

STRATEGIC PLAN 2002-2006

I. INTRODUCTION

This plan defines the strategic areas to be pursued by the Louisiana Sea Grant College Program (Louisiana Sea Grant) during the period 2002-2006. It is a working document developed through a year-long, collaborative process designed to help Louisiana Sea Grant identify coastal and marine research, extension, and education priorities for the next four years. Louisiana's plan was prepared within the context of Sea Grant's Network Plan: 1995-2005 (Network Plan), NOAA's Strategic Plan: A Vision for 2005 (NOAA Plan), and the long-range plans that guide several other Louisiana Sea Grant partner institutions, agencies, and organizations.

Louisiana Sea Grant is proud of the role it has played since 1968 to help address some of the complex, and often interrelated, ecological, economic and social challenges that affect coastal Louisiana. The magnitude of the challenges and the program's limited resources have required a practical and well defined approach, as well as heavy reliance on partners in an extensive network—that we helped establish—of state and regional universities, federal and state resource management agencies, the private sector, and citizen groups.

For the next four years (2002-2006 period), Louisiana Sea Grant will continue to pursue research, extension, and education activities in five strategic areas, identified as priorities during the planning process.

STRATEGIC AREAS

Seafood Harvesting and Production.

Louisiana's seafood industry faces many challenges—declining stocks, deteriorating ecosystems, and intense competition from imports. Despite increased demand for seafood products, the industry's problems have been exacerbated by the rapid growth of the recreational sector, debate over allocation of stocks, the unique challenges presented to the oyster aquaculture industry, and real and perceived problems relating to seafood quality and safety. Louisiana Sea Grant will focus its research and outreach efforts toward assisting the state and region's seafood harvesting and production industries to become sustainable and competitive.

Sustainable Coastal Communities. Coastal communities must balance the often divergent needs of maintaining economic growth, protecting

public infrastructure, planning for and responding to natural hazards, and preserving natural and cultural assets. Planning and managing in such a daunting situation with very limited resources is a critical challenge for Louisiana's coastal communities, which are primarily rural. Louisiana Sea Grant is committed, through applied research and outreach, to assisting community leaders to cope with many of these challenges.

Wetlands Restoration. Wetland loss has in more than one way affected almost all of the people, land, and wildlife in coastal Louisiana. Extensive marsh deterioration has made the coastal region more vulnerable to flooding from storms and hurricanes, reduced the amount of nursery areas and other habitat, reduced biodiversity, made inland areas more vulnerable to saltwater intrusion, and has cast a mantle of uncertainty on the outlook for recreation and nature-based tourism. Louisiana Sea Grant can help mitigate these problems through investments in restoration science and technology, and by improving the public's understanding of ecosystem changes and impacts.

Water Resources. Protecting and enhancing coastal water resources is a challenging environmental and economic issue for Louisiana in light of the region's unstable landscape, the invasions of aquatic nuisance species, nutrient-rich runoff that enters the Gulf of Mexico, depleting groundwater supplies, and the numerous waste discharges that pollute natural waterways and shellfish-producing waters. By focusing on water treatment technology, best management practices, and water policy, Louisiana Sea Grant will advance the nation's clean water and environmental quality agendas.

Public and Formal Education. Sustainable development requires caring citizens, responsible workers, understanding of natural systems and appropriate technologies. Louisiana Sea Grant will accelerate educational programming for teachers and youth, and train graduate and undergraduate students. Outreach activities will provide new knowledge to resource managers and policy makers, and help build an environmentally informed citizenry.

These five strategic areas are within the scope of the national program's Network Plan. Several goals have been selected for emphasis within each area, and specific two-year objectives have been identified in the Louisiana Sea Grant Implementation Plan 2002-2006. The intentions of these goals and objectives are to: (1) selectively

channel the investment of scarce program resources into endeavors that hold exceptional potential for producing constructive change in the management and utilization of Louisiana's coastal and marine resources; (2) inform the University community regarding Louisiana Sea Grant's research, outreach, and education priorities for the 2002-2006 period; (3) establish a template that internal and external evaluators can use to periodically measure the program's performance; and (4) facilitate cooperation with state, federal, and private partners on the topics that Louisiana Sea Grant has targeted for emphasis.

