•	•			Annotated bibliography

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
holder groups?												
<ul style="list-style-type: none"> a. Large sample b. Human subject issues, easily permitted c. "Survey" work for some federal grants/institutions d. Focus groups and sampling requires much hands-on time 				•				•			<ul style="list-style-type: none"> a. Universities b. MPA center c. SA cooperative ecosystems study unit d. National Estuarine Research Reserves System (NERRS)/ Sanctuaries 	Risk assessment, social science
<ul style="list-style-type: none"> a. No baseline on community benefits; possibly also no baseline on education, outreach and communication efforts b. Need to identify target MPAs/communities c. Need to identify/compile community benefits/categories d. Human subjects involved 			•	•				•			<ul style="list-style-type: none"> a. Taylor Stein – U of FL b. Sea Grant (SC, NC, FL, etc.) c. National Estuarine Research Reserve System (NERRS) site network 	Link to "differences in manager/ community perceptions"
<ul style="list-style-type: none"> a. Defining parameters b. Prioritizing constituencies c. Segmenting literature based on constituency groups d. Defining accepted practices/peer review 			•					•			<ul style="list-style-type: none"> a. Academia b. Consultants c. Government agencies 	

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Exploring MPA educational program effectiveness in addressing APBs: How can education, outreach and communication about MPAs affect APBs of various stakeholder groups?	5-step process at MPA site: 1) Review alignment of education, outreach and communication goals with MPA management goals; 2) Identify if and what management goals address APBs; 3) Assess education, outreach and communication goals that potentially address management goals; 4) Assess effectiveness of education, outreach and communication in meeting those goals; 5) Identify process for monitoring and/or applying goals to other sites.		•	•	•	•	a. Identification of gaps in MPA education goals aligned with and contributing to management goals b. Recommendations on how MPA education effectively addresses APBs c. Process for assessing effectiveness of individual sites' education, outreach and communication plan to address APBs
Assessing how or whether stakeholder involvement/experience influences APBs about MPAs as a management tool	1) Level of stakeholder involvement/participation in marine resource management related processes and organizations/associations – considering APBs of MPAs as variables; 2) Marine resource management processes include regional fisheries management, advisory committees, decision-making committees, membership boards of local/regional stakeholder organizations, and public comment; 3) Comparison of virtual communities with communities of interest; 4) Includes identification of types and levels of involvement.		•	•	•		a. Better understanding of the importance of experience in conflict resolution b. Identification of gaps in stakeholder participation and potential educational strategies
Determining if education, outreach and communication positively affect compliance with regulations or affect stewardship/self-governance in MPAs	This project will assess the ability of education, outreach and communication programs to inform public about importance and significance of submerged cultural resources (SCRs) in specific areas in such a way that the results are readily quantifiable through observation of the protection (through community involvement) of target SCRs.		•	•	•		a. Protect SCRs through stewardship/self-governance b. Assumption of local stewardship and responsibility
Determining how important education is to a locally successful MPA: a review of local education programs in South Atlantic MPAs	This project will review/assess programs in SA MPAs to see how important they are to the overall goals and strategies of affecting attitudes, perceptions and beliefs of MPAs in general (modify/redefine as required).		•			•	a. Determination of effectiveness of the education programs b. Determination of the value in educating the public about these MPAs on the local level c. Documentation of any changes in the public's perception because of education/ outreach

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
<p>a. Management plans rarely have explicit goals for addressing APBs of stakeholders</p> <p>b. Many educational goals are defined in the cognitive rather than the affective domain</p>		•				•	•				Sea Grant, NERRS	Affects how supportive people are/ would be toward each other's management goals (ecological, physical, regulatory, etc.)
<p>a. Identifying survey methodology</p> <p>b. Need to focus on specific stakeholder groups in order to focus project – some stakeholder groups could feel left out – problem of personal bias toward valuing one stakeholder group over another</p>		•	•				•	•			Existing stakeholder organizations, recreational and commercial fishermen (e.g., Seafood Alliance, SAFMC, Sea Grant)	<p>a. Links with stakeholder involvement/ governance questions</p> <p>b. Could link with community benefits question</p>
<p>a. Preconceived notions of SCRs</p> <p>b. Reaching appropriate audience through programs designed to reach that group</p> <p>c. Baseline evaluation of SCRs prior to outreach/ communication program's implementation</p>			•				•				<p>a. Academic institutions in the area</p> <p>b. Research institutions with an interest in the area beyond protections of SCRs</p> <p>c. States, agencies, local communities</p>	<p>a. Geomorphology/ coastal processes groups</p> <p>b. Army corps projects impacting area</p> <p>c. University research interests</p> <p>d. Local academic participation</p>
<p>a. Need to understand local communities before you can see the big picture</p> <p>b. What might work here doesn't necessarily work there: Local studies will have to be done first, then look at regional – this will establish baseline</p>					•	•					<p>a. Local MPAs outreach/ education specialists</p> <p>b. Local educators, school systems, schools, colleges, universities</p> <p>c. States in SA region</p> <p>d. Sea Grant</p>	<p>a. Geomorphology projects, IOG reviews</p> <p>b. USACE projects</p> <p>c. CIS mandated for private/industrial development</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Question: What are public participation methods and do they/how do they affect perceptions of the MPA process and outcomes of							
Determining the best mix of methods: How can we determine best methods to ensure initial and continued involvement of communities of interest in the MPA process?	This project will identify affected public. It will identify the means of reaching the most people in the MPA to encourage their participation in the MPA establishment process, considering perceptions, and impediments (occupational, geographic, etc.) to ensure fairness among stakeholders.		•	•	•	•	a. Determination of the involved grant agencies and NGOs b. Determination of the "affected public" c. Determination of the impediments to MPA processes d. Justified actions?
Analyzing public participation requirements in MPA processes: A comparative study of what is required vs. what has been done, what should be done in state and federal MPAs	Stage 1: 1) State/federal MPA categories in SA – Determine the existing MPA categories in the various states. Perform a statutory/regulatory analysis of minimum public participation (PP) requirements; 2) Classification of PP mechanisms according to degree of PP, decision-making capability, state regulations, and the MPA management process; 3) Reality – What PP mechanisms did the MPA authorities actually use? Perhaps the authorities only met the PP requirements or perhaps they adopted greater or lesser PP strategies. Stage 2: Evaluate whether the degree of PP mechanism affects perceptions about MPAs. Develop an attitudinal MPA scale with reliable questions that get at appropriate perceptions. Give same instrument to public at different sites. Conduct surveys of 2 or 3 recently adopted or revised MPAs.		•	•	•	•	a. Classification of MPA PP mechanisms according to a scale of PP b. Survey of various types of MPAs in SA and their PP requirements c. Evaluation of whether authorities have complied with the minimum requirements or whether they have gone further than necessary
Correlating MPA process satisfaction to outcome satisfaction	Comparison of participant's perception of public participation in those processes to the actual outcome of those processes. Phase 1: Document process through survey-interviews, ask about perceptions (fairness, inclusiveness, validity, diversity of representation) of process. Phase 2: Periodically (appropriate interval) interview/survey to assess perception of outcomes.		•	•		•	a. Feedback in outcome of public participation process (PPP) b. Better understanding of values of PPP

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
the process?												
<p>a. Consumptive users' concerns about their livelihood/recreational interests being more strictly regulated</p> <p>b. Limited historic examples</p> <p>c. Limited public awareness of the issues</p>			•			•					<p>a. NGOs, local, state, and federal government agencies</p> <p>b. Commercial user groups</p> <p>c. Recreational user groups</p>	
<p>The major challenge is stage 2 of the correlation between MPA PP mechanisms and perception about MPAs. There are so many other variables besides PP mechanisms. Also it may be difficult to identify 2 or 3 comparative sites for stage 2 of project.</p>		•					•	•			<p>a. State DNRs</p> <p>b. SAFMC</p> <p>c. NMSP/NPS</p>	<p>a. International Association of Public Participation (IAP)</p> <p>b. IAP 2</p>
<p>a. Identifying suitable cases</p> <p>b. Temporal scale – when to do Phase 2?</p> <p>c. “After the fact” remembering differs from during phase</p> <p>d. Agencies may have rigidly defined PPP</p> <p>e. Multiple variables affecting outcome</p>				•		•					<p>a. NERRS, Sanctuary, NMFS, Parks, Refuges</p> <p>b. Universities</p> <p>c. The Nature Conservancy (TNC), NGOs</p>	<p>a. Management plan revisions</p> <p>b. New MPA designations</p> <p>c. International efforts</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Does individual perception of process correlate to perception of outcome? Compare previous experiences in agencies leading MPA involvement and locally identify perceptions among communities of agencies	Phase 1: Conduct interviews with managers and participants – use participation lists, type of meeting, diversity of audience, and perception of process. Content influences attitude instrument. Phase 2: Survey work of communities near MPA. Example: if fish season changes, would you prefer to have rules made through workshop in federal agency or who? Council, agency, University, NGO? Evaluation of a paired design for a park? For an MPA?		•	•			a. Identification of past audiences and their perceptions of agency leads b. Identification of historical attitudes toward agencies, Universities, trade groups, NGOs c. Literature review d. Recommendations relative to most effective institutions to be a lead in a local MPA process
Determining how NGOs influence the MPA process and how they affect an individual's participation in the process	This project will interview key NGOs and a sample of smaller groups to determine where they feel they participate in the process, how they interact. Do they provide education or outreach? It will sample past individual participants for their attitudes toward NGO participation in the process.		•	•			a. Understanding of the role NGOs play in the MPA process b. Identification of better or effective ways NGOs can participate c. Determination of whether individual's participation is influenced by NGO participation
Determining the barriers to participation in MPA processes (e.g., time, space, culture, language, trust, access, etc.)	This project will identify stakeholder groups and their characteristics. Characteristics include: occupation, belief and value systems, language, community embeddedness, and status. It will demonstrate different social characteristics of these groups forming barriers to participation in the MPA process.		•	•	•	•	a. Identification of the Universe of Constituencies b. Identification of salient characteristics of constituent groups c. Determination of the methods that have the least impact on the most groups d. Determination of the best methods and identification of outlying constituency
Determining how stakeholder involvement affects perceptions of involvement in the MPA process: The role of cooperative research in affecting continued stakeholder involvement in MPA management process	Assessment of stakeholders' perceptions of value and effectiveness of MPAs as a management tool, in relation to their involvement in either cooperative research. Comparison of MPAs with or without cooperative research.		•	•	•	•	a. Case study of MPAs where co-management and cooperative research has occurred b. Demonstration of how cooperative research can be valuable to number retention of stakeholders in the process

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
a. Human subjects – easily overcome b. Surveys – federal problems c. Institutional bias – strategic agencies with interviews d. Self-reported data e. Finding former participants			•					•			a. Current MPA managers b. CESU – Cooperative Ecosystems Study Unit c. NOAA Fisheries d. State agencies	NOAA Coastal Services Center (CSC) – evaluating effectiveness of methods of public participation
a. Contacting NGOs b. Contacting former process participants			•				•				a. East Carolina University (ECU), other Universities b. Foundations	
a. Ensuring the full suite of stakeholders is considered b. Lack of social science data on constituencies (particularly at site-specific level)			•					•			a. Academia b. Government agencies c. Consultants and NGOs	Executive Order (EO) on environmental justice
a. Lack of “real world” examples in the U.S. b. Bias toward participation c. \$\$ d. Research methodology					•					•	a. SAFMC b. NOAA c. Industry groups, conservation organizations, states	There is existing cooperative research money and identified research needs relating to MPAs in the SA through NOAA Fisheries and Gulf of Mexico and SA Fisheries

