Strategic Workforce Contingency Plan for Fishing and Related Industries in Coastal Louisiana

A report presented to The St. Bernard Economic Development Foundation

By:
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I. Summary Report
I. Introduction

This strategic action plan was created to benefit communities impacted by the Deepwater Horizon Oil Spill, also known as the BP Oil Spill, in coastal Louisiana. The economy of the proposed area of investment is predominantly characterized by the fishing industry, tourism, as well oil & gas exploration and production. Research completed by the LSU Ag Center in 2007 estimated the value of fisheries and wildlife enterprises in Plaquemines and St. Bernard Parishes alone at over $93 million. This industry is a significant economic driver, as well as a cornerstone of culture and identity for small coastal communities in Louisiana. The impacts on the tourism industry were also significant. Even after the spill was sealed, the economic outlook continued to look bleak. A concerted set of strategic initiatives were needed to ensure these coastal parishes could begin what would be a long process of recovery, and give both businesses and residents hope for a brighter future.

In the fall of 2010, the St. Bernard Economic Development Foundation (SBEDF) secured an Economic Development Administration (EDA) grant in the amount of $200,000, with an in-kind match by SBEDF of $50,000, for the purpose of developing a strategic workforce contingency plan for fishing and related industries severely impacted by the British Petroleum Oil leak. Fisheries have been identified in the regional Comprehensive Economic Development Strategy (CEDS) as a key economic driver for the region. Although this project will focus on St. Bernard, Plaquemines, and Orleans Parishes, the plan will be implemented throughout coastal Louisiana as applicable. Prior to the BP spill, the Fishing industry had suffered severe impacts from the devastation of Hurricanes Katrina and Rita. The additional loss of population compounded significant out-migration suffered in St. Bernard, Plaquemines, and Orleans Parishes, as a result of Hurricane Katrina. Every effort should be made to preserve the economic vitality and cultural heritage of the fishing communities in southern Louisiana. They are a vital part of the region, the state, and the nation.

Insurmountable damages to wildlife habitats attributed to the oil spill have left the people who rely on the natural resources associated with the Gulf of Mexico for their livelihoods in a state of uncertainty. Even if fishing, shrimping, oyster harvesting and related industries eventually recover, many of these people will need to find alternative work in other fields such as experiential tourism, wetland and coastal restoration, and alternative marine industries. The proposed study on workforce needs and implementation speaks directly to the region’s CEDS strategic planning process, which identifies programmatic and infrastructure needs to support the growth of targeted clusters. This study and subsequent implementation will aide in developing a plan tailored to the current needs of the fishing industry, an identified cluster of importance. The action agenda will recommend cross-training of workers to foster skills needed to support both an increasingly-competitive seafood industry, along with other identified clusters of importance, such as experiential tourism (including art, craft, and entertainment) and coastal restoration and preservation activities.

The intent of the project is to look beyond the immediate economic horizon, to identify a game plan for tapping new market opportunities in seafood related industries and other clusters of significance within the region. The project was designed to be collaboratively executed in coordination with partners, such as Seedco Financial, Louisiana Small Business Development Centers, southeast Louisiana Workforce Investment Boards, and area community colleges.
The plan developed as a result of this project will enable the region to plan and coordinate resources to support the economic recovery of communities impacted by the Deepwater Horizon Oil Spill. The plan addresses programmatic development to leverage the knowledge, and skills of the affected population into other prominent regional sectors and economic opportunities. The plan methodology included an analysis of existing skills and intellectual property possessed by those employed in the fishing industry and research as to other sectors where their skills may be transferable. In addition, this report identifies additional training that may be necessary to increase competitiveness and profitability of impacted companies.

Although led by the St. Bernard Economic Development Foundation, this report will provide benefit to Plaquemines and Orleans Parishes, as well as other coastal communities in southeast Louisiana. The initiatives and information presented in this report will aid the region in moving beyond the short-term impacts of the Deepwater Horizon Oil Spill, and create an action-oriented roadmap for the future. This series of action agendas will allow them the capability to diversify their economies, and increase their capacity to build wealth in their communities.

The report is divided into six sections:

1. Main body Summarizing the Background, Methodology, Findings, and Recommendations
2. Presentations and Strategic Action Agendas of the 3 Initiative Implementation Task Forces
3. Regional Economy Preliminary Scan, Fisheries Structural Analysis, and Best Practices
4. List of Interviewees, and Bibliography of Previous Regional Reports and Analyses Studied
5. Beginning, Intermediate, and Final Presentations to SBEDF Board and Leadership Team
6. Acknowledgements: SBEDF Board, CEO, Leadership Team, and Task Force Members

DADCO Consulting, Inc. was selected as the consultant responsible for creation of the report. The DADCO team consists of: Co-project leaders David Dodd, CEd, President of DADCO Consulting, Inc. and Barbara Johnson, CEd, Principal of Johnson Group, LLC; with Ann Guissinger, Principal of Guissinger and Associates; Principals Chris Beacham, Trent Williams, and Stuart Rosenfeld, and Associates Corrine Cain and Jenna Bryant, of Regional Technology Strategies, Inc.; and featured speaker Ronnie L. Bryant, CEd, FM, HLM. Each member of the DADCO team contributed significantly to the development of this strategic plan.