II. COASTAL LOUISIANA: THE PLANNING ENVIRONMENT

THE PEOPLE

History and Culture. The people of coastal Louisiana are a melange of nationalities and cultures, including French, Spanish, Portuguese, German, Italian, English, Caribbean, Croatian, African, and American Indian. The culture associated most closely with coastal Louisiana is French, brought primarily by exiles from Acadia (now Nova Scotia) in the 1750s. Their descendants, called Cajuns (a corruption of Acadians), have dominated much of the coastal area from Baton Rouge westward and southward in language, religion, and traditions.

For generations, the Cajuns farmed, fished, and trapped in the lush coastal lowlands. Many of them knew little English and spoke only French until after World War II, when English-speaking was required in schools. The influence of television and the influx of people from all parts of the nation, especially those who came in connection with the oil industry, also changed language patterns.

The most profound changes in Cajun culture were wrought by an offshore oil boom that began in the 1950s and continued for three decades. The new industry tore apart the solidly agrarian fabric of the region's economy and, along with a flood of new income, brought many thousands of new residents with new ideas to the coastal area. Today the Cajun culture, although predominantly still French in flavor, is a blend of influences. It is

common to hear coastal Louisianians of all ethnic backgrounds refer to themselves as "Cajun," which has become more the designation for a way of life than for ancestry.

And the way of life in coastal Louisiana is indeed distinctive—its cuisine, traditions, music, party-loving culture, and opportunities for year-round outdoor recreation make it attractive for tourists and, over the last two decades, Cajuns have learned to appreciate, as well as effectively market, themselves. But it is also a plain, working-person's environment. The parishes (counties) bordering the Gulf of Mexico have none of the luxury and convenience found in New Orleans or the holiday resorts of Florida, and the recreation offered (hunting,

swimming, boating, and fishing) appeals to people who enjoy the outdoors. For coastal residents, recreation and work are often interwoven; for example, commercial shrimpers also fish for pleasure and offshore oil workers swim and scuba dive.

Population. The decline of the oil and gas industry in the early 1980s left a depressed economy and a greatly diminished coastal population, as jobs were

eliminated and thousands of people moved elsewhere to seek work. According to the University of New Orleans Division of Business and Economic Research, a pervasive emigration of about 47,000 people took place annually from 1981 through 1987 as a result of the downturn in oil



production. Since then, Louisiana employment has increased about 1.9 percent per year, but between 1988 and 1999 emigration continued at a rate of about 28,000 annually.

Although oil and gas production has recovered somewhat with the advent of deep-water drilling technology, the relatively small workforce required has not brought a swell of new residents to the rural coastal parishes. During the past decade, in fact, Louisiana's coastal population outside metropolitan New Orleans has grown less than 5 percent, from 1,867,796 residents in 1990 to 1,957,104 in 2000 (U.S. Census). This lags far behind growth in other coastal areas of the U.S., which are now home to 53 percent of the U.S. population. In other states of the Gulf of Mexico region, coastal populations increased 15 to 20 percent, although in Alabama the increase was over 36 percent.

Along with sluggish growth, the state's coastal population is aging. From 1990 to 2010, Louisiana's under-18 population is expected to decrease by 2.8 percent and those in the 18 to 34 age range to decrease by 4.3 percent. The increase of people from ages 35 to 54—those at the peak of their productivity in the labor force—is projected to be only about 1.6 percent by 2010, but the population of those 55 and over is expected to increase by 5.4 percent. If current population trends continue, coastal Louisiana faces a critical loss of young, educated workers, the all-important human resources needed to attract new industry that can revitalize a stagnant economy.