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Question: What is the perception of ownership of the commons between users and nonusers in relation to potential or existing MPAs?							
Determining who is moving to the SA region and what they think about existing or potential MPAs	This project will conduct a demographic trend survey and ethnic survey of newcomers to an area to find out who is moving, why they came, and whether they have a conservation ethic – How do they feel about MPAs? What is their perception as a “newcomer” to the traditional use of a common area?		•	•	•		a. Survey data on who is coming, why, what they believe b. Management tools for the MPA, ideas for outreach, ideas for conflict resolution
Identifying and correlating differences of perceptions of ownership, and ethics of use, between traditional users and new arrivals; Identify each group’s perception of the other	This project will categorize a suite of perceptions and beliefs about the sense of ownership of an area and a sense of the rights, privileges, responsibilities and ethical behavior obtained by virtue of longevity of use of or interest in an area. It will determine if there is a significant difference in the perception or strength of feeling based on longevity in an area or belonging to a cultural group.		•	•	•		a. Survey of local residents/ traditional users b. Survey of (newer) residents/ users c. Comparison of responses to surveys and recommended management actions
Assessing MPA public resource manager perception of ownership and linkage to decision-making	This project idea was proposed based on anecdotal observations that managers of certain public resource management areas appear to exhibit ownership behavior similar to that expected from traditional users or similar to that expected from newcomers. The project will: 1) Conduct a literature review of public resource managers’ attitudes/ perceptions regarding ownership of their resource; 2) Identify public resource managers associated with existing and potential MPAs. Managers include agency and stakeholders – All involved in management process; 3) Survey managers: knowledge of ownership, laws/policy, demographics (i.e., length of time in area, relationship to area, personal resource user history, relationship to resource), MPA ownership perception survey – right vs. privilege, biases, meaningfulness, decision-making attitude towards user groups, opinion on user rights; 4) Compare to other studies on terrestrial areas; 5) Identify biases/trends.		•		•		a. Process for identifying managerial perspectives and decision-making biases to resource ownership in MPAs b. Recommendations for training of managers, particularly regarding knowledge of ownership principles regarding the commons and how they self-identify or work with own biases relating to user groups c. Results should be integrated with survey of traditional users and newcomers, then into a training workshop involving managers, traditional users and newcomers designed to make perceptions/biases more transparent and ultimately resolve conflict

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
<p>a. Designing a survey that actually gets to what you need to know</p> <p>b. Finding existing demographic/census data that you can utilize for this study</p>		•					•				<p>a. Scientists, anthropologists, demographic specialists</p> <p>b. Universities – graduate students, local governments, state governments</p> <p>c. U.S. Census</p>	<p>1. Basic U.S. census data could be built upon</p> <p>2. Could link to fisheries projects of traditional users</p>
<p>a. Surveying to identify attitudes and beliefs is easily biased by methodology</p> <p>b. Making a useful distinction between longtime residents/ traditional users and newcomers</p>					•				•		<p>a. Private environmental organizations</p> <p>b. Local state and federal government</p> <p>c. All the stakeholders in an area</p>	<p>Similar to the terrestrial zoning problems required for managing any land or lands or waters because of supply and demand (because of increasing consumptive demand on natural resources)</p>
<p>a. No existing survey protocol/methodology</p> <p>b. Willingness of managers to participate/reveal biases</p>			•				•				<p>a. Agencies involved in MPA management</p> <p>b. Pew Oceans Commission/The Ocean Conservancy</p> <p>c. Clemson – parks, recreation & tourism management – Rob Bixler</p>	<p>a. Training of managers</p> <p>b. Previous studies of terrestrial managers</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Determining what causes people to feel ownership in relation to MPAs and potential MPAs	Literature review to identify cause and relationship of ownership beliefs of public natural resources in other contexts. Identification of data and methods of analysis required for the specific study comparing existing or potential MPA sites (reference project 2). Develop or modify a process of ownership model based on data collection and literature review. Test model of existing and comparison sites.		•	•	•	•	a. Literature review, database of ethics, perceptions, beliefs and ownership among different subpopulations b. Process/evolution of ownership models for existing and potential MPA sites c. Management implications of results

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
a. Selection of study sites b. Development of a model that can be transferable to other sites c. Categorization of individuals in different groups d. Multiplicity of variables to describe subpopulations and ownership populations			•					•			a. Clemson and other regional Universities (Duke, University of North Carolina [UNC], Virginia Institute of Marine Science [VIMS], ECU). b. State agencies c. NMFS, Councils	a. Census of population studies b. Sense of community, sense of place c. Potential resource use patterns d. Other themes such as governance

Economics of MPAs

This theme deals with economic conditions and trends associated with marine protected areas. Subjects of interest include, but are not limited to, market and non-market values, costs and benefits, and positive and negative impacts associated with marine protected areas.

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Theme: Economics							
Question: What is the distribution of indirect and direct costs and benefits of MPAs?							
Economic valuation of the effects of proposed MPA sites on recreational and commercial fishing	This project will create models of the effects of recreational fishing on proposed MPA sites utilizing changes in use patterns, characteristics of the fishing experience, substitute sites, and costs of fishing at different sites by sectors/cost type, and generate similar models for the commercial users.		•	•	•	•	a. Net effects (economic) of proposed sites on commercial and recreational fishing sectors and other consumptive/non-consumptive groups b. Distribution of primary economic costs and benefits across user groups throughout time
Developing a resource sector-oriented input-output model for the South Atlantic states (including Virginia)	Using existing input-output (I-O) models, this project will collect and analyze market-oriented economic data on coastal natural resources oriented industry (e.g., sand and gravel, wind energy, fishing, etc.) and consumer sectors currently and/or potential critical to the selection of MPAs and existing MPAs. This partial survey approach will include collecting and analyzing consumer type expenditure patterns related to MPA oriented natural resources and quantifying linkages between industries and related market channels critical to MPAs.		•	•		•	a. Preparation of a flexible economic impact model to determine potential economic and fiscal impacts at a regional, state and/or multiple state level b. Quantification of potential economic impact (distributional) changes associated with comparing candidate MPA sites c. Establishment of ex-ante economic baseline for future economic impact analyses related to MPAs

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
Theme: Economics												
<p>a. Development of an unbiased survey to collect data due to the opposition to this regulation</p> <p>b. Combination of this data with existing information</p>			•								<p>a. Councils/states</p> <p>b. NOAA fisheries</p> <p>c. University of FL/ Miami/other regional universities</p>	<p>a. Linked to the use pattern study</p> <p>b. Linked to some of the valuation studies conducted by NOAA fisheries</p> <p>c. Trip cost data collections initiatives conducted by NOAA fisheries, non-consumptive</p> <p>d. Links to other consumptive use studies</p>
<p>a. Dependent on predicted behavior of resource users derived from other sources</p> <p>b. Dependent upon secondary economic data provided by various federal agencies (e.g., BEA)</p>			•								<p>a. Federal, state and local economic development agencies</p> <p>b. Small Business Administration (SBA), Department of Commerce (DOC), BEA, U.S. Bureau of Census and other federal agencies involved in collecting local, state and regional area economic data</p> <p>c. NOAA, DOI, regional universities including the Clemson University Regional Economic Development Lab</p>	<p>a. User outdoor recreational pattern research by DOI and other federal agencies</p> <p>b. Economic valuation of net effects from candidate MPA sites based on bottom fishery restrictions by Regional Fishery Management Councils (e.g., SAFMC)</p> <p>c. NOAA, DOI, MMS, EPA, USACE, and U.S. Department of Agriculture (USDA) economic impact research on MPAs, wilderness and other protected areas</p>

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Developing and implementing a research protocol to measure existence value for planning MPAs	This project will develop research models and instruments for measuring existence value of resources protected by MPAs. This will include surveys to identify existence value and to gauge objectively the public values attached to estimated existence of marine resources. This will include ranking and scalar analyses, aimed at translation of existence values into dollar values, and lab experiments.		•	•	•	•	<p>a. Instruments to measure existence value, derived from intensive ethnographic interviews with selected respondents</p> <p>b. Ranked lists of existence values of marine resources</p> <p>c. Profiles of ranked existence values specific to proposed or existing individual MPAs</p>
Question: How can we improve consideration of economic effects on local/traditional economies in MPA planning (including selec-							
Assessing effects on local/traditional economics using a sample of existing MPAs in the South Atlantic region: a comparative case study	Using standard local economic impact modeling methods, the comparative economic impacts of existing MPAs will be analyzed. The local data collection and resulting economic impact analysis will be oriented toward providing economic information germane to the development of policies and tactics to mitigate negative impacts or enhance positive impacts of planned MPAs on local economies.		•	•		•	<p>a. Objective comparative analysis of MPA sites on associated local economies</p> <p>b. Economic information critical to developing prescriptive recommendations for mitigating potential negative impacts or enhancing positive impacts</p>
Developing recommendations for improving and/or mitigating MPA impacts to local traditional economies based on lessons learned from previous project (s)	Using “lessons learned” from previous project, this project will identify examples of successes and failures in considering economic effects on local/ traditional economies. This project will recommend strategies and tactics applicable to new and existing sanctuaries to help mitigate negative local economic effects and/or enhance positive effects.		•	•	•		<p>a. “Laundry list” of potential strategies, tools and partners to avoid/mitigate adverse effects on local/traditional economies</p> <p>b. “Laundry list” to maintain or ensure benefits to local/ traditional economies</p>

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
<p>a. Definition, representation, and communication of the concept of existence values relative to marine reserves</p> <p>b. Valid and consistent measurements of existence values</p> <p>c. Translation/transformation of existence values into monetary/economic values, and other metrics</p>			•					•			<p>a. Universities</p> <p>b. Councils (local, state, federal)</p> <p>c. NGOs and trained researchers</p>	<p>a. All of the administrative agencies of the region's parks, reserves, MPAs, etc.</p> <p>b. DNR</p> <p>c. SAFMFC, ASMFC, NERRS, NOAA Sanctuaries</p>
tion) and management?												
<p>a. Lack of ex-ante baseline economic information before a given MPA was established</p> <p>b. Lack of ex-post economic information on the effects of a MPA over time</p> <p>c. Dependent on predicted behavior of resource users derived from other sources</p>			•						•		<p>a. Federal, state and local economic development agencies</p> <p>b. Small Business Administration (SBA), DOC, BEA, U.S. Bureau of Census and other federal agencies involved in collecting local area economic data</p> <p>c. NOAA, DOI, regional universities including the Clemson University Regional Economic Development Lab</p>	<p>a. Socioeconomic research including the National Survey on Recreation and the Environment and various NOAA sponsored economic surveys (e.g., MRFSS add-ons)</p> <p>b. Economic valuation of net effects from candidate MPA sites based on bottom fishery restrictions by Regional Fishery Management Councils (e.g., SAFMFC)</p> <p>c. NOAA, DOI, MMS, EPA, USACE, and USDA economic impact research on MPAs, wilderness and other protected areas</p>
<p>a. MPA uniqueness may limit the use of strategies used by economic development specialists</p> <p>b. Public sector constraints to enhancing the precedent of mitigating negative economic impacts of MPAs</p>		•							•		<p>a. Federal, state and local economic development agencies</p> <p>b. Economic development NGOs and consultants</p> <p>c. Clemson University (e.g., Regional Economic Development Lab.) and other regional universities</p>	<p>a. Economic development research on local coastal economies by federal (e.g., SBA), state and local economic development agencies</p> <p>b. Federal, state and/or local experience on mitigating negative local economic impacts of MPAs</p>

Communities

This theme examines the characteristics of geographic and stakeholder communities associated with marine protected areas and the ways these communities function, particularly as they relate to the use and conservation of marine resources.

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Theme: Communities							
Question: How has community structure changed through time? How might it change? Consider relative risk							
Developing a community/sensitivity scale	Using secondary data such as census, fishing permits data, BEA, etc, this project will: identify natural resource dependent communities; measure relative risk due to change; and, once communities are identified, conduct case studies to compliment secondary data analysis.		•	•			a. Secondary data analysis b. Case studies c. Sensitivity, vulnerability scale
Identifying coastal counties that have had major demographic/ethnic change for further study	The goal of this project is to provide profiles of all coastal counties in the SA derived from census data from 1890-2000. The profiles will include information on population changes, socioeconomic changes, changes in ethnic composition and changes in means of livelihood. Major changes, especially short term ones, may be indicators of more fine-grained research to identify agents of change, types of change and consequences of change.		•	•	•	•	a. County profiles based on selected census categories b. Identification of major changes, demographic and socioeconomic, within 10 year census cycle c. Identification of pivotal changes that need further fine-grained research
Studying oral histories of long-term residents looking at community networking	This project will identify elderly and/or long-term residents within coastal communities who have a repertoire of memories associated with the history of their residential community. Oral history and life history interviews will document the knowledge. Historical memory files will be created for each county.		•	•	•		Historical memory profiles for selected communities



Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
Theme: Communities												
Capturing non-resident users			•							•	a. State organizations b. NOAA	Link with existing environmental sensitivity indices to help in planning/siting MPAs
a. Adjustment of profiles in relation to changes in census categories through time b. Development of a method to pinpoint major changes	•					•					a. Universities b. Local/state/federal agencies c. NGOs	
a. No baseline b. Location, identification of individuals to include in the projects	•					•					a. Local historical societies b. Universities	

Cultural Heritage and Resources

This theme covers the historical and traditional artifacts within marine protected areas. These may include, but are not limited to, artifacts of nautical history (wrecks, replicas, etc.), maritime infrastructure (piers, lighthouses, locks, ports, forts, etc.), and historical documents (books, photographs, music, recipes, etc.) of MPAs. This theme addresses primarily the physical manifestation of historical and traditional uses of marine resources; their social and cultural underpinnings are addressed by other themes.