The BP spill was the latest in a series of enormous challenges for the fishing and related industries in the Louisiana Gulf coast. Even prior to Hurricane Katrina in 2005, the industry had been under intense competitive pressure, primarily from Asia, with the U.S. market flooded with inexpensive imports, especially shrimp. In the last three years, the rising cost of fuel and U.S. recession further eroded both margins and markets. Just as the industry was beginning to recover, and looking for the 2010 season to be robust, the Deepwater Horizon rig exploded. The ramifications of the spill over time are still uncertain, but as of the date of this report, the perception of the availability and quality of Louisiana seafood continues to be severely impacted. Even though the spill was stopped over a year ago, restaurants along the Gulf coast...
still report instances of patrons expressing concern about, even requesting that they not be served Gulf seafood.

While all of the closed fishing areas of the Gulf have been re-opened, this convergence of events, including the Oil Spill, hurricanes, and foreign competition, is clearly a mandate for change and transformation of the fishing industry. Those active in the industry, and those public and private stakeholders who support it, agree that the industry must change course. The fishing industry should not be abandoned, but it must change and adapt to a new economic reality. This change should take two tracts: 1) Transformation of the industry from an “ad hoc” group of independent operators to a true industry cluster, through intense training programs and robust communication and collaborative action that addresses significant competitive issues in quality, supply, production, and distribution of their products; and 2) Economic diversification through market opportunities in previously underutilized types of fish and new methods of processing and preparation, including byproducts.

In addition, there are opportunities to apply the unique skills and expertise of fishermen and shrimpers in new ways, creating new sources of income that are not subject to the same risks and market pressures. These new markets include coastal restoration, eco-tourism, and possibly also specialty boat building. To successfully utilize these skills in new ventures, significant training in ancillary skills will be required. These skills closely parallel the business skills training for transforming the industry, coupled with specific actions to analyze, prioritize, and act on new market opportunities.

II. Methodology

DADCO’s plan of work in performing the study contained five specific elements:

1) Develop a leadership organizational framework for the project involving key stakeholders;
2) Review existing conditions, including an environmental scan to develop a skills profile;
3) Conduct a structural analysis, focusing on competencies that can be transferred into other areas of opportunity;
4) Work with stakeholders to develop demand-driven strategies that focus on action; and
5) Develop a detailed implementation plan that focuses on skills and market opportunities.

In carrying out the plan of work, the project team utilized a methodology combining empirical research with interviews of stakeholders, then engaging community leaders in the creation of detailed action agendas for implementation. The process included reviewing a significant number of previous studies on the industry and region, conducting an environmental scan to gauge the health of the overall economy, conducting interviews of representatives from the seafood industry and support organizations, and researching new and alternative market opportunities. This methodology was designed to ensure that decisions were based on both solid data and the values of those directly involved in the industry plus those that actively support it. Together, they compromise a comprehensive set of data and information from which the three strategic task force action agendas were crafted.

Actions outlined in the final report will not result in successful industry transformation unless they are embraced and implemented by community stakeholders. The creation of an involved, representative leadership team was the first step in developing a successful agenda for action.
Thanks in large part to the knowledge and expertise of the St. Bernard Economic Development Foundation’s Executive Director, an excellent oversight leadership team was assembled. The team includes industry leaders, economic development officials, and representatives from education and government from the region. The team was fully engaged from the first meeting and will continue to be an invaluable sounding board and source of guidance as the plan is implemented. Research and meetings with many stakeholders led to the following initial findings:

1. Significant work among a number of organizations is underway to increase the competitiveness and profitability of the seafood industry;

2. Substantial efforts are underway to develop basic training curriculum to advance the “professionalism” of the industry – Louisiana State University’s Sea Grant Initiative is currently under contract with Louisiana Department of Wildlife and Fisheries to develop;

3. Research by LDWF and Sea Grant have identified new seafood products that may have market potential;

4. Investigation of coastal restoration jobs opportunities is underway by several organizations, most notably the GNO Inc. and Chevron sponsored Gulf Vitality Project;

5. There is a need for a mechanism for coordination of different initiatives focused on increasing the economic health and competitiveness of fishing industry.

The matrix below summarizes the initiatives found that are underway. It also indicates which of the three primary areas of action they impact: 1) Increasing the efficiency, competitive position, and profitability of the industry; 2) Developing new opportunities to expand types of fish and new processing techniques; and 3) Exploring new and related industries that may utilize skills and assets of the regional cluster. The matrix is not intended to be entirely comprehensive. It is based on knowledge of programs that are active or may become activated that are available in the region. Only one of the 12 initiatives listed focuses on skills-contingency based new market opportunities.

There are several opportunities that need to be explored in related industries such as experiential-based tourism and craft-based production. There is a need to develop more initiatives that streamline distribution systems using the same premise as Delcambre Direct. Finally, related opportunities such as innovations in net technology and new product and waste processing facilities need to be explored and tested in the marketplace and implemented through specific business planning.