THE GEOGRAPHY

Terrain. Louisiana's flat coastal lowlands are occupied mainly by marshes, swamps, lakes, bays,



and sluggish, wandering tidal streams; they also include about 200 miles of the Mississippi River, the Atchafalaya River, and several lesser rivers. The coastal region extends east-west between the Sabine River on the western border with

Texas to the Pearl River boundary with Mississippi. It is convenient to consider its northern boundary as interstate highways I-10 and I-12, which cross the state at the latitude of Baton Rouge. Although this area contains parishes that are not strictly coastal because they do not abut on the Gulf of Mexico, they are inextricably tied to the coastal parishes in geography, economy, culture, and spirit and thus must be considered coastal.

Coastal Louisiana is in every sense a product of the Mississippi River: a region created through 7,000 years of cyclical delta building and abandonment, as the river pursued a relentless search for the shortest route to the Gulf of Mexico. Three distinctive land forms emerged: the alluvial

valley, the deltaic plain, and the chenier plain.

The alluvial valley is identified by low, sinuous asymmetrical natural levee ridges of river silt formed during seasonal overbank flooding. These natural levees slope gently away from their parent channels and grade into heavy clay and muck deposits occupied

for the most part by forests and swamps.

The deltaic plain, formed by sediments deposited thickly by the Mississippi River as it entered the Gulf of Mexico, is a composite of five major deltas and supports vast fresh- and saltwater marshes.

The chenier plain, in southwestern Louisiana, resulted when eastward and westward shifts in the Mississippi's course provided alternating supplies of fine and coarse sediments that accumulated on



the shelf, were reworked by strong littoral currents, and resulted in beaches flanked by mud flats. Today the area is characterized by sandy, oak-crowned cheniers, or ridges, with intervening marshy swales.

Throughout the coastal region, and especially near the Gulf of Mexico, land suitable for farming, cities, and travel routes is primarily confined to natural levees along the Mississippi and the bayous that denote locations of the river's abandoned distributary channels.

Land Loss. Louisiana's most devastating environmental problem has been the loss of its vast and productive coastal marshes, over a million acres since the 1930s. The loss continues at about 30 square miles per year, and an additional 1,000 square miles of the coast is expected to vanish by 2050.

Although natural phenomena such as subsidence and storms have taken a serious toll, deterioration and loss have been accelerated by human activity. First, the construction of the Mississippi River levee system and other flood-preventing structural measures has "strait-jacketed" the river from its junction with the Ohio River to the Gulf of Mexico.

Floodwater is thus prevented from spilling into the low-lying wetlands, denying these areas the nourishing sediment they need to maintain healthy plant growth. Secondly, activities associated with the exploratory drilling, development, and exploitation of offshore oil and natural gas have had a dramatic effect on Louisiana's coastal environment. Rigs, platform assemblies, and tubular goods had to be transported on barges and erected by barge-mounted cranes at drilling sites. To accommodate barge traffic as well as the tugs and towboats used in this service,

crisscrossing navigation channels were dredged through shallow bays, lakes, and marshes. The channels have accelerated saltwater intrusion and made sensitive natural habitats vulnerable to the



devastating effects of severe storms; moreover, the extensive spoil banks created from the dredged material have disrupted natural drainage patterns. Along with the total primary loss of wetland acreage caused by this activity, secondary losses have occurred through channel

bank slumping and erosion. Together, leveeing and channel dredging set in motion a complicated and destructive process of wetland loss through erosion, saltwater intrusion, and hydrologic change.

Over the last decade, the state has undertaken prodigious efforts to rehabilitate and restore ravaged wetlands, primarily through funds provided by the Coastal Wetland Planning and Protection Act (CWPPRA) and the state's Wetlands Trust Fund. River diversion structures send nourishing sediment and water from the Mississippi River into deteriorated marshes. Shoreline protection devices absorb wave energy and trap sediment to counteract erosion. Some barrier islands have been restored with the

combined use of dredged sediments to increase their size, structures to prevent further erosion, and fences to trap sand and stabilize beaches. CWPPRA projects are expected to reduce by 13 percent the 1,000-square-mile loss projected for 2050, and two major freshwater diversion projects will prevent another 9 percent of anticipated loss.