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Theme: Cultural Heritage and Resources							
Question: How do we instill a cultural resource ethic among the public?							
Evaluating the extent to which agencies designating and managing MPAs acknowledge and recognize the role of local and traditional cultural heritage and resources (e.g., "maritime heritage") (Specific case studies to inform broader MPA processes and overall MPA governance structures)	<p>1) This project will review and evaluate the selection, designation and planning of a large sample of South Atlantic MPAs. It will identify:</p> <ul style="list-style-type: none"> a. Agency recognition of valuation of local community traditions; b. Efforts to sustain coastal communities through better understanding and use of maritime heritage resources; c. Examples of successes to use maritime heritage values to build positive local relationships d. Examples of failures to use maritime heritage values to build positive local relationships; e. Key principles of successful integration of maritime heritage values in MPA selection, designation, planning and management; and f. Key principles of building relationships in maritime heritage values among components of MPA networks. <p>2) This project will make recommendations to improve the process of MPA selection, designation, planning and management with respect to maritime heritage.</p>		•	•	•		<ul style="list-style-type: none"> a. Report summarizing the results obtained b. Possible changes in culture c. Possible changes in governance structures
Surveying public perceptions concerning maritime heritage	This project will design and carry out a survey instrument to inventory perceptions of coastal populations in relation to maritime heritage. It will include identification of types of heritage recognized, valued and promoted. The survey will also include perceptions related to terminology and preferred use of descriptive terms, and socioeconomic and demographic variables in order to differentiate across regions, ethnicity, age, gender and occupation.		•	•	•	•	<ul style="list-style-type: none"> a. Data sets with measurements of maritime heritage variables, differentiated according to socioeconomic and demographic categories b. List of types of recognized and valued maritime heritage c. Ranking of the extent to which types of maritime heritage are valued d. Community profiles of types and value of maritime heritage



Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
Theme: Cultural Heritage and Resources												
a. Imbalances between natural and cultural resource protection imperatives (including authorizing legislation) b. Agency culture and the potential for distrust c. Complex MPA governance framework (multiple agencies) d. Study boundary process (should include Florida Keys National Marine Sanctuary [FKNMS] and Tortugas 2000)		•					•				a. Agency staff (state, federal and local) b. Academic experts (outsiders to specific MPA processes) c. Representatives of fishing and other maritime communities d. NGOs	
a. No baseline data b. Need to develop the research instruments (combination of ethnography and related survey instruments) c. Need to develop sampling procedures to include the types of communities within the region			•					•			a. Universities/ educational institutions b. Local government agencies c. NGOs	Established cultural and physical conservation areas (e.g., cultural heritage associations, Sea Grant extension, natural parks, local communities, state recreation areas/ management)

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Inventorying and assessing existing outreach events and methods	The purpose of this study is to identify outreach events and evaluate their success. This will be accomplished through web searches, information from the local Chamber of Commerce, media content analysis and information from museums and historical societies.		•			•	<ul style="list-style-type: none"> a. Report b. Website summarizing inventory and linking to local events c. Recommendations for improving outreach
Question: What cultural resources are within the South Atlantic region at potential and existing MPA sites?							
Identifying and prioritizing cultural resources in the South Atlantic region that need to be protected	This project will identify and establish a priority list for cultural resources in proposed and existing MPAs based on known or potential impacts to sites and imminent threats to sites.		•	•	•		<ul style="list-style-type: none"> a. List of priority sites that are in imminent danger b. List of sites in proposed or existing MPAs c. Prioritized list of sites and recommended actions to protect sites
Literature review to identify known maritime cultures and subcultures in the region	Initial literature review of published and unpublished documents or oral histories related to regional maritime cultures/subcultures.		•	•	•		<ul style="list-style-type: none"> a. Literature review b. Published and unpublished resources c. Archival sources
Applying existing or creating/ synthesizing new models to identify high probability locations of cultural resources	Some models currently exist that predict the likelihood of the presence of specific types of cultural resources in specific areas. This project will identify the useful models and incorporate them into a comprehensive or modular suite of models to predict the probable occurrence of all types of cultural resources in MPAs or potential MPAs.		•	•	•		<ul style="list-style-type: none"> a. List and evaluation of existing predictive models b. List of cultural resources for which no predictive models exist c. Comprehensive integrated predictive model, applicable to all existing and proposed MPAs
Inventorying, assessing and managing cultural resources within a designated MPA	This project is designed to establish cultural resource potential within MPAs and generate a research design (RD), methodological protocol (MP) and management proposal for a given MPA. This RD and MP will be designed to be applicable to other MPAs.		•	•	•	•	<ul style="list-style-type: none"> a. Cultural resource inventory of given MPA b. Exportable RD and MP, including management suggestions c. Initial presentation of maritime landscape of MPA

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
The data may be inadequate for evaluating success of outreach without additional data collection (i.e., attendance figures for festivals, economic gain, sponsorship, attitudinal surveys)	•					•					a. State agencies (universities, bureaus) b. Sea Grant	There would be direct linkages between the community and the natural environment
a. Actual field survey: expensive and time consuming b. Actually knowing the impacts that are planned: dredging can be planned around... but a ship grounding cannot					•					•	a. Local MPA managers b. Government agencies, state agencies, universities, research institutes c. Locals, fishermen, watermen	Some inventories already exist for SA states (GA, FL, SC, NC, VA?); and some MPAs already have lists (Gray's Reef, GA; State of Florida Archaeological Reserves, FL; Cooper River Shipwreck Heritage Trail, SC)
a. Volume of information to synthesize and prioritize b. Locating pertinent information of high quality			•						•		a. Academic institutions b. State agencies c. National libraries, historical societies, Smithsonian Institute, NOAA	a. Tied to valuing cultural resources b. Link between this and other literature searches that have been done for specific sites
a. Incompatibility of existing models or non-transferability of data between models b. Lack of predictive models for certain types of cultural resources c. Sheer complexity of comprehensive predictive models and possibility of large errors from small programming errors											a. Universities b. State historical preservation offices c. National Historic Trust, various protection organizations such as Civil War Trust, ABPA, etc.	This modeling resembles some endangered species habitat prediction models. It is also similar to and almost as complicated as climate change predictive models
a. Cultural resource inventory may not be priority of MPA but must be included in overall MPA development b. Cost per returns				•					•		a. State agencies b. Universities c. Internship program within participating institutions	a. USACE projects b. Maritime development with potential impacts c. MPA may well be established for reason other than specific cultural resource preservation

Project Title	Description	One site	Many sites	Planning	Management	Evaluation	Outputs/Outcomes
		Geographic Coverage		Applicability			
Analyzing gaps between public perception and professional perception of cultural resources	This project will conduct survey/ ethnographic type interviews of a random sample of affected area to determine: public perceptions or definitions of types of cultural resources; characteristics of respondents; and their relationship with maritime resources. Also, for the same sites the project will determine the researchers' perceptions of the existing cultural resources.		•	•	•		<p>a. Description of the importance placed on components of a site by researchers</p> <p>b. Description of the level of importance placed on similar components by different groups of the general public</p> <p>c. Comparison or contrast between these various groups</p>

Challenges	1 Quarter	1 year	2 years	5 years	Ongoing	<50	50-100	100-250	250-500	>500	Potential Partners	Linkages
	Estimated Duration					Estimated Cost (\$K)						
Providing information to the public so that they could begin to inventory their ideas on definitions of cultural resources without introduction of bias				•					•		a. State agencies with scientific expertise b. Universities in the region	Economic and social value of cultural resources by the general public – value to the economy

Appendix B. Additional Proposed Research Questions

Following is a list of all the questions that were developed in the initial brainstorming session of the Savannah workshop. These questions were prioritized by the workshop participants in terms of their perceived importance for the generation of social science information for MPAs in the region. The number in parenthesis after each question represents the number of votes received during the prioritization process. The bolded questions comprise the final twelve questions that the participants developed in detail, which are included in Appendix A.

GOVERNANCE, INSTITUTIONS AND PROCESSES

- **What are the government structures at regional levels? What are overlays with underlying ecological/human patterns? What governance processes or modifications are needed to implement MPAs? (10 votes)**
- Informal pattern of governance in area of interest – community tradition (e.g., fishing communities have their own systems of monitoring and enforcement). (9 votes)
- Understanding stakeholder groups and their issues and what they want. (8 votes)
- Dynamics of the way stakeholders do/don't participate. (6 votes)
- How NOT to do an MPA? (lessons learned from Florida Keys National Marine Sanctuary [FKNMS]). (5 votes)
- What is the effective role of "advisory" council/panel? Who should be on the advisory council/panel? Representation? Powers? Authority? (5 votes)
- How to build a constituency for integrated management? (4 votes)
- Consideration of alternative methods for providing information ("scoping" under National Environmental Policy Act [NEPA] isn't liked by fishermen). (3 votes)
- How to best evaluate MPA processes? Meet goals? Is the stakeholder process effective? How effective are processes and institutional arrangements? (3 votes)
- Concept of zoning water- public awareness. (2 votes)
- Need to understand informal governance (e.g., word of mouth agreements, charter fishermen agreements), institutional beliefs. (2 votes)
- A science-based network of MPAs in South Atlantic? (1 vote)
- What processes do people trust? (1 vote)
- Efficacy of public process (e.g., NEPA). (1 vote)
- Conflict between different authorities; legal contradictions. (1 vote)
- History of regulations/authorities (context). (1 vote)
- How do we prepare managers and stakeholders for decision-making regarding MPAs? (1 vote)
- Perceptions of participatory impact/effect (or lack thereof) – avoidance behavior may play a role – may prefer direct political route.
- How to transfer information between federal and state agencies and the public/users?
- How to take advantage of Pew and U.S. Ocean Commission reports?
- How to capture non-vocal majority in processes? – perceptions that can't influence process perceptions of institutional arrangements.
- Models of self-regulation of users in the region?

USE PATTERNS

- **What are historical use patterns as they relate to an existing or potential MPA? (18 votes)**

- **What drives change in use and non-use of MPAs? (10 votes)**
- Who are the users of MPAs? (10 votes)
- Where are the conflicting and complementary uses? (9 votes)
- What limitations to use will people accept? How or when should we ask this? (7 votes)
- Where are the users in relation to the MPAs? Coastal linkages between coast and ocean. (1 vote)
- What are the types/kinds of uses? (1 vote)
- How will MPAs likely change use? (1 vote)
- How will larger ecological changes affect use? (1 vote)
- What are the seasonal use patterns?
- What are the impacts of use (aesthetic, social)?
- How to distinguish primary/secondary users? (sand/gravel example)

ATTITUDES, PERCEPTIONS AND BELIEFS

- **What is the local knowledge (specific to locations) about resource quality, use, access and protection? (11 votes)**
- **How can education, outreach and communication about MPAs affect attitudes, perceptions and beliefs (APBs) of various stakeholder groups? (6 votes)**
- **What are public participation methods and do they/how do they affect perceptions of MPA process and outcomes of process? (14 votes)**
- **What is the perception of ownership of the commons between users and non-users in relation to potential or existing MPAs? (6 votes)**
- What are historical bases of current APBs? (5 votes)
- How do we predict attitudes (actions/phases) towards MPAs? (4 votes)
- How do we use belief systems to craft implementation of MPA management, including enforcement? (social marketing). (2 votes)
- How do we incorporate environmental justice across the board? (1 vote)
- How can we link APBs to non-use values? (methods question) (1 vote)
- How are the words marine protected area perceived by different stakeholder groups? (1 vote)
- What is the current attitude towards governance?
- How do we educate to overcome misperceptions among users regarding MPAs?
- Identify misperceptions among user groups.
- What are sources of information?
- What are people's baseline knowledge regarding environmental science/marine ecosystems?
- What are attitudes towards shifts in community leadership?