**Current or Planned Initiatives and Action Components Affected**

<table>
<thead>
<tr>
<th>Initiatives:</th>
<th>Increasing existing operation profitability</th>
<th>Developing new fishing industry opportunities</th>
<th>Exploring new and related industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSU Sea Grant and LDWF work focused on improving product quality and professionalization of the industry, including work in the areas of traceability, equipment/gear, product certification,</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Project Description</td>
<td>Funded Status</td>
<td></td>
<td></td>
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<tr>
<td>-----------------------------------------------------------------------------------</td>
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<td></td>
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<tr>
<td>marketing, and experiments to justify re-opening harvests</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Trade Adjustment Act (TAA) training for fishermen</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development of curriculum for 1-hour courses in six areas – the beginning of</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>curriculum to facilitate professionalization of the industry – Sea Grant</td>
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<tr>
<td>under contract with LDWF</td>
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<tr>
<td>Louisiana Seafood Promotion &amp; Marketing Board branding, certification and</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>marketing initiatives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delcambre Direct – direct marketing initiative</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market umbrella – direct marketing initiative</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal Restoration jobs investigation – GNO Inc.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GNO Inc./Chevron Coastal Vitality Initiative</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research on new seafood products that may have market potential – Sea Grant and</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDWF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delgado Community College Entrepreneurial Skills Program</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nunez Community College FAST Program</td>
<td>Not Funded</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### III. Preliminary Industry Scan

The Fishing Industry, though battered by storms, assaulted by foreign competition, and engulfed by the BP oil spill, continues to be an important sector in the regional economy. The location quotient is a measurement of concentration of companies within a region. For the fisheries industry, it is still relatively high, although it is declining:

Chart 1: Change in Location Quotient of Major Industries in Southeast Louisiana
Occupational concentrations followed a similar path. Although the location quotient for fishing and related occupations remains relatively high, it has lessened over time. This is consistent with anecdotal evidence regarding the challenges that have faced the industry in the last six years, including the BP oil spill:

Fisheries are still the second most concentrated occupation in the three-parish region, but are
losing ground due to a combination of foreign competition and damage to fishing environments and populations due to both natural and man-made disasters.

When looking at the fastest growing occupations in the region, there are a few that could utilize existing skills of fisheries workers, including cooks, food prep, and food and beverage workers:

For the most part, however, skills and attributes of the fishing community will either need to be replaced with new skills, or strategies must be developed to expand employment and business opportunities in industries whose occupations more closely align with current skills of fishermen, including increased competitiveness and new occupational and business opportunities within the fishing industry.

IV. Economic & Structural Analysis of the Fisheries Cluster

1. Economic and Demographic Trends in the Region: The economy and demography of the Orleans, Plaquemines and St Bernard parishes region has been on a roller coaster in the last decade. National and global economic malaise, a series of destructive hurricanes and the BP oil spill have combined to change the face and character of the region. Here we examine some of those changes. We start with the years before Hurricane Katrina, analyze the demographic and economic recovery since then and look back over the entire period. Within the economic realm we begin with data on the fisheries industry before looking at the broader economy. We researched population projections moving forward for the next five years but all projections, including those from the Louisiana State Census Data Center were based on 2000-2010 changes and do not adequately reflect the population recovery that has occurred since 2006.

2. Population Trends: Even before Hurricane Katrina the three parish regional population was in decline with only Plaquemines Parish growing during the 2000-2005 period (Figures 1-4). Since Katrina the parishes have recovered to various degrees. The regional population, based on the 2010 Census, now stands at 402,768, 73 percent of the 2005 pre-Katrina level. Plaquemines has recovered to 23,042, 81 percent of 2005 pre-Katrina. Orleans is at 76 percent
of pre-Katrina – 343,849. St. Bernard, which received the most damage from Katrina, is at 55 percent of 2005 pre-hurricane levels – 35,897. It should be noted that St. Bernard Parish has officially challenged the results of the 2010 Census counts. St. Bernard believes that their population is between 43,000 and 45,000, approximately 68 percent of pre-Katrina levels. The 2009 estimate for the parish 40,652. The 2010 Census count for Orleans was within 3 percent of the 2009 estimate while the 2010 Census count for Plaquemines was 10 percent higher than the 2009 estimate. Neither parish is challenging the Census results. Data for the broader region suggest that many residents of the three-parish region relocated to St. Tammany and other parishes that were less damaged by Katrina.

Figure 1. Regional Population, 2000-2010  Source: US Census Bureau.

![Regional Population 2000-2010](image1)

Figure 2. Orleans Population, 2000-2010  Source: U.S. Census Bureau

![Orleans Population 2000-2010](image2)

Figure 3. Plaquemines Population, 2000-2010  Source: US Census Bureau

![Plaquemines Population 2000-2010](image3)
3. Economic Trends: We begin our analysis of the economics of the region with a review of the changes that have occurred within the fisheries industry – numbers of commercial vessels, numbers of producers and the value of catches. We follow by looking at the broader economy and embed more traditional economic data for the fisheries industry such as employment into that analysis.

4. The Fisheries Economy in the Region: The fisheries industry in the region over the last decade has been greatly affected by global economic trends, changes in domestic markets and distribution, consumer demand and, of course, economic impacts from Katrina, the BP Spill and ongoing coastal erosion. Nevertheless it remains one of the most significant economic engines in the region, especially in Plaquemines and St. Bernard parishes. Fisheries production in Orleans Parish is relatively small compared to the region and the overall Orleans economy but the value of production does not reflect the total impact of fisheries given the importance of Louisiana seafood to the tourism and restaurant industries. The number of commercial fishing licenses in the region was declining before Katrina and has recovered only slightly since then but with a significant uptick from 2009 to 2010. (Figure 5).

