

Community Economic Development in Rural Coastal Acadiana Parishes

*An In-Depth Review of the Vermilion, St. Mary, and Iberia
Parish Seafood Supply Chains*



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Seafood is foundational to the culture and economy of Louisiana, it flavors Louisiana cuisine, informs Louisiana's regional identity, and drives economic development in rural coastal parishes.

Executive Summary

Seafood is foundational to the culture and economy of Louisiana. It flavors Louisiana cuisine, informs Louisiana's regional identity, and drives economic development in rural coastal parishes. With funding from the U.S. Department of Agriculture (USDA) Louisiana Rural Economic Development Office, the University of Louisiana at Lafayette Business School, Louisiana Sea Grant, and the Meridian Institute partnered to examine how Louisiana can bolster its seafood industry to create jobs, food, and opportunities for new business development.

By mapping the seafood supply chain through economic data analysis and interviews with seafood industry leaders and government officials, the research team identified ways public and private investment can catalyze seafood business development in Louisiana. This report summarizes the research findings from an evaluation of the seafood supply chain in Coastal Acadiana. It features a methodological overview of the research; a description of key findings and recommendations on cold storage; transportation; labor and succession; entrepreneurship; marketing and branding; and aligning the industry with economic development in the state. The report also describes future research. Included is an appendix listing economic development programs that can support seafood business development in Louisiana.

Building from the findings in this report, the project team will conduct additional regional assessments in central and eastern Louisiana. Ultimately, the project team will produce a suggested statewide strategy with recommendations for developing rural seafood business. This will provide the foundation needed to implement scalable projects that achieve meaningful and resilient economic development.

Opportunities for Sustainable Growth

The value of the seafood industry in Coastal Acadiana is diverse and varied. It is an integral component of the culture and fabric of rural communities. Equally important, it contributes to livelihoods; seafood product preparation and packaging and commercial fishing contribute \$416 million annually to the regional economy. Discussions with industry, state, and parish leaders, however, reveal that opportunities for economic growth and business development are significant. These conversations helped us identify strategic supply chain interventions with the potential to strengthen the region's economy and communities, described here along with a sampling of recommendations. Consistent themes emerged calling for enhanced coordination among business and government actors, effective communication about the value of Louisiana seafood, and impactful collaboration across the supply chain.



Sustainable oyster aquaculture is growing across the Gulf

Resilience

Many Coastal Acadiana seafood businesses face threats from flooding, high winds, and severe storms. Moreover, due to their frequent location in flood plains, in coastal zones, or on the ocean, many seafood businesses are unable to find affordable flood insurance, and instead continue to operate uninsured. As such, large and small seafood businesses in the region are only one major flood or storm event away from permanently going out of business. To strengthen this critical economic sector's resilience, there is a marked need for economic development efforts to take these disruptions into account. We recommend:

- Increasing the accessibility of insurance,
- Assistance with risk and disruption planning
- Mitigating supply chain impacts through strategic planning, and
- Locating businesses in flood safe zones when possible

Aligning the Industry with Economic Development Initiatives

Evaluating the seafood supply chain through an economic development lens reveals misalignment between the region's industry and economic development activities at the local, state, and federal levels. To fully realize its potential, the seafood industry needs to become more integrated into programs and initiatives designed to bolster economic development and job growth. There are three main ways that this could be advanced:

- Establishing a central coordinating entity for the seafood industry to interact with, instead of the many touch points across a plethora of agencies
- Including the industry in economic development strategy development and prioritization for investment, and
- Establishing a unified voice for the industry that can represent seafood interests consistently in legislative and economic development efforts. This could include efforts to quantify and establish seafood as a major economic driver and essential part of culture and communities.



The project team met with local business owners to understand how to bolster economic development in Coastal Acadiana.

Cold storage

Cold storage is not widely available in Coastal Acadiana. For most businesses, this shortage is not a business-threatening supply challenge but becomes problematic at certain times of the year. Due to the seasonal nature of the seafood industry, clients do not need storage space year-round. However, fishermen must secure cold storage seasonally by paying for an entire year's worth of space. Ice to keep products fresh is also limited. If ice and cold storage warehouse availability can be resolved, numerous business opportunities for Coastal Acadiana can be developed, including supplying restaurants directly with local product that is frozen for stability, producing new products based on the ability to store and sell them on an as-needed basis, and accessing new fresh and frozen markets. We recommend:

- Identifying operator(s) that can provide consistent and efficient cold storage to augment the operations of upstream producers/processors and downstream transportation providers and customers, and
- Establishing a cold storage cooperative model whereby the operator and users of the facility are all investors and work together to ensure success.