ECONOMICS

- **What is the distribution of indirect and direct costs and benefits of MPAs? (7 votes)**
- **How can we improve consideration of economic effects on local/traditional economies in MPA planning (including selection) and management? (7 votes)**
- When creating an MPA, how does that increase values in surrounding area? (e.g., property values, ecotourism) does this happen? (6 votes)
- How can co-management and rights based management (incentive-based management) be combined with MPAs? Economic/environmental ethics and stewardship. (5 votes)
- How does "socio" modify economics? Ramifications on different social groups - distribution of impacts. (5 votes)
- Existence value held by local people and people far away. (4 votes)

- What is additive value when have aggregation of conservation areas (marine and upland). (4 votes)
- Showing economic benefits of ocean zoning (recreational benefits). (3 votes)
- How to piggyback on existing data collection to create useful models? And to get more economic data that's useful – how to develop models that can be used to transfer benefits from one location to another. (2 votes)
- Using cost-effective analysis – can you use when difficult to quantify values of MPAs? (2 votes)
- Repair of damages as access to MPAs. (1 vote)
- How to help fishermen understand the economic-based decision-making? (1 vote)
- Foregone use benefits – effects of displacement. (1 vote)
- Values that come from common resources.
- Economic value of restoration.
- How is economic behavior modified by MPAs?
- How to determine economic “footprint” of MPAs and relative economic values (unseen value).
- Cost of doing nothing.

COMMUNITIES

- **How has community structure changed through time? How might it change? Consider relative risk (16 votes)**
- How does the general public view and value traditional resource based communities? (7 votes)
- Non-traditional and distributed communities (general public), rights/responsibilities of. (7 votes)
- Sustainability and resiliency of community. (4 votes)
- Where/how communities receive info on MPAs? (4 votes)
- How do communities learn and change or cope with change? (1 vote)
- What methodologies help to define communities? Incorporate geographic and virtual (e.g., social, occupational) – keying out by relationship, recreational, to use – consumptive, non-consumptive. (1 vote)
- What are the historic/traditional communities? Including not geographically attached, and level of dependencies. (1 vote)
- How/why people choose to identify or participate in community?
- Regional differences in communities.
- Social sensitivity analysis (to ecological sensitivity assessment)?
- What are the linkages between the communities – including communications?
- What are the internal/external pressures?
- Are they cohesive or not? Social capital – capacity of communities.

CULTURAL HERITAGE AND RESOURCES

- **How do we instill a cultural resource ethic among the public? (13 votes)**
- **What cultural resources are within the South Atlantic region at potential and existing MPA sites? (11 votes)**
- Value of ocean as a historical/cultural resource (how do you frame this?). (6 votes)
- Build a history (part of and linked to local history of MPA) of the use of an MPA (incorporate public). (2 votes)
- How do we, and what methods do we use, to prioritize sites? And how do you balance with competing uses? (2 votes)

- What is the perception of the public towards the importance of cultural heritage and resources? (sophisticated demographics). (2 votes)
- How do we protect cultural (subsistence?) resources? (1 vote)
- Education – how should resources be presented and managed? (1 vote)
- How do we overcome “step child” syndrome to natural resources? Natural heritage also plays 2nd fiddle to resource exploitation.
- Education of public (value?).
- Evaluate quality of culture, sustainability.

Appendix C. Existing Social Science Research Efforts

Existing Social Science Research Efforts							
Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
MPA Social Science							
South Carolina Dept. of Natural Resources (DNR) and NOAA's Coastal Services Center	Characterization of the Ashepoo-Combahee-Edisto (ACE) Basin, South Carolina (1997-2000)	The study was developed to provide managers, scientists and users with an interdisciplinary synthesis of information about the ACE Basin. The goal is to facilitate management and resource allocation in the area by assembling into one information resource much of the environmental, socioeconomic and resource management information. A major emphasis of the ACE Basin Ecological Characterization is to explore the linkages between land use within a watershed and the ecological and sociological changes that result.	Economics; Use Patterns			•	NOAA Coastal Services Center: csc@csc.noaa.gov; http://www.csc.noaa.gov/acebasin/
NOAA and Georgia Department of Natural Resources	Visitor Use at Gray's Reef National Marine Sanctuary (1983-1984)	Goal of project was to develop a hypothetical scenario of local offshore fishing patterns, by using overflights of the Gray's Reef NMS. The overflight schedule was designed in two phases. The first phase (summer) consisted of intensive sampling during a relatively high use period, while the second phase (winter) consisted of weekend sampling.	Use Patterns			•	http://www.graysreef.nos.noaa.gov/flight.html
NPS - National Parks Service Social Science Program (Usable Knowledge: A plan for furthering social science and the national parks)	Visitor Services Projects in South Atlantic Region	NPS Social Science Program developed a research review series to further scientific understanding of the issues. The products include a visitor service project that provides park managers with accurate information about visitors - who they are, what they do, their needs and opinions. Park managers have used this information to improve visitor services, protect resources, and manage parks more efficiently.	Attitudes, Perceptions & Beliefs		•		Visitor Services Project Director, Dr. Steven Hollenhorst: stevenh@uidaho.edu, (208) 885-7911; www.nps.gov/socialscience/

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
NOAA	Geoarcheology in the Georgia Bight: A Study of Gray's Reef National Marine Sanctuary and J Reef, Georgia (1995-1998)	Scientists studying the geoarchaeology of Gray's Reef and nearby J-Reef are attempting to document the reefs' existence above sea level during geologic time. Such documentation would provide the foundation for studies concerning the possible existence of prehistoric humans and their prey in this area.	Cultural Heritage & Resources		•		Dr. Erv Garrison: egarriso@arches.uga.edu; http://www.graysreef.nos.noaa.gov/arch.html
NOAA	Monitor National Marine Sanctuary (1977- present)	Since 1977, research at the Monitor site has been directed toward documenting the wreck in detail and understanding how it has been affected by natural deterioration and human activities. In 1987, NOAA completed baseline studies at the site that are essential for determining the rate of deterioration of the hull and changes in the Sanctuary environment. In 1990 and 1991, NOAA conducted site inspection studies to document changes in the Monitor and its immediate environment. General research goals for the Sanctuary are the continued scientific recovery and dissemination of historical and cultural information preserved at the site, the continued scientific study of the Monitor as an artificial reef, and the careful review and monitoring of privately-sponsored research activities.	Cultural Heritage & Resources		•		Dr. John Broadwater: John.Broadwater@noaa.gov; http://monitor.nos.noaa.gov/research_programs.html

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
MMA Social Science							
Minerals Management Service	Federal Oil and Gas Activities: A Socioeconomic Review (1983-1984)	Goals are: (1) To search current literature to gather existing quantifiable socioeconomic information that identifies Outer Continental Shelf (OCS) related socioeconomic impacts, summarized by Planning Area; (2) To prepare a series of tables containing relevant quantifiable socioeconomic baseline information for each Planning Area; (3) To prepare a description of potential OCS oil and gas activity impacts on the socioeconomic environment, with accompanying tables, for each Planning Area; and (4) To translate impact to dollar value using market and non-market valuations, as appropriate. (North Atlantic, Mid-Atlantic, South Atlantic, Eastern Gulf of Mexico, Central Gulf of Mexico, Western Gulf of Mexico, Southern California, Central/Northern California, Washington-Oregon, Gulf of Alaska Subregion, Bering Sea Subregion, and Arctic Subregion).	Economics			•	C. Bakewell. http://www.mms.gov/eppd/socecon/techsum/at/30051.doc
Minerals Management Service	Onshore Impacts of Offshore Oil and Gas Exploration, Development, and Production on the Atlantic Outer Continental Shelf (1989-1990)	The objective of this study was to develop and demonstrate a methodology to evaluate the onshore economic impacts of offshore oil and gas exploration, development and production on the Atlantic OCS.	Economics			•	Jason Anderson and Barbara Wallace. http://www.mms.gov/eppd/socecon/techsum/at/3503.PDF

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
Minerals Management Service	Coastal North Carolina Socio-economic Study (1993)	Goals are: (1) Characterization of base case conditions in the five potentially affected counties including standard aggregate variables, the structure of relevant industries, and the relationship among private and public sector entities; (2) Detailed studies on representative communities potentially affected by OCS development; (3) Aesthetic and perceptual issues study of representative components of potentially affected populations; (4) Infrastructure studies; and (5) Design of a socioeconomic monitoring study.	Economics			•	John Maiolo and John S. Petterson. http://www.mms.gov/eppd/socecon/techsum/at/30671.PDF
Minerals Management Service	Assessment of Space and Use Conflicts on the U.S. Outer Continental Shelf Between Oil and Gas Industry and Commercial and Recreational Fishermen (1979-1981)	Goals are: (1) To review historical conflicts between OCS oil and fishing industries; (2) To identify potential and ongoing fishing gear type vs. oil structure conflicts; (3) To develop a predictive catch loss model due to space loss by OCS oil structures; and (4) To assess the ability of particular harbors to accommodate oil support vessels and staging operations. The geographical scope of this study included the Atlantic, Gulf of Mexico, and California OCS lease sale regions. Site visits were made to 30 ports.	Use Patterns			•	F. Proschaska, M. Roessler, D. Tabb. http://www.mms.gov/eppd/socecon/techsum/at/29167.doc
Minerals Management Service	Study of Environmental Impacts of Utilizing Pipeline Corridors in the Mid-Atlantic OCS (1982-1983)	Goals are: (1) To characterize the physical, biological, and cultural/economic systems in the Mid-Atlantic OCS; (2) To review pipeline operation and impacts in other areas; and (3) To evaluate potential impacts and mitigation. This study is a compilation and synthesis of existing information. The study area is comprised of the Hatteras-Cape Cod Shelf and a small area of the Florida-Hatteras Shelf.	Use Patterns			•	J. Brosius, N. Psuty, C. Talbot. http://www.mms.gov/eppd/socecon/techsum/at/29195.doc

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
Office of Fisheries Management, Division of Marine Resources, South Carolina Department of Natural Resources	Economic Assessment of Commercial Reef Fishermen in the South Atlantic Region (1996)	The goal of this project was to collect primary economic data on federally permitted commercial reef (snapper-grouper) fishermen in the South Atlantic region. The lack of economic data has been a significant problem in the evaluation of current and proposed fishery management plans developed by the South Atlantic Fisheries Management Council.	Economics			•	Raymond Rhodes: rhodesr@mrd.dnr.state.sc.us; Wayne Waltz; Robert Wiggers
Marine and Coastal Area Social Science							
U.S. Bureau of the Census; NOAA National Marine Fisheries Service; South Atlantic Fishery Management Council	Ethnographic Social Network Tracing (2000-2001)	Anthropological field research carried out to determine the degree of residential mobility among a small work community of fishermen, their co-workers and family in the coastal southeastern United States.	Communities			•	Kathi Kitner: kathi.kitner@noaa.gov
Marine Fisheries Initiative (MARFIN); NOAA National Marine Fisheries Service, Southeast Region; Department of Family, Youth and Community Sciences, University of Florida	Identifying Fishing Dependent Communities: Development and Confirmation of a Protocol	This research describes problems related to defining and identifying communities and develops a protocol to identify fishing-dependent communities using central place theory. Furthermore, the project will identify such communities for the entire state of Florida.	Communities			•	Steve Jacob: sgj@gnv.ifas.ufl.edu; Michael Jepson: mjepson@ufl.edu; Carlton Pomeroy; David Mulkey; Chuck Adams; and Suzanna Smith; http://fishcomm.ifas.ufl.edu/default.htm
MARFIN; Office of Fisheries Management, Marine Resources Division, South Carolina Department of Natural Resources; and the Strom Thurmond Institute, Clemson University	Socio-Demographic Assessment of Commercial Reef Fishermen in the South Atlantic Region (1997)	This project sought to provide selected socio-demographic data on commercial reef fishermen needed in supporting and evaluating management actions, especially by the South Atlantic Fishery Management Council. The research was comprised of two components, qualitative and quantitative.	Communities			•	Raymond Rhodes: rhodesr@mrd.dnr.state.sc.us; Kenneth Backman; Greg Hawkins