While the region had nearly 2,600 licenses in 2002, the number had fallen to about 2,050 in 2010. Still that represents a 43 percent increases in licenses since Katrina. St. Bernard experienced both the largest decline in licenses from Katrina but also the largest percentage gain since then, 62 percent. The number of licenses granted in Orleans and Plaquemines parishes increased by 28 and 37 percent respectively. The overall landed value of fisheries production in the region is shown below in Figure 6. As noted above, the vast majority of the production is located in Plaquemines and St. Bernard parishes. As can be seen, the value of marine fisheries production increased significantly from 2003-2005 but fell precipitously after...
Katrina. Since then recovery has been steady though the latest data do not reflect the impact of the BP oil spill. The value of fisheries production in the region totaled $85.6 million in 2009, near the $88.5 million in 2005.

Figure 5. Commercial Fishing Licenses in the Region, 2002-2010

Source: Louisiana Department of Wildlife and Fisheries

Figure 6: Value of Fisheries Production in the Region, 2003-2009

Source: Department of Wildlife and Fisheries

The impact of the fisheries industry in the region is not limited to the direct sales of fish products harvested by fisherman in the region. A 2006 study of the impact fisheries, boating and wildlife
provides a means to estimate the full economic impact of the fisheries industry.\footnote{The Economic Benefits of Fisheries, Wildlife and Boating Resources in the State of Louisiana – 2006. Prepared by Southwick Associates for the Louisiana Department of Wildlife and Fisheries, 2008.} When we take into account the economic multiplier impacts of the industry we can see the total impacts. As shown in Table 1 the impacts are dramatic. The regional industry creates over 8,500 jobs and $122 million in earnings. It should be noted that the impacts do not all occur within the region. There is significant leakage to other parishes within the state. For example the fisheries caught in the state are largely processed outside of the region. Still the impacts within the region are substantial.

Table 1. Economic Impacts to the State of the Fisheries Industry within the Region

<table>
<thead>
<tr>
<th>Category</th>
<th>Orleans</th>
<th>Plaquemines</th>
<th>St. Bernard</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of Fisheries</td>
<td>$1,560,580</td>
<td>$68,539,188</td>
<td>$15,527,538</td>
<td>$85,627,306</td>
</tr>
<tr>
<td>Total Economic Impact</td>
<td>$13,836,681</td>
<td>$607,693,877</td>
<td>$137,672,915</td>
<td>$759,203,473</td>
</tr>
<tr>
<td>Retail sales</td>
<td>$10,377,511</td>
<td>$455,770,408</td>
<td>$103,254,686</td>
<td>$569,402,605</td>
</tr>
<tr>
<td>Earnings</td>
<td>$2,224,741</td>
<td>$97,708,494</td>
<td>$22,135,838</td>
<td>$122,069,073</td>
</tr>
<tr>
<td>Jobs</td>
<td>155</td>
<td>6,815</td>
<td>1,544</td>
<td>8,514</td>
</tr>
<tr>
<td>State/Local Tax</td>
<td>$983,182</td>
<td>$43,180,435</td>
<td>$9,782,518</td>
<td>$53,946,135</td>
</tr>
<tr>
<td>Federal Tax</td>
<td>$900,174</td>
<td>$39,534,780</td>
<td>$8,956,596</td>
<td>$49,391,550</td>
</tr>
</tbody>
</table>

Source: Southwick Associates, Louisiana Department of Wildlife and Fisheries, 2008 and calculations by RTS, Inc., 2011

The three leading fisheries in the region are shrimp, oysters and menhaden with the largest value and the largest number of producers in shrimp. Figures 7-8 display the number of producers and the value of catch. Figure 7 shows that there has been a significant and steady decline in the number of shrimp producers, particularly since Katrina. Figure 8 indicates that the value of catch has not declined much though the data reflect a significantly higher price per pound than previous years. Plaquemines is the dominant producer of shrimp within the region, particularly in terms of catch as the producers in Plaquemines on average have larger catches.

Figure 7. Number of Shrimp Producers in the Region, 2003-2009
Note that there was no data of number of producers reported for 2007.

Figure 8. Value of Shrimp Production in the Region, 2003-2009

Figures 9 and 10 display oyster producers and values of production. The figures show that St. Bernard was more affected in terms of oyster production than Plaquemines. On the other hand, the producers in St. Bernard have recovered more rapidly than those in Plaquemines.
Menhaden is also a significant element in the region’s fisheries production. Menhaden are used to produce fishmeal and fish oil that is sold as a feedstock for livestock and aquaculture. The Louisiana Department of Wildlife and Fisheries has less complete data for menhaden than other fishery products. In 2009 more than 330 million pounds of menhaden were harvested generating a value of about $30 million, a very low value per pound (about 9 cents) compared to shrimp and oysters.