Transportation

The transportation of seafood is a gateway competency that connects producers/processors to markets. In Coastal Acadiana, producers and processors are located in rural areas, creating geographic discrepancies that have prohibited the distribution of fresh product outside of the immediate area. Though transportation poses some problems, it was not identified as the largest barrier for the growth of businesses. However, this may be because Acadiana producers do not currently produce enough supply to create new opportunities for transportation on their own. Improved transportation and logistics options can expose Coastal Acadiana seafood producers to new markets. We offer two main recommendations to improve transportation to grow the seafood industry — one short-term and the other long-term:

- Short-term: It could be highly advantageous for subsets of small- to medium-size producers in Louisiana to organize a joint ground freight pick-up location where they could transfer product to third-party logistic providers like Refrigerated Express. Such coordination would make pickup economically viable for these providers and, in doing so, provide the producers with access to new markets. This location could be a processing house, retail store, or location with safe, available refrigerated space.
- Long term: There is an opportunity to develop partnerships that link producers with third-party logistic providers, like Southwest Airlines and Refrigerated Express, by engaging them in educational sessions for producers/processors and in evaluating regional strategic plans for the coastal seafood industry. In turn, partners are more likely to become engaged in identifying market opportunities that are aligned with the seafood transportation capabilities in the coastal region.

Workforce Development

Labor — captains, deck hands, truck drivers, and seafood processors — is a key supply challenge for the seafood industry in coastal Louisiana. The seafood industry struggles to adequately staff operations, and many business owners see labor as the most critical bottleneck preventing the growth of their businesses. The current shortage of labor derives from an absence of interested local laborers and continuing challenges with obtaining H2B visas. Unfortunately, the labor challenges do not stop with today's business needs but extend into the future. Succession planning is especially difficult, as many seafood businesses face uncertain futures; if a business' future is suspect, it is unclear how current assets can be sold or transferred to a new generation. Moreover, succession planning challenges and current labor challenges reinforce each other. If this cycle can be broken through targeted workforce development programs, the industry may be able to initiate a positive cycle of job creation and predictable succession planning. Potential opportunities include:

- Developing a local workforce development program for shrimping deckhands that would train and attract younger workers,
- Reinstating a targeted H2B visa program that attracts Vietnamese workers to the Vietnamese shrimping fleet, and
- Developing community college educational curricula for captains that focus on skill development for fishing and business management.

Fostering Innovation

While bolstering seafood economic development requires supporting the current industry, it also requires supporting innovative entrepreneurs who capitalize on existing market opportunities and create new ones. With its entrepreneurial culture, Acadiana is already home to several seafood innovators. We identified three successful archetypes of entrepreneurship in the seafood industry that we recommend be replicated by other businesses, as appropriate:

- Vertical integration,
- Business start-ups to meet an existing market need, and
- Creation of new products and services to build new markets.



A local Gulf blue crab producer presents his product

Marketing and Branding

Many seafood companies in Coastal Acadiana would like to leverage marketing and branding to scale up from serving local customers to creating channels into markets outside of the region. Producers and processors who are seeking to sell products to consumer and retail markets recognize that fresh, high quality, branded products can command higher prices in the market. We recommend:

- Building a brand for locally produced and processed products that leverages the unique people and culture of Coastal Acadiana to effectively position the region's seafood in the minds of chefs and consumers throughout the United States (U.S.). The region must educate producers and processors on how to leverage this brand to add value to their operations by identifying and leveraging new market opportunities and differentiating their products.
- Improving the industry's online presence and e-commerce capabilities to expand operations and reinforce its position as an innovative leader in the Gulf seafood market. The establishment of search engine-optimized web-based practices can position the region in new external markets, assist in accumulating the requisite volume of supply needed to attract shipping services, and help businesses create new revenue channels.
- Developing a marketing cooperative around seafood produced, processed, and packaged in Coastal Acadiana to assemble and market commodities and expand reach into larger markets. The co-op may also provide a location to assimilate the necessary supply of seafood products at a central distribution/transportation point.