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
University of Georgia	Cultural Models and Fishing Knowledge: A Case Study of Commercial Blue Crab Fisherman in Georgia, USA (2003)	Ph.D. Dissertation, University of Georgia. The dissertation presents models of fishermen knowledge about blue crab behavior, biology and habitat, demonstrating that the fishermen have a rich body of knowledge that is derived from experience and hypothesis testing (i.e., their knowledge is systematic, complex, and reliable).	Communities			•	Dana Robert Cooley and Ben Blount (as supervisor): bblount@uga.edu
University of Georgia and Georgia Sea Grant	The History of African American Participation in Commercial Fisheries on the Coast of Georgia (1997-1999)	The objective of this project was to construct a history of African Americans in the oyster, shrimp and blue crab commercial fisheries, utilizing archival and interview data. Interviews were held with elderly African American fishermen who had retired from active fishing. The results of the research were that virtually all of the commercial fishing on the coast was done by African Americans from 1751 to approximately 1900, but during the 20th century they were marginalized from each fishery, in turn, through increased capitalization and related technological development. Today only a very small number of African American commercial fishermen remain.	Communities			•	Ben Blount: bblount@uga.edu
University of Georgia and MARFIN	Factors Affecting Participation in Commercial and Recreational Fisheries in McIntosh County (Georgia) and Brunswick County (North Carolina) (2003-2005)	This research project began in 2003 and will continue through 2005. The aim of the research is to identify factors that lead to recruitment of fishers into commercial and recreational fisheries in the two counties and to identify factors that lead to fishers leaving the fisheries. The time frame is 1994-2004. The research is based on (1) extensive interviews with fishers who have left fisheries and those who have recently entered them, and (2) a mail questionnaire developed from the interviews.	Communities		•		Ben Blount: bblount@uga.edu

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
NOAA - National Marine Fisheries Service	Socioeconomic survey of recreational fishermen from North Carolina through Louisiana (March, 1997 - February, 1998)	This project collects and provides demographic and economic data on marine recreational fishing participants in North Carolina, South Carolina, Georgia, Florida, Mississippi, Alabama, and Louisiana.	Economics			•	NMFS: http://www.st.nmfs.gov/st1/econ/1997_facts.html
South Atlantic Fishery Management Council	Cost/Earnings Data Collection Program for South Atlantic Fisheries	Survey to collect information from commercial fishing boats to better gauge the economic health of specific commercial fisheries in the South Atlantic region. The survey will include two sections: a section to be filled out after each fishing trip, and a section to be filled out once a year.	Economics		•		Staff economist at the South Atlantic Fishery Management Council (843-571-4366); or economist at the NMFS' Southeast Fisheries Science Center in Beaufort, NC (252-728-8710)
North Carolina Sea Grant	Demographic Change in North Carolina's Coastal Counties and Related Policy Implications (February, 2002 - January, 2004)	Goals are: (1) To aggregate, synthesize and analyze demographic and social data to document change in North Carolina coastal counties between 1950 and 2000; (2) To identify and describe the major socioeconomic changes in the state's coastal counties; and (3) To identify and analyze coastal resources management issues that have resulted from demographic and socioeconomic changes.	Economics		•		Lauriston R. King: kingl@mail.ecu.edu ; Jack F. Thigpen, II: jthigpen@pinn.net
Office of Fisheries Management, Division of Marine Resources, South Carolina Department of Natural Resources	Economic Impacts and Fishing Success of Offshore Sport Fishing Over Artificial Reefs & Natural Habitats in South Carolina (1977)	This study was conducted to provide economic information on the economic impacts associated with SC anglers fishing over artificial reefs & non-artificial reef locations plus estimate statistics related to angler catch and effort at these sites. Data was collected using a random, mail sampling of SC registered boaters during 1977.	Economics; Use Patterns			•	David Cupka: cupkad@mrd.dnr.state.sc.us ; David Liao; R. Rhodes (SC Mar. Res. Ctr., Tech. Report 38, May, 1979)

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
Office of Fisheries Management, Division of Marine Resources, South Carolina Department of Natural Resources	A Socio-Economic Survey of the Third Annual Arthur Smith King Mackerel Tournament (1979)	This study collected selected socioeconomic information from king mackerel tournament participants and estimated the total aggregate expenditures associated with the tournament during 1979. Data was collected via in-person interviews during the tournament.	Economics			<ul style="list-style-type: none"> • 	Charles Moore: moorec@mrd.dnr.state.sc.us; R. Rhodes: rhodesr@mrd.dnr.state.sc.us (SC Mar. Res. Ctr., Technical Report 46, Nov., 1980)
Office of Fisheries Management, Division of Marine Resources, South Carolina Department of Natural Resources	A Socio-Economic Survey of the Seventh Annual Arthur Smith King Mackerel Tournament (1983)	Using in-person interviews, this study also collected selected socioeconomic information from king mackerel tournament participants during 1983 and estimated the total aggregate expenditures and economic impacts associated with the tournament using these data. Selected catch information was also collected.	Economics			<ul style="list-style-type: none"> • 	Charles Moore: moorec@mrd.dnr.state.sc.us; R. Rhodes: rhodesr@mrd.dnr.state.sc.us (SC Mar. Res. Ctr., Technical Report 58, May, 1984)
Office of Fisheries Management, Division of Marine Resources, South Carolina Department of Natural Resources	Estimate of SCUBA Spearfishing Harvest Effort and Economic Impacts Associated with South Carolina's Artificial Reefs (1990)	This project estimated the spearfishing catch & effort and economic impacts associated with SCUBA spearfishing at SC artificial reef sites during 1990. Data was collected via questionnaires distributed to divers and weekly phone interviews of dive shop managers.	Economics, Use Patterns			<ul style="list-style-type: none"> • 	Raymond Rhodes: rhodesr@mrd.dnr.state.sc.us; Mel Bell: bellm@mrd.dnr.state.sc.us
Office of Fisheries Management, Division of Marine Resources, South Carolina Department of Natural Resources	Survey of Recreational Fishing Use of South Carolina's Artificial Reefs by Private Boat Anglers (1991)	This project's three objectives relative to SC artificial reefs were: (1) To estimate angler usage rates for specific reefs; (2) To explore the influence of location related factors on angler reef usage; and (3) To collect data to estimate economic impacts associated with private boat anglers. Annual and quarterly data was collected using a random, mail samplings of SC registered boaters during 1991-1992.	Economics; Use Patterns			<ul style="list-style-type: none"> • 	Raymond Rhodes: rhodesr@mrd.dnr.state.sc.us; Mel Bell: bellm@mrd.dnr.state.sc.us

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
Office of Fisheries Management, Division of Marine Resources, South Carolina Department of Natural Resources	A Socio-Economic Survey of South Carolina Saltwater Recreational Fishing Activities By Mode (1996-1998)	This multi-year project sought to collect selected socioeconomic data on SC saltwater anglers based upon fishing mode including various types of saltwater fishing tournaments. The resulting analysis of these data emphasized estimating the economic impacts associated with the various fishing modes. Using random sampling protocols, data was collected via in-person interviews, mail questionnaires, and/or phone surveys.	Economics			•	Raymond Rhodes: rhodesr@mrd.dnr.state.sc.us
Office of Fisheries Management, Division of Marine Resources, South Carolina Department of Natural Resources	Economic Impacts of the 1997 South Carolina Governor's Cup Billfishing Series	This study collected economic information from billfishing tournament series participants and the resulting data analysis was used to estimate the economic impacts associated with the 1997 series. Data was collected via in-person interviews during the tournament and follow-up mail questionnaires.	Economics			•	Raymond Rhodes: rhodesr@mrd.dnr.state.sc.us (Economic impact analysis published in the 1998 National IMPLAN User's Conference Proceedings)
Virginia Institute of Marine Science, School of Marine Science, College of William & Mary	Virginia's Commercial Fishing Industry: Its Economic Performance and Contributions (1997)	This study presents an examination of the economic role, contributions and impacts of commercial fishing relative to the economies of the state and coastal communities of Virginia.	Economics			•	James Kirkley: jkirkley@vims.edu; http://www.vims.edu/cgi-bin/byteserver.pl/library/Kirkley/Kirkley2.pdf

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
Virginia Institute of Marine Sciences; U.S. Environmental Protection Agency (EPA); Pennsylvania State University; Smithsonian Environmental Research Center; East Carolina University; and the Environmental Law Institute	Ecological and Socioeconomic Indicators for Integrated Assessment of Aquatic Ecosystems of the Atlantic Slope (2001-2005)	Project objectives are: 1) To develop and test ecological and socioeconomic indicators of aquatic resource condition; construct models that use environmental, geographic and stressor data to predict indicator responses; and use models to link upstream watersheds and downstream estuaries; 2) Develop large scale measures for characterizing landscape attributes and land-use patterns to serve as predictors of a range of environmental conditions; and 3) Deliver a nested suite of indicators to managers, where the implications of aggregating models at various scales are considered, and for which reliability is known.	Economics		•		Carl Hershner: carl@vims.edu; Kirk Havens: kirk@vims.edu; Lyle Varnell: lyle@vims.edu; Marcia Berman: marcia@vims.edu
Duke University, Nicholas School of the Environment and Earth Sciences	Selection of Wetland Restoration Sites in Rural Watersheds to Improve Water Quality: Integrating Ecological and Economic Approaches (September, 1998 - September, 2001)	The primary objective of this study is to develop a procedure for configuring mosaics of restored wetlands to yield the greatest positive cumulative effect on watershed-level water quality given a set of ecological, economic and political constraints.	Economics			•	Curtis J. Richardson; and Randall A. Kramer: kramer@duke.edu
University of Maryland, College Park; Environmental Protection Agency; NOAA's National Marine Fisheries Service	The Economic Value of Mid and South Atlantic Sportfishing (1994)	This report is a study of the economic value of marine recreational fishing on the East Coast of the U.S., from Long Island, New York to Key Biscayne, Florida. It is the second in a series on the economics of recreational fishing in this region. This study is concerned with the value of recreational fishing opportunities to anglers, not individuals and firms providing services to those anglers. It contains an analysis of responses to questions concerning individuals' preferences, both stated and revealed, for sportfishing sites.	Economics			•	Kenneth E. McConnell: kmccConnell@arec.umd.edu; Ivar E. Strand

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
NOAA and U.S. Forest Service (USFS)	National Survey on Recreation and the Environment 2000: Current Participation Patterns in Marine Recreation (2001)	National Survey on Recreation and the Environment (NRSE) 2000 explores the outdoor recreational needs and environmental interests of the American people in greater depth.	Use Patterns			•	Dr. H. Ken Cordell: kcordell/srs_athens@fs.fed.us (USFS); Dr. Vernon R. (Bob) Leeworthy: Bob.Leeworthy@noaa.gov (NOAA) (http://marineeconomics.noaa.gov/NSRE/NSRE_2.pdf)
Land Use – Coastal Ecosystems Study Program; South Carolina Sea Grant Consortium, NOAA, Clemson University, University of South Carolina	Development of a GIS-based Database Management and Spatial Modeling Program To Characterize Sources and Effects of Natural Parameters and Anthropogenic Impacts To Coastal Ecosystems (2000-2004)	This proposed research clearly addresses the need to establish and maintain a GIS-based data and information management infrastructure (Section 1) to support the development of science-based, predictive decision making tools (models) that integrate changes in land use patterns with effects on hydrodynamics, transport processes and ecosystem function (Section 2), and the impacts of increasing populations (Section 3) to assist in planning for sustainable coastal land use and resource management.	Use Patterns		•		Dr. Dwayne E. Porter. Dept. of Environmental Health Sciences and the Baruch Institute, University of South Carolina. (803) 777-4615; porter@sc.edu; http://enhs.sph.sc.edu . http://www.lu-ces.org/documents/Proposals/GISprop.pdf
Duke University, Nicholas School of the Environment and Earth Sciences	Human Use Mapping and User Coordination Plan for Core Sound, North Carolina, NC Department of Environment and Natural Resources (1998)	The overall goal of this project is to document the historical and contemporary uses of Core Sound and its surrounding environments, and to facilitate a discussion of the ways in which the different uses and user groups involved in the Core Sound area might be better coordinated, relying as much as possible on co-management between the users themselves and appropriate local, state and federal governments.	Use Patterns			•	Mike Orbach: mko@duke.edu