Figure 10. Value of Oyster Production in the Region, 2004-2009

Source: Louisiana Department of Wildlife and Fisheries

V. Findings and Major Strategic Recommendations

The opportunities for use of transferable skills along with development of added skill levels for both increased competitiveness and diversification of products from the seafood cluster, and related industries/activities such as experiential tourism and coastal restoration/preservation, provide the most viable opportunities for the affected region. This conclusion is based on a combination of industry growth projections, enhanced revenue/funding opportunities, and knowledge of cultural norms and community desires. Therefore, the three major strategic recommendations of this report are:

1.) Increasing competitiveness, providing higher value-added opportunities, and diversifying the catch of the fisheries/seafood industry in the affected area;

2) Identifying and developing employment and business opportunities in experiential tourism and related industries; and

3) Identifying and developing employment and business opportunities related to coastal restoration and preservation, including development and commercialization of new technologies.
1. **Fisheries/Seafood Industry:** The seafood industry is, despite the many problems previously noted, still a major economic and cultural foundation for the area. Statewide, the fisheries industry employs over 45,000 people and contributes a total economic impact of $4.1 billion. In the three affected parishes, though relatively small in size compared to transportation and resource extraction/production industries, the activities of fishermen, shrimpers, and oystermen have a large impact. These include docks that serve them, the distributors that sell their product into the national marketplace, and the specialized supply and repair outfits that keep the fleet going. Culturally, fishing is a way of life, and goes far beyond income and employment. It is so deeply woven into the fabric of those coastal communities that a non-fisherman stated “without fisheries, there is no coastal Louisiana.”

Whether true of not, there is no doubt as to the importance of the sector, and worldwide, that feeling could be shared by hundreds of not thousands of coastal regions. Internationally, fisheries are facing three major issues: 1) Resource management; 2) Quality; and 3) Changing fisheries from a “cottage industry” into a modern, competitive food products sector. These are being addressed through a variety of activities that have evolved to share worldwide acceptance, including:

--Individual fishing quotas and individual transferable quotas to put boundaries on overfishing;
--Sustainability certification, including the Marine Stewardship Council or Food and Agriculture Organization-based equivalent, which provide standards for maintaining healthy levels of fish
--Quality, which is increasingly demanded, especially in premium markets where margins are highest, from packaging to traceability from boat to table
--Moving from independent “free agents” to collaborative producer networks or large, integrated fishing operations, again spurred by demand for high quality at globally competitive prices

The fact is that only 5% of the market for shrimp in the U.S. is filled by Louisiana shrimpers. The other 5% is filled by other shrimpers in the U.S., and a full 90% is imported. This reality is a driving factor in the need to reach the top 10% of the market through increased quality measures and savvy marketing. These markets demand seafood from “certified sustainable fisheries” and tracking from catch to final retailer. Focusing on this market, producing the very highest quality, not only for shrimp but for oysters and fish, is the best single way to increase both profitability and sustainability of the southeast Louisiana fisheries and seafood industry.

Improving quality starts with better product handling at all levels, including immediate chilling of catch, chilled potable water at the docks, and methods to trace a specific shrimp, oyster, or fish from the boat to the retailer or restaurant. For marketing, the key is building a strong brand for Louisiana seafood products and putting controls such as Certification standards in place to ensure the product meets the standard of the brand. Transparency in the marketing chain is critical to ensuring product quality and taste is maintained. The seafood marketing chain is complex, but it can be managed with proper oversight:
Improving Business Practices is another critical issue for the future of the fisheries industry. The most critical workforce issues are related to management practices, namely financial literacy and management, marketing/sales, and operations. Closely related is the use of new technologies to reduce costs and improve quality. Cost reductions can be found in use of more efficient nets and cambered doors, which may also provide business opportunities in production and distribution of these innovations. Quality improvements in terms of product handling, safety, and traceability can also derive from relatively simple training courses. More intensive and time consuming are business management training and education. However, the return on investment of time and resources can be substantial.

In other fisheries-dependent regions around the world, modernization efforts have worked. In Canada, the federal government took the reins and developed a required certification process. The process was developed in consultation with fishermen over a seven-year period, with some fishermen grandfathered in as a result of years of experience and skill level. The process begins at the apprenticeship level and contains several levels, each providing opportunities for higher pay. The certification must be renewed annually, and colleges/universities have developed training programs to accommodate obtaining and retaining certification.

In Alaska, a voluntary program has emerged that teaches business skills fishers need to operate more effectively and efficiently. The Fishbiz project, administered by Alaska Sea Grant, provides workshops, online resources, and a fisheries technology program at the University of Alaska Southeast that offers a certificate and associate degree-level training. The website offers online training in business management, preparing taxes, marketing, and product handling. A key feature of the Fishbiz initiative is the targeting of younger fishers, including holding a Young Fishers Summit to encourage the development of the next generation of fishing professionals.

New opportunities for development of the seafood/fisheries industry in St. Bernard, Plaquemines, and Orleans parishes include:

--Development of a working waterfront using the successful Delcambre Direct as an example;
--Reuse of the former Bumble Bee processing facility and/or development of new processors;
Creation of a cooperative dedicated to value-added processing and use of new fish and/or seafood related products, and development of a fisheries-related business incubator

Development of opportunities for new uses of both primary products and byproducts to maximize the value of all available seafood-related products.

Several entities are already involved in assisting the industry, and the fisheries competitiveness initiative is designed to compliment rather than duplicate their efforts. These partners include:

--Louisiana Department of Wildlife and Fisheries
--Louisiana Seafood Promotion & Marketing Board
--Louisiana Sea Grant/LSU Ag Center
--Louisiana Shrimpers Association
--Louisiana Fisherman’s Association/Geaux Fish

--Workforce Investment Boards-Region 1
--Nunez and Delgado Community Colleges
--Local and Regional Economic Developers
--Louisiana Oyster Association
--GNO Inc./Chevron Coastal Vitality Project

Recommendations for improvement in the competitive position of the fishing industries include:

--Improving Profitability through identifying existing entrepreneurship and business management training courses in the region that could be adapted to focus on fishers;
--Accessing business-related training needs for docks and fish dealers and existing/potential processors (e.g.-industrial maintenance, safety/health-related, management training, etc.)
--Identify and promote incentives, funding sources, and new short-course programs for fisheries
--Develop a center focused on fisheries at a community college; develop a certification program
--Access infrastructure needs for docks/dealers; develop a plan for addressing them
--Identify locations for, and develop a plan to implement, a working waterfront similar to the Delcambre Direct model, including training for fishermen, and explore research opportunities
--Begin a long term assessment on how to improve the supply chain/distribution system
--Focus on development of the next generation—consider replicating Alaska’s Youth Summit

To implement these recommendations and explore new opportunities, a task force for the fisheries industry was created that includes representatives of the industry, key support organizations, training and education providers, and local, state, and federal public officials. The task force met to develop a strategic action agenda, which is found in the section immediately following this summary. The implementation of that agenda, along with the two other initiative task forces created as a result of this study, will be performed under a separate agreement that will utilize the remainder of the grant funds and matching in-kind services.

2. Coastal Restoration/Preservation:

The erosion of the Louisiana Gulf coast is widely considered to be one of the greatest ecological disasters in history. Where the Mississippi River delta, the third largest drainage basin in the world, meets the Gulf of Mexico, a wide variety of activities occur that cannot be replicated anywhere. As a point of commerce, the region is unequalled. The lower Mississippi River contains the largest cargo port complex in the world. Over 30 states depend upon Louisiana’s ports for imports and exports. It is also the top producer in fisheries in the Lower 48 States. By weight, 24% of all commercial species caught in the lower 48 is caught in Louisiana waters. Louisiana is also the top producer of oysters, blue crabs, crawfish, and shrimp in the lower 48. Finally, the Louisiana Gulf is the top producer of domestic oil, has the top domestic reserves of oil and gas, and is the top producer of offshore oil and offshore natural gas. No less important,
the Louisiana Gulf is the top producer of offshore revenues for US Treasury, and has significant offshore alternative energy potential, particularly for wind and solar power.

However, rampant coastal erosion threatens all of these activities. Perhaps most importantly, one of the world’s unique cities, New Orleans; and undoubtedly two of the world’s most unique cultures, the Cajun and Creole, is also threatened by the unprecedented loss of coastal land, marsh, and the ecosystems that thrive in them. After years of on-again and off-again funding, political battles, and territorial protection, a unified strategy is finally beginning to emerge. The passage of the Gulf Restoration Act and the allocation of Clean Water Act penalties from the BP oil spill may provide the resources to preserve and restore this national asset. By some estimates, over $50 billion will be invested in Louisiana coastal restoration over the next 20 years. This work will involve a wide variety of occupational skills, along with business acumen to take advantage of contracting and subcontracting opportunities.

One of the primary challenges of effectively utilizing Gulf restoration activities in creating new opportunities is dealing with the wide variety of often overlapping agencies and organizations. These include:

--Greater New Orleans, Inc./Chevron Coastal Vitality Project;
--Greater New Orleans, Inc. Sustainable Integrated Water Strategy;
--The Louisiana Office of Coastal Protection and Restoration;
--The Governor's Office of Coastal Activities/Coastal Protection and Restoration Authority;
--Louisiana Department of Natural Resources' Coastal Restoration and Management Project;
--The President's Gulf Coast Ecosystem Restoration Task Force
--The Coastal Planning, Protection, and Restoration Act
--Army Corps of Engineers Mississippi River Gulf Outlet Project (and opposing “must go” group)
--Non-Profit Foundations and NGOs, including Oxfam, The Ocean Conservatory, and others.

The latest attempt to organize and facilitate funding is the recently announced Gulf of Mexico Endowment, an effort by those affected by the BP oil spill to fairly distribute funding among affected states, while creating an endowment for research and centers of excellence. This fund would utilize the estimated $5 billion to $22 billion in current and future fines assessed under the clean water act. As in other funding scenarios, Louisiana's Gulf coast would collect at least a portion of the funding, and neighboring states would collect under multiple criteria, as shown in the following chart taken from a meeting of the Gulf Coast Equity and Inclusion campaign:
In developing a plan for involvement of the fisheries industry in coastal restoration, the strategy is two-fold: first, there are specific skills that combined with the inherent knowledge of the waterways, estuaries, and wetlands of the region, could be highly marketable to those in charge of restoration activities. Based on extensive discussions with coastal restoration authorities and previous experiences of area residents and small business owners who have contracted for work in the past, the following occupational and business areas seem most applicable:

1.) Jobs involving earthwork, including sediment relocation, involving working with heavy machinery, dredging operations, mapping and surveying—including possible use of vessels;

2.) Growing sea-grass in nurseries and/or existing low-lying land, involving horticulture and management skills…could be combined with planting (low-skill/low wage) as a package service;

3) Reef construction/reconstruction—new technologies that blend reef and oyster production .

4.) Research activities, utilizing vessels and knowledge of waterways, marshland, and the Gulf.

To take advantage of these potential opportunities, the following actions need to be addressed:

1.) Gather specific information on skills and/or business capacity needed for employment, contacting, and/or subcontracting from both restoration agencies and major contractors;
2.) Work together in assuring that the fisheries are represented in all coastal restoration/preservation efforts and have representatives report back on specific skills and/or certifications;

3.) Work with community colleges, vocational colleges, universities, foundations/funders, the school system, and the regional Workforce Investment Board to develop or utilize specific training programs for skills relating to coastal restoration and preservation activities; and

4.) Convene interested stakeholders and serve as a proponent of establishing one or more major centers of research on coastal restoration, major river delta protection, and/or wetlands preservation to create new technologies and innovations that may be exported worldwide.