Access to Capital

In addition to identifying specific interventions that will help to grow the industry, entities along the seafood supply chain and state and parish leaders need access to capital to put programs in place. To facilitate access to capital, there is a need to compile information about funding sources, including grant and loan programs, tax incentives, opportunity zones, and programs available through traditional lending institutions. Appendix A outlines a number of programs that may be useful to incentivize development and enact recommendations. In addition, we found that some fishermen struggle to secure funds from traditional lending institutions, which require a two- to three-year banking history. A potential solution would be a five-year transition program to secure blended financing from bank loans and the Small Business Administration, helping businesses build a banking history that facilitates future lending opportunities.

Next Steps

This report marks the completion of the first phase of our work. We are committed to sharing these insights with communities to help them implement recommendations. At the same time, we will continue this work in other coastal parishes with the intention of producing a set of recommendations for the seafood supply chain across the entire state.

I. Introduction

THE LOUISIANA SEAFOOD INDUSTRY: *A KEY TO RURAL ECONOMIC RESILIENCE*

As far back as the early 1900s, advertisements for Louisiana shrimp could be found in Oklahoma and San Francisco newspapers, touting the abundant harvest of Louisiana's fisheries. Seafood is foundational to the culture and economy of Louisiana: it flavors Louisiana cuisine, informs Louisiana's regional identity, and drives economic development in rural coastal parishes. Indeed, the seafood industry in Louisiana today has an economic impact of over \$2.4 billion annually and accounts for one out of every 70 jobs in Louisiana. Considering the importance of Louisiana's seafood industry, it is a prime target for state economic development policies and programs. This is especially the case in recent years, as coastal parishes have been battered by environmental disasters and suffered economic losses due to downturns in the offshore oil and gas industry. Compounding these conditions, an influx of inexpensive, shrimp imports has flooded domestic markets, driving down the price of shrimp and squeezing profit margins for Louisiana fishermen.

Despite these economic challenges, communities like Delcambre, Louisiana, have chosen to invest in their fishing economies by developing new boat launches and dockside seafood and farmers markets. It is these types of initiatives that have brought people to the waterfronts and created development and/or re-development opportunities. Communities like those surrounding the port of Delcambre demonstrate the resilient spirit and economic development potential that the seafood industry holds. Moreover, regions around the country have demonstrated the benefits of seafood business expansion, value-added products, and infrastructure development.

There are considerable opportunities for Louisiana's seafood industry to improve its capabilities and pursue growth opportunities in the marketplace. This report provides a comprehensive understanding of the full supply chain, opportunities for business growth, and the barriers and challenges to seafood business development.

To ascertain the extent to which interventions within the seafood industry could bolster rural economic development, this project researched the Louisiana seafood supply chain and interviewed owners of small and large companies; local, state, and federal government officials; and others critical to the seafood supply chain to learn about needs within the industry, constraints to growth, and opportunities for expansion. This work also considered economic development through the lens of coastal resilience to ensure that future investments continue to generate impactful returns for rural communities.

This report summarizes the findings from the stakeholder interviews and supply chain research. It demonstrates the pivotal role that seafood businesses play in rural economic development and offers recommendations for bolstering the industry in the future. Above all, this report serves to communicate that future economic development initiatives in coastal Louisiana must identify innovative methods to provide gainful employment opportunities in the seafood industry, re-establish communities along waterfronts, and reinforce the cultural heritage of Louisiana's working coastline.

OUR FOCUS: COASTAL ACADIANA

The Coastal Acadiana parishes of St. Mary, Iberia, and Vermilion are all experiencing major economic challenges. Since 1997, these three parishes have experienced poverty rates higher than both the U.S. and Louisiana averages. However, the access these rural communities have to the Gulf of Mexico, their historic seafood culture and capacity, and the infrastructure in these areas can be leveraged to yield new jobs and economic development if creativity and resources are applied in the right way.

Economic development in St. Mary, Iberia, and Vermilion Parishes may be spurred by addressing business continuity issues such as succession planning and resiliency planning, and by developing opportunities for value-added products. In Vermilion and Iberia Parishes, value-added products like Vermilion Sweet Shrimp and Vermilion Black Drum are indicative of the types of products that can emerge. However, the success of these products is yet to be realized and there is currently a strategic need for economic development to assist with marketing and supply chain issues.

Coastal Acadiana communities also face challenges from increasing storm frequency and intensity, coastal erosion, and flooding. Increasing resilience to these events will be crucial to the long-term viability of the livelihoods and businesses in these coastal communities. By expanding new business opportunities, and building in resilience measures at the outset, communities can be positioned to plan for and more readily recover from disasters in the future.