In many areas, efforts to rehabilitate ravaged wetlands by replanting marsh vegetation have been thwarted by the nutria

(*Myocastor coypus*), a furry, web-footed, prolific rodent from South America with a seemingly unlimited appetite for tender



wetland plants. The nutria has no enemies to speak of other than the alligator and man. Its burgeoning population was once controlled by trapping, but declining prices for fur discourage most trappers and the nutria now continues to multiply virtually unchecked except by the carrying capacity of its habitat. The recent establishment by the state of an official nutria hunting season from September through February may be helpful. Otherwise, the only recourse in many areas may be a concerted effort by community officials to kill the animals. For example, a shooting campaign was begun by the Sheriff's office in Jefferson Parish where the nutria has been especially destructive.

THE ECONOMY

In the more populous parishes around New Orleans, shipbuilding and other industries related to maritime transportation are a major activity, and chemical processing and manufacturing continue to dominate the corridor flanking both sides of the Mississippi River between Baton Rouge and New Orleans. In the largely rural coastal parishes, however, the two-decade decline in offshore oil and gas production has left the economy stagnant and community leaders struggling to find ways to diversify. Unfortunately, the future of these local economies is entwined with the fate of the eroding marshes, an environment whose instability undermines infrastructure, cripples traditional occupations such as fishing and oyster farming, and hinders the emergence of new business and industry.

Economic revitalization—sustainable, community-based enterprises that preserve

environmental integrity but offer viable employment opportunities—is a critical need but there are no easy answers. Although the oil and gas industry has recovered to some extent and still dominates the coastal economy, its deepwater



activities now require a smaller workforce. Commercial fisheries, especially shrimp and menhaden, continue to be important but face severe restrictions because of a deteriorating ecosystem, foreign competition, rising fuel costs, stringent regulations, and dwindling stocks. Louisiana's oyster industry, the most prolific in the nation, has suffered economically over the last decade because of dwindling consumer markets for raw product; closures of polluted coastal growing waters; and the destruction of harvests by disease, predators, and influxes of fresh water from

river diversion projects. Agricultural crops in the coastal area such as rice, sugarcane, and soybeans continue to be important but farmers face chronic problems with foreign competition, uncertain federal price supports, and, most recently, increasing salinity in their fresh water supplies. The pond culture of crawfish has been a viable industry for



the last two decades, but in recent years an unusual drought has caused serious crop losses. A bright spot has been tourism development, as coastal communities have begun to realize and capitalize on their allure for travelers interested in off-the-beaten-path ecotourism and unusual cultural

experiences. Tourism revenues cannot, however, fill the gap left by declines in other sectors.

By and large, new industry hesitates to come to coastal Louisiana because of a decreasing and

generally untrained labor force and the potential impacts of continued coastal erosion on highways, bridges, and flood protection systems. Other concerns include the need for improving ports and navigation access, constructing new highways, upgrading potable water supplies, and devising new and efficient methods for waste disposal.

The health of the coastal economy cannot be isolated from the economic well being of Louisiana as a whole. Having built its tax base on the seemingly inexhaustible revenue from oil production, the state was suddenly hard-pressed to support its agencies, services, and institutions when the industry declined. Thus, the past 15 years have been dominated by the painful necessity to reduce spending and raise revenue. A legislative reluctance to reform the entire tax structure, however, has resulted in a resort to "temporary" sales taxes and heavy reliance on gambling revenues, a solution that pleases few but allows the state to limp along.

PLANNING CHALLENGES

Ranging from wetland loss to shrinking supplies of fresh water, problems in the coastal region are complex and interrelated, presenting Louisiana Sea Grant with myriad choices for investment. However, this is a time when the state's coastal problems, especially wetland restoration, are attracting enormous effort and funding from numerous governmental and institutional sources. For instance, Coast 2050, a strategic state plan for coastal restoration, has a price tag of over \$14 billion.