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
University of Georgia	History of the American Shad and Atlantic Sturgeon Fisheries in Georgia (2002-2004)	This project was begun in 2000 and consisted of interviewing individuals who had been active fishers in the Atlantic sturgeon fishery when it was closed in 1997. The objective was to document for the historical record fishermen knowledge about the fishery, including gear, fish behavior and fish habitat. A survey questionnaire was developed based on the interviews and is currently being mailed to all of the fishermen who held sturgeon licenses in 1997. The project will be completed by June 2004.	Use Patterns		•		Ben Blount: bblount@uga.edu; and Carlos Garcia-Quijano
NOAA - Coastal Services Center (CSC)	Assessing the Knowledge and Attitudes of Coastal Communities of North Carolina (2001-2003)	This project surveys coastal residents and coastal decision-makers to determine their attitudes toward their natural environment and their understanding of the coastal area's basic nature and processes.	Attitudes, Perceptions & Beliefs			•	NOAA Coastal Services Center: csc@csc.noaa.gov
South Atlantic Fishery Management Council	TEDS: A Study of the South Atlantic Shrimp Fishermen's Beliefs, Opinions and Perceptions Regarding the Use of Turtle Excluder Devices (1987)	The objective of this study is to determine the beliefs and perceptions that South Atlantic shrimpers hold relative to federal regulations mandating the use of turtle excluder devices (TEDs) prior to actual implementation. It also addresses the issues of how to successfully implement technology transfer, the role that class plays in structuring different behaviors and reactions to new fisheries policies, and why and how the goals of some regulations can foment conflict and dissent among and between various groups.	Attitudes, Perceptions & Beliefs			•	Kathi Kitner: kathi.kitner@noaa.gov

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
North Carolina Sea Grant	Stakeholder Perceptions of Water Quality: New Approaches to Assessing and Responding to Public Involvement (February, 2002 - January, 2004)	This project will determine how different perceptions of environmental processes and human activities fuel public responses and reactions among individuals living, visiting and working in the coastal zone, and how these perceptions impact tourism and related industries.	Attitudes, Perceptions & Beliefs		•		Jeffrey C. Johnson: johnsonje@mail.ecu.edu; David Griffith
Virginia Institute of Marine Science	Assessing the Decision-making Process in Wetlands Resources Management in Virginia (2001-2002)	The study aims to provide an assessment of the extent to which social and economic issues are currently incorporated in the decision-making process by the local wetlands boards, and to suggest a preliminary framework for incorporating social and economic considerations in the wetlands decision-making process.	Attitudes, Perceptions & Beliefs; Governance, Institutions & Processes			•	Kirk Havens: kirk@vims.edu; Ratana Chuenpagdee: ratana@vims.edu; Thomas Barnard: barn@vims.edu
University of Georgia	Perceptions of Water Resources and Conservation in Coastal Georgia (1999-2004)	Two research projects have focused on the general public's perceptions, understandings and preferences regarding sources of fresh water, water use and water conservation. The first project, which focused on two coastal counties (McIntosh and Glynn) was completed in 1999, and the second project, which focuses on all six coastal counties, is currently underway. Data collection will be completed in April 2004. The aim of the research is to provide survey-derived information about what the public know about water availability and use. Their responses will be analyzed by region, demographics and socioeconomic factors.	Attitudes, Perceptions & Beliefs		•		Ben Blount: bblount@uga.edu

Existing Social Science Research Efforts

Institution	Project	Description	Theme	Planned	Ongoing	Complete	Contact
				Project Status			
NOAA Office of Ocean Exploration; East Carolina University Maritime Studies Program	Ocracoke Shipwreck Explorer Project	This is a two-part program for the exploration and discovery of submerged cultural resources, primarily shipwrecks, between Cape Hatteras and Cape Lookout, North Carolina in the vicinity of Ocracoke Island. A systematic remote sensing survey will be conducted to assess the scope of existing archaeological resources.	Cultural Heritage & Resources		•		http://www.ecu.edu/maritime/OcracokeWebSite/Home.htm

Appendix D. Research Institutions and Information Resources

Research Institutions and Information Resources			
Institution/ Resource	Program	Description and/or Mission	Contact
College of William and Mary	Virginia Institute for Marine Science - Department of Coastal and Ocean Policy	The Department of Coastal and Ocean Policy's interdisciplinary research covers the spectrum of basic and applied science on coastal resources. Scientists work closely with estuarine and marine industries, the public, and state and federal agencies to integrate sound scientific principles into the management of coastal resources.	http://www.vims.edu/
Duke University	Nicholas School for the Environment	The school functions as an environmental forum, an intellectual hub drawing input from all disciplines at Duke-law, business, medicine, science, and engineering. It is composed of three research divisions, which primarily serve doctoral students, graduate professional students and undergraduate students: Earth and Ocean Sciences, Environmental Sciences and Policy, and Coastal Systems Science and Policy.	http://www.nicholas.duke.edu/
East Carolina University (ECU) - College of Arts and Sciences	Program in Maritime Studies; and PhD in Coastal Resource Management	The Program in Maritime Studies integrates hands-on experience with interdisciplinary studies in history, anthropology, geography, geology and related marine sciences.	http://www.ecu.edu/maritime/index.htm
East Carolina University (ECU) - College of Arts and Sciences	Anthropology Department: Southern Coastal Heritage Program	The Southern Coastal Heritage Program is a partnership of educational, research and service institutions committed to preserving and transmitting knowledge about the natural and cultural environments of coastal North Carolina.	http://www.artsci.ecu.edu/cas/schp/schp_home.html
Clemson University - Department of Parks, Recreation and Tourism Management in the College of Health, Education and Human Development	Recreation, Travel and Tourism Institute	The Institute's objectives are: to act as coordinator of a reservoir of talent which may be called upon when there is a need for individuals with specialized training in recreation, parks and tourism; to identify and develop a broad-based recreation and tourism research posture as well as serve as a vehicle for assisting faculty in obtaining research funds; to cooperate with other state divisions and departments conducting research or extension programs related to recreation and tourism; and to work with Clemson University's Cooperative Extension Service in conducting and developing public service programs concerning recreation and tourism.	http://www.hehd.clemson.edu/PRTM/special/main.html

Research Institutions and Information Resources

Institution/ Resource	Program	Description and/or Mission	Contact
Sea Grant: Virginia		The mission of Virginia Sea Grant is to use the talents of research, extension and education professionals to solve marine resource issues critical to the Commonwealth of Virginia and the nation through a partnership of universities, industry and government - united by the Sea Grant concept - to better serve the citizens of the Commonwealth of Virginia, the region and the nation. Main research areas include: Developing Sustainable Aquaculture, Revitalizing Commercial Fisheries, Seafood Safety and Quality, Marine Resources, Coastal Business Development, and Coastal Ecosystem Health.	http://www.virginia.edu/virginia-sea-grant/home.html
Sea Grant: North Carolina		North Carolina Sea Grant links university researchers to the people, businesses and governments that manage, use and enjoy coastal and marine resources. Main research areas include: Aquaculture, Coastal Communities, Coastal Hazards, Fisheries, Law & Policy, Seafood Science & Technology, and Water Quality.	http://www.ncseagrant.org/
Sea Grant: South Carolina		The South Carolina Sea Grant Consortium is a state agency that, through a program of research, education, extension and training, enhances economic opportunities and conservation of coastal and marine resources for South Carolina citizens. Main research areas include: Coastal Ocean Studies, Ecosystem Dynamics, Climate and Hazards, Sustainable Economic Development, and Emerging Technologies.	http://www.scseagrant.org/
Sea Grant: Florida		Sea Grant Florida's goal is to use academic research, education and extension to create a sustainable coastal economy and environment. Publications include: "Economic Impacts of the Processing and Marketing of Commercial Florida Marine Landings", "Current and Projected Tourist Demand for Saltwater Recreational Fisheries in FL", "Recreational Anglers' Valuation of Near-Shore Marine Fisheries in Florida", "The Impacts of Florida Net Ban on Commercial Fishing Families", and "Commercial Fisheries' Perceptions of Marine Reserves for the Florida Keys National Marine Sanctuary".	Director, Dr. Jim Cato: jcato@ifas.ufl.edu, (352) 392-5870; www.flseagrant.org/

Research Institutions and Information Resources

Institution/ Resource	Program	Description and/or Mission	Contact
Virginia Association of Wetland Professionals (VAWP)		VAWP strives to: provide an independent forum for the open discussion and exchange of wetland related ideas from all fields; promote scientifically based educational programs on wetland ecology, functions and values; develop a Commonwealth of Virginia wetland delineator certification program; and encourage wetland conservation.	http://www.vawp.org/
Society of Wetland Scientists (SWS): Virginia		The Society of Wetland Scientists is a non-profit organization founded in 1980 to promote wetland science and the exchange of information related to wetlands. The objectives of the Society are: to operate solely and exclusively as a charitable and educational organization to foster conservation and understanding of wetlands; to advance public education and enlightenment concerning the nation's wetland resources; to provide an independent forum for an interchange of ideas and data developed within wetland science; to develop and encourage wetland science as a distinct discipline by supporting student education, curriculum development and research; to encourage and evaluate the educational, scientific and technological development and advancement of all branches of wetland science and practice; and to encourage the knowledgeable management of wetland resources.	http://www.sws.org/
Mariner's Museum: Newport News, Virginia		The Mariners' Museum, one of the largest international maritime museums in the world, is dedicated to "illuminating mankind's experience with the sea and the events that shaped the course and progress of civilization." It is a non-profit, educational institution accredited since 1972 by the American Association of Museums.	http://www.mariner.org/
North Carolina Maritime Museum		The North Carolina Maritime Museum documents, collects, preserves and researches the maritime history—and its corollary natural history—of coastal North Carolina for the purpose of interpreting this history through educational services and exhibits for our contemporary society, and passing intact its material culture to future generations.	http://www.ah.dcr.state.nc.us/sections/maritime/default.htm
Ships of the Sea Maritime Museum: Georgia		Ships of the Sea Maritime Museum, founded in 1966, exhibits ship models, paintings and maritime antiques, principally from the great era of Atlantic trade and travel between England and America during the 18th and 19th centuries.	http://www.shipsofthesea.org

Research Institutions and Information Resources

Institution/ Resource	Program	Description and/or Mission	Contact
Lighthouse Archaeological Maritime Program (LAMP): Florida		The Lighthouse Archaeological Maritime Program (LAMP) is dedicated to the research, design, investigation and interpretation of St. Augustine's maritime history. Through historical and archaeological research, LAMP will explore and delineate the numerous shipwreck sites associated with the creation and development of the nation's oldest port.	81 Lighthouse Ave.; St. Augustine, FL 32080; Phone: (904) 829-0745; http://www.staugustinelighthouse.com/maritime/
International Association of Fish and Wildlife Agencies (IAFWA)		IAFWA represents the states' interest in fish and wildlife management, solidifying the goals and objectives of all 50 states and territories, and the overlapping interests of Canada and Mexico. The Association negotiates with federal agencies on behalf of state fish and wildlife agencies to develop effective and complementary policies and regulations. It participates in the development of international conventions, regulations and policies concerning the welfare of North America's fish and wildlife.	444 North Capitol Street, NW; Suite 544; Washington, DC 20001; Phone: (202) 624-7890; iafwa@sso.org
International Game Fish Association (IGFA)		The purpose of IGFA, as set forth in the early bylaws, is: "to encourage the study of game fishes for the sake of whatever pleasure, information, or benefit it may provide; to keep the sport of game fishing ethical, and to make its rules acceptable to the majority of anglers; to encourage this sport both as recreation and as a potential source of scientific data; to place such data at the disposal of as many human beings as possible; and to keep an attested and up-to-date chart of world record catches."	http://www.igfa.org/index.cfm
National Wildlife Federation (NWF)	Southeastern Field Office	The Southeastern Field Office of NWF concentrates on education outreach and grassroots advocacy to protect rapidly disappearing wildlife habitats and raise the awareness of local communities to issues that affect their quality of life. NWF accomplishes this by helping citizens get necessary information and showing how they can use that information to influence decisions that affect them.	http://www.nwf.org/southeastern/about.html