Increasing the resilience of Coastal Acadiana to increasing storm frequency, coastal erosion, and flooding will be crucial to the long-term viability of livelihoods and businesses.

II. Research Approach

Rural Coastal Acadiana is experiencing population declines, high unemployment rates, and major challenges from storms and land loss. This study sought to explore how best to position the seafood supply chain for future success by inventorying Coastal Acadiana's seafood supply chain assets, identifying areas of strategic growth, and aligning community/industry needs with opportunities for support. The project consisted of four key elements (shown in Figure 1):

1. Evaluating the seafood supply chain,
2. Engaging with small and large-scale operators across the seafood industry,
3. Coordinating with state and parish leaders to identify recommendations to bolster resilient economic development, and
4. Developing strategies for seafood economic development in the region.

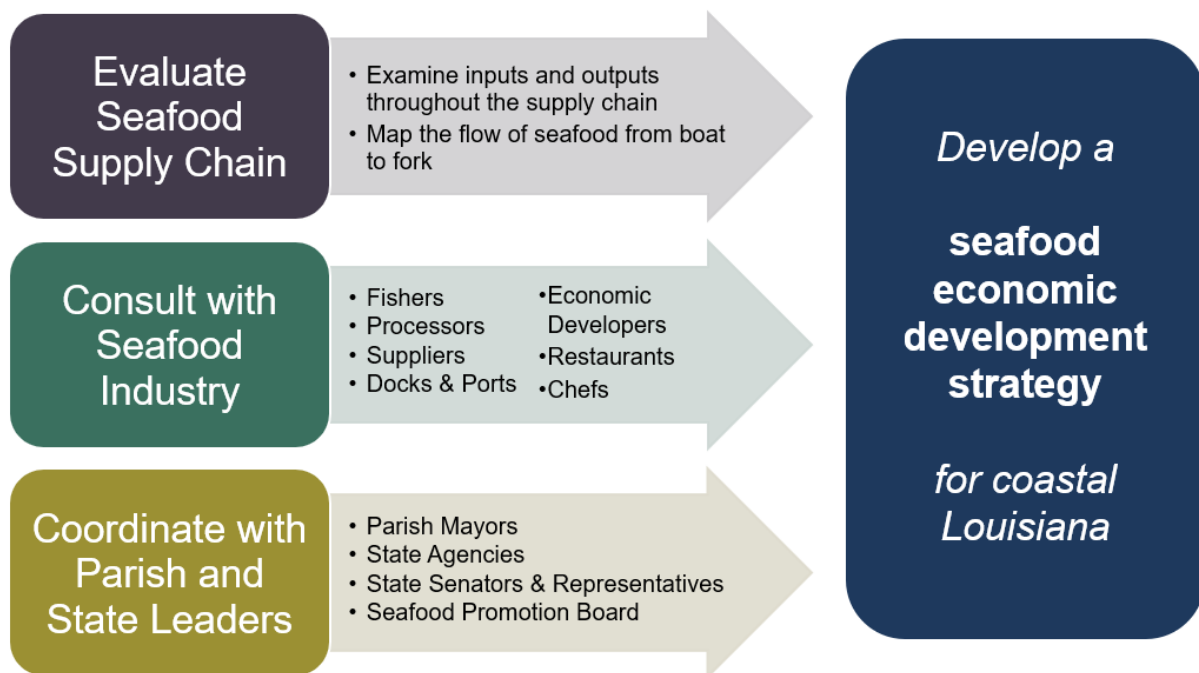


Figure 1 - Project Elements

EVALUATING THE SEAFOOD SUPPLY CHAIN

To evaluate the seafood supply chain, secondary data and meetings with economic developers were leveraged to create a snapshot of the Vermilion, Iberia, and St. Mary Parishes. As such, the research team used IMPLAN, a leading provider of economic impact data and analytical software, as its primary source for industry data and augmented it with commercial fisheries data from the National Oceanic and Atmospheric Administration. Building upon the information from these sources on the output of the industry, the research team drew upon field visits, expert testimony, and the project team's long-term experience working in the region to create an inventory of the businesses which comprise the seafood supply chain in Coastal Acadiana. We held discussions on the seafood landscape with:

- Economic Developers, including Anne Falgout (Vermilion Economic Development Alliance), Mike Tarantino (Iberia Industrial Foundation), Frank Fink (St. Mary Parish), Monique Boulet (Acadiana Planning Commission), and Rebecca Shirley (One Acadiana)
- Lt. Governor Billy Nungesser
- Secretary Don Pierson and Deputy Secretary Brad Lambert - Louisiana Economic Development
- Louisiana Senator Bret Allain
- Louisiana Sea Grant
- Wendell Verret, Port of Delcambre and Delcambre Direct Seafood
- Jim Gossen, Gulf Seafood Foundation and former owner of Louisiana Fine Food Companies
- Frank Randol, Gulf Seafood Foundation
- Refrigerated Express – Transportation Company
- Southwest Airlines – Transportation Company
- Mike Michot, The Picard Group
- Leonard Franques, Restaurateur and Investor

The focus of these efforts was to identify the roles of businesses currently involved in the seafood supply chain and subsequently identify regional areas of strength and weakness. Through these efforts, we were able to evaluate the working capacities of sectors and identify areas where the industry may need assistance.

ENGAGING THE INDUSTRY

Successful business development depends on working cooperatively with local communities to identify and address their needs, interests, and challenges. Before seafood-related initiatives can become a success, interested communities may need help addressing challenges like building acceptance of new economic development opportunities, repurposing existing or developing new infrastructure, building resilience into new businesses and infrastructure planning, and workforce development.

To understand how barriers to seafood industry development can be addressed, we engaged leaders and vendors from across the seafood supply chain to understand their needs, concerns, and insights on future opportunities. This was done through a series of site visits where the project team interviewed seafood business leaders about their operations and the industry. In each visit, the project team discussed challenges and opportunities facing the business, such as workforce development and retention, logistics, suppliers, product demand, profit margins, supply chain connectivity, and the impact of existing economic development measures. The project team conducted site visits at the following locations:

- Granger Seafood, September 2018
- Gulf Crown Seafood Co., September 2018
- St. Mary Seafood & Marina, September 2018
- Gulf Seafood Foundation, September 2018
- Louisiana Blue Crab, November 2018
- Gulf South Shrimp Dock, November 2018
- Port of Delcambre – Port Director Wendel Verret, November 2018
- Touchard’s Marine and Supply, November 2018 and February 2019
- Omega Protein, February 2019
- Big D’s Seafood Inc., February 2019
- Louisiana Bait, February 2019
- Bayou Shrimp, February 2019
- Louisiana Sea Grant – Mark Shirley and Thu Bui, April 2019



Granger Seafood

We worked to understand both strategic threats to industry continuity, like business and fishing vessel succession planning, and opportunities for developing and expanding value-added products like processed seafood (e.g., Vermilion Sweet Shrimp, Vermilion Black Drum) and by-products from processing waste and bycatch. Each of these opportunities has unique requirements that may or may not be best-suited to address a community’s needs.

COORDINATING WITH PARISH AND STATE LEADERS

In addition to hearing from the seafood industry directly, we also engaged leaders at the parish and state level. Coordinating with these leaders was necessary to ensure that business opportunities identified in this report are aligned with support from key community leaders and are synergistic with current economic development plans. We convened a series of meetings with key leaders including:

- Economic Developers, including Anne Falgout (Vermilion Economic Development Alliance), Mike Tarantino (Iberia Industrial Foundation), Monique Boulet (Acadiana Planning Commission), and Rebecca Shirley (One Acadiana), November 2018

- Frank Fink, Economic Developer for St. Mary's Parish, February 2019
- Senator Bret Allain, February 2019
- Louisiana Lt. Governor Billy Nungesser, April 2019
- Robert Twilley, Louisiana Sea Grant, April 2019
- Chalin Delaune, Louisiana Seafood Marketing Board, April 2019
- Don Pierson, Secretary Louisiana Economic Development, April 2019
- Brad Lambert, Deputy Secretary Louisiana Economic Development, April 2019

These conversations allowed us to assess current efforts, barriers, and opportunities in state programming and support for the seafood industry. During each meeting, the project team facilitated in-depth conversations about gaps in existing programs and policies and how existing programs and policies could be leveraged to bolster the seafood industry in the future.

Ultimately, the most successful business development plans integrate expert and local knowledge. We sought to do this by actively and purposefully engaging communities in identifying barriers and needs to best position them for success. Co-developed, collaborative products are more likely to be successful and sustained over time because community buy-in is achieved up front with genuine partnership and collaboration. This work fills the urgent need to critically assess and understand the strengths and limitations within the seafood supply chain and to strategically identify and develop economic strategies that align with local economic development initiatives and serve as catalysts of growth within the coastal parishes.