Louisiana Sea Grant can remain relevant by carefully directing scarce resources to identifying and addressing imminent, niche issues of significance to coastal Louisiana's sustainable

development. We can do this most effectively by continuing to establish and maintain partnerships with other state and federal programs, agencies, and private-sector companies in order to supplement limited resources.

III. HIGHER EDUCATION IN LOUISIANA: THE ACADEMIC ENVIRONMENT

An important element of Sea Grant's planning environment is Louisiana's four public systems of higher education. They are governed by the Louisiana Board of Regents, although each system has its own management board. Systems include the Louisiana State University System, with eight institutions on ten campuses; the University of Louisiana System, with eight institutions; the Southern University and A & M System, with five units on three campuses; and the recently created Louisiana Community and Technical College System, with 42 campuses. Also governed by the Board of Regents is the Louisiana Universities' Marine Consortium (LUMCON), a coastal facility and cooperative multi-institutional program that

conducts research and educational activities in the marine sciences. In 2000, the four public university systems had a total enrollment of 175,292, of which the graduate enrollment was 23,371. In addition, the Louisiana Association of Independent Colleges and Universities

contains 11 private institutions, of which Tulane University is the largest.

Sea Grant-funded research has been conducted through many of these academic institutions and Sea Grant education opportunities offered to students enrolled in them.



IV. CRITICAL STEPS IN FORMULATING A LOUISIANA SEA GRANT STRATEGIC PLAN

STRATEGIC PLANNING 2002-2006 PROCESS

The priorities and major areas contained in the Louisiana Sea Grant Strategic Plan for 2002 through 2006 were identified through use of four distinct mechanisms: (1) Nine focus groups were convened during September-November 2000. (2) Two special conferences, HabTech 2000 and the Louisiana Tourism Collegium 2010 were held in June and November 2000, respectively. (3) The long-range plans of 14 major public partner organizations and agencies were carefully reviewed. (4) Louisiana Sea Grant's Advisory Council provided comments.

Nine Focus Groups. In June 2000, key Louisiana Sea Grant staff members developed an initial list of coastal Louisiana's most significant research, outreach, and education issues, commensurate with Louisiana Sea Grant's sustainable development mission. The list served to organize nine external focus groups to explore the following major topics affecting coastal Louisiana: coastal wetlands, natural fisheries, aquaculture technology, oyster aquaculture, water quality, coastal hazards, invasive species, socioeconomic issues, and seafood products.

Each group included six to ten representatives of all major stakeholder groups. In advance of each three-hour roundtable meeting held at the Louisiana Sea Grant offices, participants were mailed packets containing a report on the Pew Oceans Commission's areas of inquiry, Louisiana Sea Grant's mission and focus statement, and the NSGO's Network Plan. All meetings took place during the months of September, October, and November 2000.

At the meetings, focus group members were asked to answer three questions: What are the priority problems and challenges facing Louisiana and the Gulf region? Of these, which are likely to grow in significance and magnitude during the next five years? What are the research needs or outreach strategies that Louisiana Sea Grant and others should consider to address these?

Special Conferences. HabTech 2000 and the Louisiana Tourism Collegium 2010 conferences,

held in June and November 2000 respectively, provided peer input on the most significant future issues likely to affect coastal restoration technology and tourism and recreation development. HabTech 2000 examined the technological strengths and weaknesses of coastal habitat restoration, identified needs, gaps, and business development opportunities, as well as impediments to the advancement of technology. In November 2000, Lieutenant Governor Kathleen Babineaux Blanco convened 80 of Louisiana's best and brightest tourism leaders for Louisiana Tourism Collegium 2010. The primary purpose of the conference, coordinated by Louisiana Sea Grant, was to discuss key issues likely to affect the state's tourism industry in the next 10 years, and identify needed public and private sector coping strategies.