As with the other two major initiatives outlined in this effort, the Coastal Restoration and Preservation Task Force has been formed, has met, and has developed a specific action agenda that is outlined in the second section of the report.

3. Experiential Tourism: Although tourism has always been a mainstay of the regional economy, traditionally it has been highly concentrated within the city limits of New Orleans. Eastern Orleans Parish, commonly known as Orleans East, Plaquemines, and St. Bernard Parishes has significant historical, natural, and cultural assets that could be capitalized on to create new employment opportunities for the fisheries industry. Historically, tourism has been associated with low-paying jobs that provided little room for advancement.

However, a new model for tourism-based economies has arisen, one that provides higher wages and business revenues than many traditional sectors. Experiential tourism encompasses a wide variety of tourism categories, and its true value lies in providing authentic, participatory experiences that educates, enriches, and entertains while respecting culture and the environment. Perhaps most importantly for the entrepreneurially-based fishing community, it provides niche business opportunities—from authentic arts and crafts to culinary offerings—that have proven to be highly profitable compared to traditional, less interactive tourism activities.

The growth of this sector over the past six years has been significant, particularly in light of the global economic downturn. Since 2004, nature-based (eco) tourism has increased at three times the rate of overall tourism, and that growth is projected to continue over the next two decades. Moreover, daily expenditures are higher and stays are longer, and visitors tend to have higher incomes, are more highly educated, and are older on average than other tourists. According to the Outdoor Industry Association, in Louisiana during 2002 the outdoor recreation economy (fishing, boating, hunting, cycling, trail, and wildlife viewing) contributes more than $4.7 billion annually to the state’s economy, supports 48,000 jobs, generates $225,000 in annual sales tax revenue, and produces $3.2 billion in retail sales and services. Wages for experiential tourism are significantly higher than the norm. In western North Carolina, successful arts and crafts based tourism efforts have yielded average incomes of $47,000/year. Perhaps the most compelling numbers are in employment. According to employment statistics, from 1997-2007, Self-Employment in Arts, Entertainment, and Recreation Self-Employment grew 6% faster than overall Self-Employment, and 6 times faster than overall employment.
Bottom Line: Experiential tourism grows business/investment/revenues/jobs, educates people on the importance of protecting, preserving, and celebrating culture and natural resources, and helps revive communities and help them celebrate their own assets. There are many assets and opportunities in experiential tourism in each of the three parishes covered in the report:

1. Plaquemines: For Plaquemines, an existing experiential tourism activity is already successful—recreational fishing in the 78 freshwater and saltwater lakes, with 109 charter fishing operations utilizing 10 marinas and boat launches generate spends of $600-$1,100 per day off-shore and $400-$700 per day on-shore by thousands of visitors every year. The BP spill essentially shut down the industry last summer, and the segment has not fully recovered. A concerted effort to combine recreational fishing with other experiential activities could help revive that activity and bring it closer to historical volumes. The Woodlands Trail and Park, encompassing 10,000 acres in Plaquemines and Orleans parishes, offers hiking, birding, and nature tour opportunities in abundance. Four historical forts (St. Phillip, Jackson, St. Leon, and La Boulaye) dating back to the early days of the United States, were built to protect New Orleans after the British invasion of 1812. A proposed Lower Mississippi Wetlands Discovery Center (http://www.plaqueminesparish.com/uploads/307_Web%20Coastal%20Center.pdf), celebrating both the Mississippi and the wetlands, could draw a significant number of eco-tourists (although estimates have yet to be revealed), and the two National Wildlife Refuges, Breton Sound and Delta, are a two-part paradise for bird and animal watchers.

2. St. Bernard: St. Bernard has a variety of tourism-related assets, including the Chalmette Battlefield and National Cemetery, site of the 1815 Battle of New Orleans and the final resting place for soldiers from the Civil War, Spanish-American War, World Wars I and II, and Vietnam. Part of the Jean Lafitte National Historical Park, the site is a treasure of history and patriotism. Just over the Orleans Parish line, but recognized as a part of the Chalmette market area, lies Jackson Barracks, one of the oldest continuously operating military installations in the United States, and chronicles conflicts with both nations and nature. The Los Islenos Heritage Cultural Center tells the story of early settlers sent by Spain from the Canary Islands, and celebrates...
their unique culture. The proposed Maumus Planetarium and Interactive Science Center plans to take visitors from the past to the future with educational, historical, and science-based activities. And the proposed Cultural Arts District of Old Arabi, envisioned in the St. Bernard Parish master plan, has already resulted in the rehabilitation of several historical residences in that area, and a new $2 million farmers/seafood market and visitor’s center is already a success. There are renewed efforts to restore and utilize the historical LeBeau plantation home as an interpretive and research center, and a much-discussed working waterfront project may become a reality. St. Bernard also has numerous birding and nature trails and is host to the annual Red Fish Rodeo—attracting fishermen and fans of the famous fish from around the nation.