Research Institutions and Information Resources

Institution/ Resource	Program	Description and/or Mission	Contact
The Nature Conservancy (TNC)	Virginia, North Carolina, South Carolina, Georgia and Florida Chapters	The Nature Conservancy's mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. TNC works with communities, businesses, governments and partner organizations to preserve lands and waters for future generations to use and enjoy. It has five priority conservation initiatives to address the principal threats to conservation: fire, climate change, freshwater, marine, and invasive species.	http://nature.org/
The Ocean Conservancy (TOC)	Southeast Atlantic and Gulf of Mexico Regional Office	Based in St. Petersburg, Florida, the Southeast Atlantic and Gulf of Mexico Regional Office focuses on ocean conservation issues off the southeastern United States and along the coast of the Gulf of Mexico (GOM). Some of these issues include manatee conservation, shrimp fisheries in the GOM, and boat groundings on coral reef ecosystems of the Florida Keys.	http://www.oceanconservancy.org/dynamic/aboutUs/offices/atlantic/atlantic.htm
South Atlantic Fishery Management Council (SAFMC)		The South Atlantic Fishery Management Council, headquartered in Charleston, SC, is responsible for the conservation and management of fish stocks within the federal 200-mile limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia and east Florida to Key West.	One Southpark Circle; Suite 306; Charleston, SC 29407-4699; Phone: (843) 571-4366; Phone: (866) SAFMC-10; Fax: (843) 769-4520; safmc@safmc.net; www.safmc.net
Mid-Atlantic Fishery Management Council (MAFMC)		The Mid-Atlantic Fishery Management Council is responsible for management of fisheries in federal waters predominantly off the Mid-Atlantic Coast. States with voting representation on the Council include New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina. (North Carolina is represented on both the Mid-Atlantic and South Atlantic Fishery Management Councils.)	Room 2115 Federal Bldg, 300 S. New St.; Dover, DE 19904; mtrollan@mafmc.org

Research Institutions and Information Resources

Institution/ Resource	Program	Description and/or Mission	Contact
NOAA Coastal Services Center (CSC)	Ocean Planning Information System (OPIS)	<p>The goal of the Ocean Planning Information System (OPIS) is to provide easy access to comprehensive ocean-related data and information that will enhance regional, integrated approaches to coastal and ocean resource management. OPIS, developed by the NOAA Coastal Services Center, in partnership with the states of North and South Carolina, Georgia, and Florida, provides the coastal management community with access to regional geo-referenced regulatory and environmental spatial data critical to timely, integrated decision-making and analysis. This is the first attempt in the U.S. to create a regional, multi-state information system for the coastal ocean.</p>	<p>http://www.csc.noaa.gov/opis/index.htm</p>

Appendix E. Regional Regulatory Framework

INTERNATIONAL OVERVIEW

Regulatory Framework		
Title	Summary	Includes Social Science
International Convention for the Conservation of Atlantic Tunas, 1966	Through the Convention, it is established that the International Commission for the Conservation of Atlantic Tunas (ICCAT) is the only fisheries organization that can undertake the range of work required for the study and management of tunas and tuna-like fishes in the Atlantic. Such studies include research on biometry, ecology and oceanography, with a principal focus on the effects of fishing on stock abundance. The Commission's work requires the collection and analysis of statistical information relative to current conditions and trends of the fishery resources in the Convention area. The Commission also undertakes work in the compilation of data for other fish species that are caught during tuna fishing ("bycatch", principally sharks) in the Convention area, and which are not investigated by another international fishery organization.	
Ramsar Convention on Wetlands, 1971	Intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The Convention's mission is the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world.	
United Nations Educational Scientific and Cultural Organization (UNESCO) World Heritage Convention, 1972	The most significant feature of the Convention is its linking together into a single document the concepts of nature conservation and preservation of cultural sites. Nature and culture are complementary and cultural identity is strongly related to the natural environment in which it develops.	•
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973	Establishes a system of regulations and/or prohibitions in the trade of species, both plant and animal, or any specimen part thereof. See: Appendix I of the Convention for species threatened with extinction as a result of trade; Appendix II of the Convention for species in which trade control is necessary for survival; and Appendix III of the Convention for species subject to regulation in the host nation.	
United Nations Convention on the Law of the Sea (UNCLOS), 1982	The United Nations Convention on the Law of the Sea lays down a comprehensive regime of law and order in the world's oceans and seas, establishing rules governing all uses of the oceans and their resources. It enshrines the notion that all problems of ocean space are closely interrelated and need to be addressed as a whole.	
United Nations Conference on the Environment and Development (UNCED), 1992	Agenda 21, adopted by UNCED, is a program of action to be implemented by governments, development agencies, United Nations organizations and independent sector groups in every area where human (economic) activity affects the environment.	•
• Agenda 21 Chapter 17 - Oceans and Coasts	Agenda 21 sets out comprehensive strategies and programs to counter environmental degradation and promote sustainable development.	

Regulatory Framework		
Title	Summary	Includes Social Science
<ul style="list-style-type: none"> • Rio Declaration of Principles 	<p>The goal of this Declaration is to establish cooperation among member states to reach agreement on laws and principles promoting sustainable development. The Declaration addresses the following areas: natural resources; environmental impact of development; poverty; ecosystem protection; the sharing of scientific ideas; public participation/public access to information; implementation of legislation; economic policies; internalization of environmental costs and the 'polluter pays' principle; notification of pollution incidents; Environmental Impact Statements; and indigenous cultures.</p>	<ul style="list-style-type: none"> •
<ul style="list-style-type: none"> • Convention on Biological Diversity (CBD) 	<p>The objective of the CBD is to conserve biological diversity, promote the sustainable use of its components, and encourage equitable sharing of the benefits arising out of the utilization of genetic resources.</p>	
<ul style="list-style-type: none"> • Framework Convention on Climate Change 	<p>The Convention's objective is to achieve the stabilization of production of greenhouse gasses. It sets out principles to achieve a greater understanding of global warming and includes the sharing of research, development of technology, and technology transfer.</p>	
<p>United Nations Environment Program's Global Program of Action for the Protection of the Marine Environment from Land-based Activities (UNEP – GPA), 1995</p>	<p>The GPA is designed to be a source of conceptual and practical guidance to be drawn upon by national and/or regional authorities for devising and implementing sustained action to prevent, reduce, control and/or eliminate marine degradation from land-based activities.</p>	<ul style="list-style-type: none"> •

NATIONAL OVERVIEW

Regulatory Framework		
Title	Summary	Includes Social Science
National Parks Service Organic Act of 1916	Established the National Parks Service within the Department of the Interior to promote and regulate the use of the federal areas known as national parks, monuments and reservations hereinafter specified, except such as are under the jurisdiction of the Secretary of the Army, as provided by law, by such means and measures as conform to the fundamental purpose of the said parks, monuments and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.	•
Historic Sites Act of 1935	Declares that it is a national policy to preserve for public use historic sites, buildings and objects of national significance for the inspiration and benefit of the people of the United States. The regulating agency is the National Parks Service (NPS), Department of the Interior.	•
Outer Continental Shelf Lands Act of 1953	Defines the Outer Continental Shelf (OCS) as all submerged lands lying seaward of state coastal waters (3 miles offshore) which are under U.S. jurisdiction. The statute authorizes the Secretary of Interior to promulgate regulations to lease the OCS in an effort to prevent waste and conserve natural resources and to grant leases to the highest responsible qualified bidder as determined by competitive bidding procedures.	
National Wildlife Refuge System Administration Act of 1966	This section of law consolidates the authorities relating to the various categories of areas administered by the Secretary of the Interior for the conservation of fish and wildlife by designating all such areas part of the National Wildlife Refuge System (the System).	
National Environmental Policy Act of 1969	The purposes of this Act are: to declare a national policy that will encourage productive and enjoyable harmony between man and his environment; to promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the nation; and to establish a Council on Environmental Quality.	•
Marine Protection, Research, and Sanctuaries Act of 1972	The Marine Protection, Research, and Sanctuaries Act (MPRSA) regulates the ocean dumping of waste, provides for a research program on ocean dumping, and provides for the designation and regulation of marine sanctuaries. Often known as the Ocean Dumping Act, the act regulates the ocean dumping of all material beyond the territorial limit (three miles from shore) and prevents or strictly limits dumping material that "would adversely affect human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities." The regulating agency is the EPA (permitting and setting of environmental criteria) and USACE (dumping of dredged materials).	•
National Marine Sanctuaries Act of 1972	Allows the regulating agency to designate and manage areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational or esthetic qualities as National Marine Sanctuaries. The primary objective of this law is to protect marine resources, such as coral reefs, sunken historical vessels or unique habitats. The regulating agency is NOAA, Department of Commerce.	•

Regulatory Framework		
Title	Summary	Includes Social Science
Clean Water Act of 1972	Established the basic structure for regulating discharges of pollutants into the waters of the United States, and deals primarily with surface water quality protection. The regulating agency is the EPA.	
Coastal Zone Management Act of 1972	Established a voluntary national program within the Department of Commerce to encourage coastal states to develop and implement coastal zone management plans. Funds were authorized for cost-sharing grants to states to develop their programs. Subsequent to federal approval of their plans, grants would be awarded for implementation purposes. The regulating agency is NOAA, Department of Commerce.	
Marine Mammal Protection Act of 1972	The Marine Mammal Protection Act (MMPA) was enacted in 1972 to protect and manage marine mammals and their products (e.g., the use of hides and meat). The regulating agencies are the Fish and Wildlife Service (FWS) (Department of the Interior), and NOAA's National Marine Fisheries Service (NMFS) (Department of commerce). The FWS manages walruses, polar bears, sea otters, dugongs, marine otters, and West Indian, Amazonian and West African manatees. The NMFS manages whales, porpoises, seals and sea lions.	
Endangered Species Act of 1973	The purpose of this Act is to protect endangered and threatened species and provide the means to conserve their ecosystems. The regulating agencies are the Fish and Wildlife Service (FWS) (Department of the Interior), and NOAA's National Marine Fisheries Service (NMFS) (Department of Commerce).	
Magnuson-Stevens Fishery Conservation and Management Act of 1976	This Act governs the conservation and management of ocean fishing. It establishes exclusive U.S. management authority over all fishing within the exclusive economic zone (EEZ), all anadromous fish throughout their migratory range except when in a foreign nation's waters, and all fish on the Continental Shelf. The Act also establishes eight Regional Fishery Management Councils responsible for the preparation of fishery management plans to achieve the optimum yield from U.S. fisheries in their regions. The Magnuson Fishery Conservation and Management Act is now the Magnuson-Stevens Fishery Conservation and Management Act, and is also known as the Sustainable Fisheries Act. The regulating agency is NOAA's National Marine Fisheries Service (NMFS) (Department of Commerce).	
The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)	This Act created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified.	
The Coastal Barrier Resources Act of 1982	The Coastal Barrier Resources Act (CBRA) designates various undeveloped coastal barrier islands, depicted by specific maps, for inclusion in the Coastal Barrier Resources System (System). Areas so designated are made ineligible for direct or indirect federal financial assistance that might support development, including flood insurance, except for emergency life-saving activities. Exceptions for certain activities, such as fish and wildlife research, are provided, and National Wildlife Refuges and otherwise-protected areas are excluded from the System.	