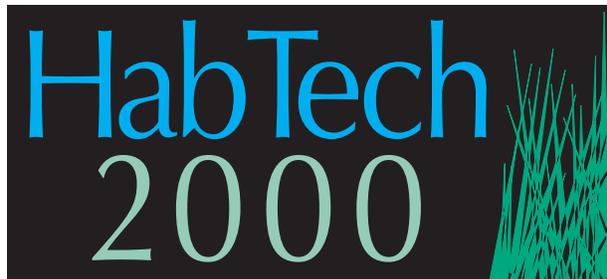
Summary reports for both conferences are available through Louisiana Sea Grant's Communications Office and will be added to the program's web site in the near future.

Long-Range Plans of Leading Partners.

During January 2001, a thorough review was conducted of the long-term plans of Louisiana Sea Grant's 14 major implementation partners-federal and state agencies, several university programs, and the NSGO. Their priorities, goals, and objectives were identified, compared, and summarized in the table on the following page.

Louisiana Sea Grant's main partners are the state departments of Economic Development, Natural Resources, Culture, Recreation and Tourism, Wildlife and Fisheries, Health and Hospitals, and Environmental Quality. The leading university-based partners are LSU and A & M College, the LSU Agricultural Center, and the Louisiana Aquaculture Task Force. The congruence with federal and regional plans is evident from comparisons with the plans produced by EPA's Gulf of Mexico Program, the regional Gulf Oyster Industry Program, and the National Sea Grant Office's Theme Teams, Network Plan, and Aquatic Nuisance Species Program.

These and other partners are devoting considerably more attention and resources to the complex issues affecting coastal Louisiana and the Gulf of Mexico than when Louisiana Sea Grant was first established in 1968. Early in its existence, Louisiana Sea Grant was one of very few organizations in the state involved in coastal research and development matters. In large measure due to Louisiana Sea Grant's major



educational, research and technology transfer thrusts of the 1970s and 1980s, the last decade has been characterized by a proliferation of academic interest in coastal problems and challenges. Thus there has been an increased involvement on the part of many others, particularly federal and state agencies, who command significant budgets.

Federal appropriations for Louisiana and other Sea Grant programs around the country have been growing slowly in recent years. Unfortunately the amounts have been relatively small, and they have been earmarked for (1) regional and multi-institutional and (2) nationally competitive initiatives. As a consequence, Louisiana Sea Grant's funding has not been able to keep up with the increasing needs and growing demands placed by the multiple agendas of the state's coastal research and development communities.

Thus, in strategic terms, our role is changing from one of a few to one of many players in the arena. This reality stimulated Louisiana Sea Grant to renew the emphasis that it has always given to building enduring partnerships dedicated to coastal Louisiana's sustainable development, and carefully coordinating and targeting research, extension and education efforts.

Louisiana Sea Grant Advisory Council: The Louisiana Sea Grant Advisory Council (Advisory Council) was briefed in December 2000 concerning the discussions and recommendations made by the focus groups. Those in attendance shared their perspectives on future priorities for the program. Several management agencies that have members on the Advisory Council—the departments of Wildlife and Fisheries, Environmental Quality, and Natural Resources—also actively participated in some of the focus group discussions, and the *HabTech 2000* Conference. Two other Advisory Council members, the Department of Culture, Recreation and Tourism and the Louisiana Travel Promotion Association, co-sponsored the *Louisiana Tourism Collegium 2010*.

In addition, the Advisory Council agreed with the staff's assessment that a focused approach to the future is essential considering available resources, the specific needs of the state's coastal region, and institutional capabilities. There was consensus among those present that Louisiana Sea Grant can play a more significant role in helping integrate the research and outreach efforts of state and federal agencies. The council encouraged interdisciplinary research and focused public education campaigns to address an array of coastal issues and their social, economic, and ecological impacts. The issues ranged from new resource management approaches to water quality problems associated with river diversions and nonpoint discharges.