Research group in field with Coastal Acadiana seafood stakeholders.

III. Overview of the Acadiana Seafood Industry

Evaluating the significance of the Acadiana seafood industry solely by its economic contributions does not fully account for the role the industry plays in the region and state. As such, the industry is often on the outside looking in when local, regional and state economic developers set priorities for workforce, infrastructure, and economic development investments. There are currently overlooked opportunities for this industry to improve its capabilities and pursue growth opportunities in the marketplace.

The following section will detail the current economic value of the industry and the existing seafood supply chain

ECONOMIC VALUE OF THE INDUSTRY

To evaluate employment, we used IMPLAN to evaluate the contributions of industry sectors. Our analysis showed that the seafood industry, while not the top industry in the region, directly employs 2,653 people and makes a significant contribution to the local economy. As shown in Table 1, the seafood product preparation and packaging sector and the commercial fishing sector annually contribute approximately \$416 million to the regional economy.



Shrimp being unloaded at dock

Table 1 – Industrial Sectors Contributions to the Coastal Acadiana Economy

Regional Industry Ranking	Sector	Description	Employment	Income (\$)	Output (\$)
1	441	Owner-occupied dwellings	-	-	695,805,603
2	75	Sugar cane mills and refining	625	43,154,628	579,115,601
3	38	Support activities for oil and gas operations	3,744	380,381,989	573,202,515
4	526	Other local government enterprises	2,185	111,544,762	566,803,467
5	266	Oil and gas field machinery and equipment manufacturing	1,245	101,277,568	554,705,383
6	445	Machinery and equipment rental and leasing	1,623	118,426,744	514,830,078
7	395	Wholesale trade	2,424	144,604,126	503,632,996
8	164	Other basic inorganic chemical manufacturing	548	64,421,197	501,847,595
9	161	Petrochemical manufacturing	90	12,549,677	495,125,916
10	410	Water transportation	549	37,203,692	359,094,269
17	93	Seafood product preparation and packaging	660	35,217,691	244,115,143
22	17	Commercial fishing	1,907	14,835,908	171,966,309
24	411	Truck transportation	1,026	31,927,361	138,221,786
58	66	Other animal food manufacturing	54	1,757,028	64,960,365
204	18	Commercial hunting and trapping	32	1,234,983	3,152,946

INDUSTRY SUPPLY CHAIN

As shown in Figure 2, a conceptual model was developed to visualize the three dimensions of the seafood supply chain. These dimensions include (1) operational realities, (2) primary functions, and (3) support functions. A description of each section is provided below.



Figure 2 - Model of the Coastal Acadiana Seafood Supply Chain

OPERATIONAL REALITIES

In southern Louisiana, it is impossible to separate the seafood supply chain from the rich culture of Acadiana, the ecological environment in which it exists, and the natural hazards and economic disruptions that regularly occur. Thus, we must evaluate businesses within their operating context. Relevant “operational realities” include the industrial effects of seasonality, the natural effects of flooding and freshwater intrusion, and the cultural effects associated with maintaining and building resilient coastal communities.

Environmental Resilience

Seasonality

Several seafood companies are inhibited by low cash flow during the off-seasons of the species on which their products depend. There may be opportunities to facilitate partnerships between companies or support businesses’ creation of new products to help address these seasonal challenges. Due to the lack of cash flow during off-seasons, many small producers become dependent upon certain processors or docks because they provide items like ice and fuel on credit in anticipation of a vessel unloading at their facility.

For example, significant challenges at LA Bait stem from the seasonality of their operation. While they sell bait from November to July, they catch fish from August to October. Thus, they hold inventory in cold storage until the market is ready to purchase. Cold storage is limited locally, and LA Bait is forced to pay more for transportation to a facility outside of the region. Seasonality creates tremendous stress on management and business cash flow.

Another example of a seasonality challenge is the cash flow bottleneck faced by shrimp processors like Bayou Shrimp. Because they depend on seasonally available shrimp harvests, they are highly active from May to December, but significantly less active from January to April. However, during the spring time frame, they must still cover fixed costs and prepare for peak season.

Freshwater Intrusion and Nutrient Loading

Environmental degradation in Coastal Acadiana and Louisiana, including coastal wetland loss, salinity changes, and an expanding dead zone, are environmental realities that impact the region’s seafood industry. Louisiana is experiencing an extremely high rate of coastal wetland loss; more than 1,800 square miles of wetlands were lost between 1932 and 2010 due to subsidence, storm damage, sea level rise and saltwater intrusion. These threatened coastal areas are productive estuary ecosystems, providing habitat, resources, and spawning grounds to important coastal fisheries. The Coastal Protection and Restoration Authority is tasked with developing an iterative Coastal Master Plan to address this monumental challenge, but coastal restoration projects are expensive and long-term funding to implement these projects has proven difficult to generate.