3. Orleans: Although best known for New Orleans’ attractions such as the French Quarter and Audubon Zoo, eastern Orleans Parish has significant experiential tourism assets. Perhaps the most valuable is Bayou Savage, the largest “urban” wildlife refuge in the U.S., with 23,000 acres of fresh and brackish marsh. Coined the “Yellowstone of the Wetlands”, Bayou Savage is only 15 minutes from the French Quarter on Interstate 10, and is dedicated to conservation and restoration of fish, wildlife, and plant resources and habitat. In addition, the Audubon Nature Institute, which includes the world-famous zoo and aquarium, also runs an Insectarium and the Audubon Center for Research of Endangered Species (ACRES), all of which provide a rich variety of places for eco-tourists to visit. The Louisiana Nature Center, which is slated for an $8 million renovation, and the Woodland Trails and Park on the Westbank are also key assets. Fort Pike, built to protect New Orleans after the War of 1812, could become as significant as Fort Sumter. New Orleans City Park and Lake Ponchatrain all provide opportunities for integrated eco-tourism and experiential-tourism tours. Added to that are the 20 Cultural Districts in the parish, including Viet Village that celebrates the culture and heritage of the Vietnamese fishermen who migrated to south Louisiana, the St. Claude Cultural District Corridor, and proposed fishing pier utilizing the former Interstate 10 bridge, and a rich mixture of culture, food, and authentic experiences can be developed that can provide increased revenues for seafood and related industries.

Issues in expanding the experiential tourism industry involve four major areas:
1. Lack of awareness of business opportunities in experiential tourism;
2. Cost of insurance and mitigating liabilities inherent in experiential tourism;
3. Obtaining resources for needed infrastructure and marketing of assets; and
4. Building support assets, including safe harbor facilities and eco-tourism amenities including bike paths, bird viewing areas, hiking paths, signage, and kiosks.

Best practices point to other areas that have succeeded through focused, united efforts. These include Nelsonville, Ohio where Hocking College has developed programs in eco-tourism and adventure travel, natural resource management, historic interpretation, wildlife management, environmental restoration, culinary arts, hotel management, and crafts through absorbing the School of American Crafts. Students actually run businesses including a hotel, travel agency, historical village, and restaurant, and have first-hand experience through visiting other travel destinations featuring experiential tourism. To provide cultural diversity and enrich the learning experience, Hocking also provides national and international student internships that attract students from 26 states and 51 foreign nations. Efforts like Hocking’s combine education with authentic experiences designed to develop usable skills in the experiential tourism industry. The Greater New Orleans area cultural economy already generates significant employment. Actions of the Experiential Tourism Task Force can accomplish the dual objective of increasing
that employment, especially in areas outside the city, and increasing wages or revenues for employees and businesses, especially in the fisheries and related industries.

There are nine progressive steps involved in growing an experiential tourism-based sector:

1. Research a profile of cultural and nature-based travelers in the nation and region;
2. Conduct a community assessment of citizens to reflect their vision, desires, and assets;
3. Develop a system of prioritized projects that include tours, trails, and guidebooks to sites;
4. Develop extensive criteria for cultural/eco-trails to ensure they are of the highest quality;
5. Develop a priority list of infrastructure improvements needed to support experiential tourism;
6. Provide training to increase skills and capacity for entrepreneurship in experiential tourism;
7. Develop systems to encourage collaboration among key partners in developing the industry;
8. Target, publicize, and celebrate key successes; and
9. Provide facilitation, training, and mentoring to individuals, firms, and communities

The opportunities in developing experiential tourism, including historical, ecological, hands-on, natural, and cultural assets to draw and keep audiences are significant. Building an authentic brand for niche’ products and services, working together to make experiences more valuable, building on the relationship with, while differentiating yourselves from, New Orleans, and providing high-value, unique regionally-based experiences and products to guests can result in
significant employment and business opportunities. Establishing a strong, united organization to represent the interests of stakeholders & provide for collaboration are the secrets for success.

VI. Summary and Acknowledgements

This report provides a framework for recovery of the fisheries and related industries in Orleans, Plaquemines, and St. Bernard parishes through development of contingency workforce initiatives. From the beginning of this engagement, the consulting team has emphasized that merely developing an analysis and agenda for action will accomplish nothing. The commitment of stakeholders, citizens, elected and appointed public sector officials, non-profit support organizations, and private businesses to work diligently in a spirit of cooperation can realize significant results for this bedrock industry, and the parishes in which it resides.

The DADCO team has attempted to develop usable, attainable, and results-oriented actions, based on a foundation of solid research, to help guide those committed leaders and stakeholders toward success. DADCO and SBEDF have both committed to remain involved under an implementation agreement in breaking action items into manageable tasks, and in helping the three task forces to successfully implement them.

An old proverb from Africa states “If there is no enemy within, the enemy outside can do us no harm”. The willingness of a diverse group of concerned community and business leaders, elected officials, and representatives of support institutions to come together, lay minor differences aside, and work together to improve, diversify, and utilize physical and human assets for a better economic future, gives great hope that these initiatives will succeed. Through unimaginable hardship, these same people have survived. Now is the time for them to prosper.

DADCO wishes to acknowledge the St. Bernard Economic Development Foundation board of directors, and particularly Executive Director Rebecca Martin, who has been invaluable as both a client and an integral part of the consulting team, the leadership team who was invaluable for advice and unwavering support, and the members of the three initiative task forces, who have already committed themselves to a difficult but rewarding mission. That mission has the potential to change the fortunes of a place and a people whose time for success has come.