PLANNING PROCESS CONCLUSIONS

Louisiana Sea Grant's strategic plan for 2002-2006 was shaped by several recurring themes that emerged from the aforementioned planning process:

- Coastal wetlands are continuing to disappear, causing problems for Louisiana's human and natural systems. The mitigation efforts to respond to these losses are creating another set of complicated and contentious problems.
- In Louisiana, water has always been perceived as a never-ending resource. Recent circumstances, however, suggest otherwise, and issues of water availability, quality, and use are imminent.
- Unlike coastal communities in other states that are undergoing significant change associated with growth in population, Louisiana's coastal communities are experiencing changes driven by other socioeconomic and environmental factors, which are exacerbated by coastal restoration issues. The issue of sustainability is at the forefront.

V. LOUISIANA SEA GRANT'S STRATEGIC AREAS FOR 2002-2006

STRATEGIC PLAN WITHIN NATIONAL EMPHASES

Louisiana Sea Grant's Strategic Plan focuses on five strategic areas to be emphasized over the next four years. The areas are presented below, organized under each of the Sea Grant network's three major topics of emphasis: Economic Leadership, Coastal Ecosystem Health and Public Safety, and Education and Human Resources. The two to four goals for each strategic area provide guidance to faculty, staff, and implementation partners on Louisiana Sea Grant's priorities for research, outreach, and education funding during the next four years to effectively address coastal Louisiana's most critical challenges. The implementation period runs concurrently with Louisiana Sea Grant's biennial (2002-2004 and 2004-2006) omnibus proposal periods.

The five strategic areas, organized by the Network's major topic of emphasis, are:

ECONOMIC LEADERSHIP

- Strategic Area 1. Seafood Harvesting and Production
- Strategic Area 2. Sustainable Coastal Communities

COASTAL ECOSYSTEM HEALTH AND PUBLIC SAFETY

- Strategic Area 3. Wetlands Restoration
- Strategic Area 4. Water Resources

EDUCATION AND HUMAN RESOURCES

- Strategic Area 5. Public and Formal Education

GOALS FOR EACH STRATEGIC AREA

Louisiana Sea Grant has set specific goals for each strategic area to focus the program's efforts.

Strategic Area 1. Seafood Harvesting and Production.

Fishers, anglers, aquaculturists, processors, sport-tourism industry, and government regulatory agencies, responding to demands for quality seafood and recreational fishing opportunities, are challenged by a lack of information on resource supply and quality; oyster diseases and predators; competition from imported products; and regulation for human health and safety. Some citizens and community leaders may be insufficiently informed about these challenges to actively seek and support sustainable solutions.

Goal 1.1 Encourage development of rational management of economically important, estuarine fisheries on the basis of sound ecological principles.

Goal 1.2 Encourage development of a viable industry based on the cultivation of marine finfish.

Goal 1.3 Help insure the continued viability of the region's oyster resource.

Goal 1.4 Help to insure full and safe utilization of seafood raised or landed in Louisiana.

Strategic Area 2. Sustainable Coastal Communities.

Community leaders, responsible for insuring a sustainable economy and the environment, must manage all resources for present and future economic development. Information and skills related to growth management, coastal ecosystems, and natural hazards are needed. Citizens may also lack information about the natural and technical resources to help leaders make informed decisions, and/or the skills to participate in new development.

Goal 2.1 Encourage a balance between economic growth and coastal resource quality in order to insure sustainable development.

Goal 2.2 Strengthen leaders' knowledge, skills to help undergird the stability of coastal communities.

Goal 2.3 Strengthen preparedness for and responsiveness to coastal hazards.

Strategic Area 3. Wetlands Restoration. Wetland loss, especially serious in Louisiana, threatens the sustainability of coastal communities by flooding, and by resource and habitat degradation. Coastal resource managers lack reliable data on coastal ecosystem changes and impacts. To safely and consistently make life-sustaining restoration and conservation decisions, citizens and policy makers need a broad and deep understanding of natural systems and their relationships to society.

Goal 3.1 Obtain a comprehensive understanding of major ecosystem changes as they affect management of coastal resources.

Goal 3.2 Establish the academic research community as a major provider of applied research support for coastal restoration technology and programs.

Goal 3.3 Contribute to better understanding of sustainable development.