In addition to coastal wetland loss, fishermen are also concerned with how increased freshwater flows from the Mississippi River, proposed river diversions, and coastal erosion may change water salinity and negatively impact their target fisheries, which are often extremely sensitive to salinity gradients.

Nutrient-rich waters from the Mississippi and Atchafalaya rivers drain into Louisiana’s central coastal bay system, which includes Vermilion, West Cote Blanche, East Cote Blanche and Atchafalaya bays. Additionally, the Wax Lake outlet allows Atchafalaya river water to flow directly into West Cote Blanche and Atchafalaya bays, often changing conditions from brackish estuary to a totally fresh environment for months at a time. Recently, intense seasonal flooding in the Midwest has sent increased freshwater flows down the Mississippi River, threatening to alter the salinity of traditional fishing grounds even more significantly. This extreme seasonal flooding appears to be occurring more frequently, leading fishermen to question how their operating conditions can be protected from this environmental threat.

Several in the industry indicated that freshwater intrusion and associated nutrient loading is negatively affecting the shrimp and crab industries. To minimize these negative impacts, stakeholders suggest that waters from the Wax Lake outlet be allowed to discharge further offshore into the Gulf of Mexico. Additionally, these stakeholders support the construction of artificial reefs to replace disappearing natural reefs as a strategy to guide fresh water out of the bays.

Higher flood volumes from the Midwest also send increased agricultural fertilizer run-off into the Mississippi River and Gulf of Mexico, contributing to algae blooms and subsequent low-oxygen conditions inhospitable to aquatic life. The resultant hypoxic zone, known as the “dead zone”, constrains habitat availability for commercial fish species and reduces fishery productivity. Unfortunately, Louisiana does not have jurisdiction to mitigate this nutrient loading, which would require federal policies to incentivize farming practices such as planting cover crops or split nitrogen application.



The Bonnet Carré Spillway opens to release floodwater.

Cultural Resilience

Strengthening community resilience is inherently tied to the ability of communities to reinforce and preserve their culture. While the economic contributions of the Acadiana seafood industry may not be the largest in the region, the industry supports livelihoods. Equally important, it preserves traditions and norms that are central to the region’s culture and identity and promotes the social cohesion that underlies community resilience. These intangibles make preservation of the industry a priority for the region and state.

Industrial Resilience

The seafood industry has worked hard to influence policies at the state and federal levels that can improve the regulations and parameters under which they operate. These types of industrial shifts influence how businesses operate and may even create new opportunities for businesses to compete. For example, stakeholders described the recurring challenge of creating a level playing field for domestic and imported seafood products. The industry appears to be unified in its concern about the dumping of low-priced imports into the U.S. market and the ease with which imports can avoid safety inspections upon entering the country. Industry professionals and associations have long fought for imported seafood to be inspected under the same guidelines and with the same scrutiny as domestic seafood products.

In July of 2019, Gov. John Bel Edwards took a step towards addressing this challenge by signing HB 335, a state law requiring food service establishments serving imported crawfish or shrimp to inform patrons that the seafood is of foreign origin. “This legislation protects Louisiana’s hardworking fishermen who help drive the state’s economy and preserve an important part of our cultural heritage,” said Gov. Edwards. “Crawfish and shrimp are foundations of Louisiana’s seafood industry and HB 335 is vital to ensuring the industry remains strong and competitive.”



Seafood leaders walk the hill in Washington, D.C.

PRIMARY FUNCTIONS

Primary functions are the essential operations in the seafood supply chain. As a starting point, the procurement of upstream products and services are needed to put a vessel on the water and to operate a fishing (production) business. As the supply chain process unfolds, the vessel operator guides the harvest (production) of seafood and then brings it into port (collection from first point of contact). Through the processing and preparation functions, value-added products are produced and distributed through various channels into the marketplace. Lastly, the value-added products are sold to consumers, retailers, restaurants, or large-scale buyers.

The Acadiana seafood supply chain has at least a minimum level of activity in each of these primary functional areas. This minimum level of activity supports production in shrimp, crab, finfish, oysters and crawfish. However, there are glaring needs to build distribution and logistics capacities.