REGIONAL OVERVIEW

Regulatory Framework		
Title	Summary	Includes Social Science
South Atlantic Fishery Management Council (SAFMC)	<p>The SAFMC is responsible for the conservation and management of fish stocks within the federal fishery conservation zone of 3 to 200 miles off the Atlantic coasts of North Carolina, South Carolina, Georgia and eastern Florida to Key West. The Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended, provides the United States with exclusive management authority over fisheries within the U.S. EEZ, except for highly migratory species of tuna. Eight regional fishery management councils were established to serve as planning units to carry out provisions of the Act. Each Council is directed to prepare fishery management plans for implementation by the Secretary of Commerce.</p>	<ul style="list-style-type: none"> •
Mid-Atlantic Fishery Management Council (MAFMC)	<p>The MAFMC is responsible for the conservation and management of fish stocks within the federal fishery conservation zone of 3 to 200 miles off the Atlantic coasts of New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia and North Carolina. (North Carolina is represented on both the Mid-Atlantic and South Atlantic Fishery Management Councils.) The Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended, provides the United States with exclusive management authority over fisheries within the U.S. EEZ, except for highly migratory species of tuna. Eight regional fishery management councils were established to serve as planning units to carry out provisions of the Act. Each Council is directed to prepare fishery management plans for implementation by the Secretary of Commerce.</p>	<ul style="list-style-type: none"> •

LOCAL OVERVIEW

Regulatory Framework	
Virginia	Includes Social Science
Code of Virginia, §10.1-214, et seq. Virginia Natural Area Preserves Act of 1989 “A state system of natural area preserves is hereby established and shall be called the Virginia Natural Area Preserves System. The system shall consist of natural area preserves dedicated as provided in § 10.1-213. Once dedicated, a natural area preserve shall be managed in a manner consistent with continued preservation of the natural heritage resources it supports. It is managed by the Department of Conservation and Recreation.”	
Code of Virginia § 28.2-1000. Atlantic States Marine Fisheries Compact The purpose of this compact is to promote the better utilization of the fisheries - marine, shell and anadromous - of the Atlantic seaboard by the development of a joint program for the promotion and protection of such fisheries, and by the prevention of the physical waste of the fisheries from any cause. Each state joining herein shall appoint three representatives to a Commission hereby constituted and designated as the Atlantic States Marine Fisheries Commission.	
Code of Virginia § 28.2-1103. Virginia Estuarine and Coastal Research Reserve System Created for the purpose of establishing a system of protected sites representative of the Commonwealth of Virginia’s estuarine and coastal lands in which research and long-term monitoring will be conducted in support of the Commonwealth’s coastal resource management efforts. The System shall be established and administered by the Virginia Institute of Marine Science of The College of William and Mary.	
4VAC5-30-10-400. Virginia State Parks Regulations All Virginia State Parks Regulations shall be effective within and upon all state parks, historical and natural areas, roads, sites and other recreational areas in the Commonwealth which may be under the jurisdiction of the Department of Conservation and Recreation and shall regulate the use thereof by all persons.	
North Carolina	Includes Social Science
North Carolina General Statutes § 70-11 Chapter 70 Article 2 - Archaeological Resources Protection Act The purpose of this Article is to secure, for the present and future benefit of the people of North Carolina, the protection of archaeological resources and sites which are on State lands, excluding highway right-of-ways, and to foster increased cooperation and exchange of information among governmental authorities, the professional archaeological community, Indian Tribal governmental authorities and private individuals having collections of archaeological resources and data.	•
NC General Statutes § 113-34 Chapter 113 Article 2 - Acquisition and Control of State Forests and Parks “The Department [of Environment and Natural Resource] may make reasonable rules for the regulation of the public use of the lands and waters and of public service facilities and conveniences constructed thereon.”	
NC General Statutes § 113-34.1 Chapter 113 Article 2 - Acquisition and Control of State Forests and Parks The Department of Administration may acquire and allocate to the Department of Environment and Natural Resources for management by the Division of Parks and Recreation lands that the Department of Environment and Natural Resources finds are important for conservation purposes but which are not included in the State Parks System. Lands acquired pursuant to this section are not subject to Article 2C of Chapter 113 of the General Statutes and may be traded or transferred as necessary to protect, develop, and manage the Mountains to Sea State Park Trail, other State parks, or other conservation lands.	
NC General Statutes § 113-44.8 Chapter 113 Article 2C - State Parks Act (a) The State of North Carolina offers unique archaeological, geologic, biological, scenic, and recreational resources. These resources are part of the heritage of the people of this State. The heritage of a people should be preserved and managed by those people for their use and for the use of their visitors and descendants. (b) The General Assembly finds it appropriate to establish the State Parks System. This system shall consist of parks which include representative examples of the resources sought to be preserved by this Article, together with such surrounding lands as may be appropriate.	

Regulatory Framework

<p>NC General Statues § 113A-101 Chapter 113A Article 7 Coastal Area Management Act This Article establishes a cooperative program of coastal area management between local and State governments. Local government shall have the initiative for planning. State government shall establish areas of environmental concern.</p>	
<p>NC General Statues Chapter 113A Article 7 Coastal Area Management Act § 113A-113. Areas of environmental concern; in general. (a) The Coastal Resources Commission shall by rule designate geographic areas of the coastal area as areas of environmental concern and specify the boundaries thereof, in the manner provided in this Part. (These areas of environmental concern may include: coastal wetlands, estuarine waters, renewable resource areas, fragile or historic areas, areas such as waterways and lands under or flowed by tidal waters or navigable waters, natural-hazard areas, areas which are or may be impacted by key facilities, outstanding resource waters, and primary nursery areas).</p>	
<p>NC General Statues § 113A-129.2 Chapter 113A Article 7 Coastal Area Management Act Coastal Reserve Program. (a) There is hereby created a North Carolina Coastal Reserve System for the purpose of acquiring, improving, and maintaining undeveloped coastal land and water areas in a natural state. (b) This system shall be established and administered by the Department of Environment and Natural Resources.</p>	
<p>NC General Statues § 113A-164.2 Chapter 113A Article 9A. Nature Preserves Act The purpose of this Article is to establish and maintain a State Registry of Natural Heritage Areas and to prescribe methods by which nature preserves may be dedicated for the benefit of present and future citizens of the State.</p>	<ul style="list-style-type: none"> •
<p>NC General Statues § 143-260.7 Chapter 143 Article 25B - State Nature and Historic Preserve Dedication Act "It is the purpose of this Article to prescribe the conditions and procedures under which properties may be specially dedicated for the purposes enumerated by Article XIV, Sec. 5 of the North Carolina Constitution ("Conservation of Natural Resources"), accepted by the General Assembly for said purposes, and thereby constituted part of the State Nature and Historic Preserve."</p>	
<p>South Carolina</p>	<p>Includes Social Science</p>
<p>SC Code of Laws §50-11-860; §50-11-980 "The South Carolina Department of Natural Resources (SCDNR), without any costs whatsoever to the State, shall designate and establish sanctuaries where game, birds, and animals may breed unmolested, if any landowner enters into an agreement with the department to set aside and turn over to the State for that purpose a certain number of acres of land."</p>	
<p>SC Code of Laws §50-11-2200 et seq. Wildlife Management Areas "Subject to available funding, the South Carolina Department of Natural Resources shall acquire sufficient wildlife habitat through lease or purchase or otherwise to establish wildlife management areas for the protection, propagation, and promotion of fish and wildlife and for public hunting and fishing, called Wildlife Management Area (WMA) lands."</p>	
<p>SC Code of Laws §51-3-10 et seq. State Parks The Department of Parks, Recreation and Tourism may control, supervise, maintain and, wherever practicable, improve all parks belonging to the State, for general recreational, educational and forestry purposes, provided, however, that swimming and rental or use of park cabins shall not be allowed.</p>	<ul style="list-style-type: none"> •
<p>SC Code of Laws §51-17-10 et seq. South Carolina Heritage Trust Program "It is ... the public policy of this State to secure for the people, both present and future generations, the benefits of an enduring resource of natural and cultural areas and features by establishing a system of Heritage Preserves and Sites; protecting this system; gathering and disseminating information regarding it; establishing and maintaining a listing of Heritage Preserves and Sites; and otherwise encouraging and assisting in the preservation of natural and cultural areas and features of this State."</p>	
<p>SC ADC 123-40-2.1 to 123-40-11.1 Wildlife Management Area Regulations Specific regulations pertaining to hunting, designating special management areas and fishing.</p>	<ul style="list-style-type: none"> •

Regulatory Framework	
Georgia	Includes Social Science
<p>Official Code 12-3-71. Heritage Trust Act “The General Assembly declares, therefore, that there is an urgent public need to preserve important and endangered elements of Georgia’s heritage, so as to allow present and future citizens to gain an understanding of their origins in nature and their roots in the culture of the past and to ensure a future sufficiency of recreational resources. The General Assembly asserts the public interest in the state’s heritage by creating the Heritage Trust Program which shall be the responsibility of the Governor and the Department of Natural Resources and which shall seek to protect this heritage through the acquisition of fee simple title or lesser interests in valuable properties and by utilization of other available methods.”</p>	•
<p>Official Code 12-3-90, et seq. Georgia Natural Areas Act “It shall be the purpose and function of the Department of Natural Resources to: (1) Identify natural areas in the State of Georgia which are of unusual ecological significance; (2) Use its influence and take any steps within its power to secure the preservation of such areas in an undisturbed natural state in order that such areas may: (A) Be studied scientifically; (B) Be used for educational purposes; (C) Serve as examples of nature to the general public; and (D) Enrich the quality of our environment for present and future generations; and (3) Recommend areas or parts of areas for recreational use.”</p>	
<p>Official code 12-3-441. Sapelo Island Heritage Authority Act Declares that the creation of the Sapelo Island Heritage Authority and the carrying out of its corporate purposes are in all respects valid charitable and public purposes within the provisions of the Constitution of Georgia in that the preservation of the culture in this endangered historical area, as it currently exists, is important to present and future generations of Georgians.</p>	•
<p>Official Code 12-5-280, et seq. Coastal Marshlands Protection Act of 1970 Protects tidal wetlands; Requires permit for structures, dredging, filing; Establishes Coastal Marshlands Protection Committee (The Coastal Marshlands Protection Act created the Coastal Marshlands Protection Committee which evaluates proposed construction or development projects which might affect these areas); The committee grants or denies permits for these projects based on their environmental impacts and the public interest; Projects must be water-dependent with no alternatives available.</p>	
Florida	Includes Social Science
<p>Title XXIX of the Florida Statutes on Public Health. Environmental Protection Act of 1971. Chapter 403.804 Environmental Regulation Commission; powers and duties: “...The commission, in exercising its authority, shall consider scientific and technical validity, economic impacts, and relative risks and benefits to the public and the environment. . . The department [of Environmental Protection] shall have a study conducted of the economic and environmental impact which sets forth the benefits and costs to the public of any proposed standard that would be stricter or more stringent than one which has been set by federal agencies pursuant to federal law or regulation.”</p>	•
<p>Title XVIII of the Florida Statutes on Public Lands and Property. Chapter 258, Part II (Also known as Florida Aquatic Preserve Act of 1975) refers to Aquatic Preserves and suggests that submerged lands with exceptional biological, aesthetic and scientific value be set aside as preserves or sanctuaries for the benefit of future generations.</p>	
<p>Title XVIII of the Florida Statutes on Public Lands and Property. Chapter 258. Part I (State Parks) refers to the creation of state parks by the Division of Recreation and Parks, for the use of the public.</p>	•
<p>Title XVIII of the Florida Statutes on Public Lands and Property. Chapter 267. (Also known as Florida Historical Resources Act). Requires the Division of Historical Resources to: provide leadership in the preservation of the state’s historic resources; administer state-owned or state-controlled historic resources in a spirit of stewardship and trusteeship; contribute to the preservation of non-state-owned historic resources and to give encouragement to organizations and individuals undertaking preservation by private means; foster conditions, using measures that include financial and technical assistance, for a harmonious coexistence of society and state historic resources; encourage the public and private preservation and utilization of elements of the state’s historically built environment; and assist local governments in expanding and accelerating their historic preservation programs and activities.</p>	•

Regulatory Framework

Title XXVIII of the Florida Statutes on Natural Resources; Conservation; Reclamation; and Use (The lead regulating agency is the Fish and Wildlife Conservation Commission). Chapter 370.025 refers to Marine Fisheries: Policies and Standards and states that "Conservation and management measures shall be based upon the best information available, including biological, sociological, economic, and other information deemed relevant by the commission."

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Title XVIII of the Florida Statutes on Public Lands and Property. Chapter 380.0555 (Also know as Apalachicola Bay Protection Act). It is the intent of the Legislature: to protect the water quality of the Apalachicola Bay Area to ensure a healthy environment and a thriving economy for the residents of the area and the state; to protect the Apalachicola Bay Area's natural and economic resources by implementing and enforcing comprehensive plans and land development regulations; to assist Franklin County and its municipalities with technical and advisory assistance in formulating additional land development regulations and modifications to comprehensive plans; to monitor activities within the Apalachicola Bay Area to ensure the long-term protection of all the area's resources; to promote a broad base of economic growth which is compatible with the protection and conservation of the natural resources of the Apalachicola Bay Area; and to educate the residents of the Apalachicola Bay Area in order to protect and preserve its natural resources.

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Title XVIII of the Florida Statutes on Public Lands and Property. Chapter 380.055 (Also know as Big Cypress Conservation Act of 1973). It is the intent of the Legislature to conserve and protect the natural resources and scenic beauty of the Big Cypress Area of Florida. It is the finding of the Legislature that the Big Cypress Area is an area containing and having a significant impact upon environmental and natural resources of regional and statewide importance and that designation of the area as an area of critical state concern is desirable and necessary to accomplish the purposes of "The Florida Environmental Land and Water Management Act of 1972" and to implement s. 7, Art. II of the State Constitution.