Strategic Area 4. Water Resource. Protecting and enhancing the quality and quantity of water available to sustain coastal Louisiana's communities is challenged by the region's unstable landscape, depleting aquifers, aquatic nuisance species, nonpoint and point-source pollution. Citizens and community leaders need information about water and wastewater management practices and technology in order slow or reverse current trends.

Goal 4.1 Help improve the quality of Louisiana coastal waters, reduce risks to public health and ecosystem productivity, and enhance the waterborne recreation and tourism industries.

Goal 4.2 Help insure reliable sources of fresh water for sustainable coastal development.

Goal 4.3 Reduce the introduction and enhance the control of nonindigenous, aquatic nuisance species.

Strategic Area 5. Public and Formal Education. Concerned and informed citizens are the cornerstones of sustainable communities. The keys to developing an informed citizenry are effectively trained teachers, graduate and undergraduate students, resource managers, and policy makers. They provide community leaders with information and experience to facilitate wise development and promote good resource stewardship.

Goal 5.1 Help create a responsible and a scientifically and environmentally informed citizenry.

Goal 5.2 Help provide a technically trained work force that understands the changing nature of science, technology, and research in marine and coastal issues and makes wise decisions concerning resource management.

Goal 5.3 Provide coastal community residents with information about their relationship with and responsibility for the coastal environment.

The table on the following page summarizes and categorizes Louisiana Sea Grant's response to network-identified, national topics of emphasis by addressing selected, strategic area goals.

LOUISIANA SEA GRANT GOALS AND NATIONAL TOPICS OF EMPHASIS

ECONOMIC LEADERSHIP	COASTAL ECOSYSTEM HEALTH and PUBLIC SAFETY	EDUCATION and HUMAN RESOURCES
Encourage rational management of economically significant estuarine fisheries (Goal 1.1)	Obtain a comprehensive understanding of ecosystem changes and effects (Goal 3.1)	Contribute toward creating an informed citizenry (5.1)
Encourage industry based on cultivation of marine finfish (1.2)	Establish research community as major provider of research support for coastal restoration technology (3.2)	Help provide a technically trained work force (5.2)
Strengthen the viability of The region s oyster resource (1.3)	Help improve the quality of Louisiana s coastal waters (4.1)	Provide information to promote understanding of sustainable development (3.3 and 5.3)
Help to insure full and safe seafood utilization (1.4)	Help insure reliable sources of fresh water (4.2)	
Promote balance to insure sustainable development (2.1)	Reduce introduction and enhance control of aquatic nuisance species (4.3)	
Strengthen leadership in coastal communities (2.2)		
Strengthen preparedness for and responsiveness to coastal hazards (2.3)		



VII. IMPLEMENTATION PLAN - SUMMARY

Louisiana Sea Grant's Strategic Plan provides direction and sets the stage for implementation over the four-year period beginning in 2002. The implementation phase is divided into two, two-year cycles which correspond with Louisiana Sea Grant's omnibus or core program proposals for the periods 2002-2004 and 2004-2006. They describe in detail the planned research, outreach, education, and management actions planned for each biennium, including information concerning anticipated impacts and milestones. The omnibus proposal for the 2002-2004 period (the first phase of the implementation cycle) will be submitted to the NSGO in November 2001 for initiation in February 2002.

This approach to implementation of the strategic plan provides an opportunity to review, re-prioritize and redirect core program activities for the 2004-2006 portion of the strategic planning cycle.

The major elements of Louisiana Sea Grant's implementation plan include:

- Periodic review and revision of the Strategic Plan through focus groups, Advisory Council input, and review of partners' plans
- Development of the Request for Proposals (RFPs) by Louisiana Sea Grant Management Team
- In-house committee to screen preliminary proposals responding to RFPs
- Selection of projects for funding through peer evaluation of full proposals
- Award and administration of grants
- Periodic review and evaluation of progress in funded research and outreach
- Documentation of key impacts of research and outreach activities

A copy of the Louisiana Sea Grant Implementation Plan (2002-2006) is available from the Louisiana Sea Grant Office.