Distribution and Logistics

While the demand for seafood grows, the reality is that Coastal Acadiana producers are not located adjacent to dense populations of consumers. Thus, producers and processors are dependent upon distribution networks to move fresh and frozen product. Logistics and distribution methods have greatly improved over the years and it is possible to move fresh product great distances while preserving its quality.

However, the Acadiana seafood supply chain is not currently utilizing state-of-the-art distribution and logistics practices. For example, fresh seafood distribution companies like Refrigerated Express, which can move fresh product, do not serve Acadiana because they cannot secure enough fresh seafood volume to warrant sending a truck.

SUPPORTING FUNCTIONS

Supporting functions and services facilitate the primary functions of the supply chain. They are focused on improving the efficiency and effectiveness of primary functions. Supporting functions that are not optimized constrain an industry's potential. Relieving these constraints requires strategic efforts aligned with growth opportunities to improve industry capabilities and add value to the market.

Key supply chain support functions cut across the six primary areas. Current examples of each include:

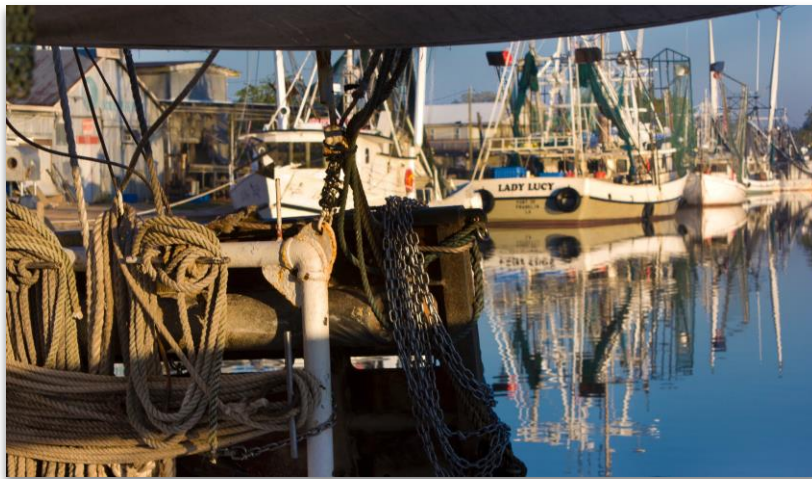
- **Economic Development Strategy and Programs**
Example: The Port of Delcambre and the Twin Parish Port Commission invested in infrastructure development to construct a new bulkhead, boat launch, marina, and dockside seafood market. While shrimp had been sold from boats for many years, Delcambre's new parking lot, pavilion and market created easier access for more customers and ultimately led to higher sales of fresh seafood.
- **Workforce Development**
Example: Workforce development and labor supply must be improved if the industry is going to maintain current production and/or grow to meet the needs of the market. Currently, "on the job training" appears to be the standard for training in the local industry.
- **Fostering Innovation**
Example: Consumers are demanding traceability. Therefore, the tracking of seafood is becoming part of the industry's everyday routine. Technological developments will enable fishermen to provide better, real-time transparency for a catch and should ultimately lead to higher value in the marketplace.
- **Marketing and Branding**
Example: Vermilion Bay Sweet brand of shrimp, black drum and wild caught catfish are sold directly to consumers through the Delcambre Direct and Louisiana Direct Seafood Programs, and indirectly through retailers and restaurants in the region.
- **Supply Chain Coordination**
Example: An efficient process has been established to move fresh blue crab product from the boat, through processing, and onto a refrigerated truck without being frozen.
- **Financial Services**
Example: Local banks, the Small Business Administration, and U.S. Department of Agriculture provide loans.

IV. Economic Development Strategies

The seafood supply chain in Coastal Acadiana is not operating at full capacity and is not effectively leveraging the natural and cultural assets unique to the region. These parishes contain the requisite primary and support supply chain functions needed to operate and maintain the industry, as shown in Figure 2. However, our analysis identified the following six supply chain priorities that can be addressed through future economic development:

- Resilience
- Aligning the Industry with Economic Development Initiatives
- Distribution and Logistics
- Workforce Development
- Fostering Innovation
- Marketing and Branding

These priorities are prevalent across industries, species, and parishes and reflect both strategic challenges that hinder the growth of the industry as well as areas of opportunity for future business development. In the following sections, recommendations for each supply chain priority and potential projects that could create opportunity are provided. These projects are investable and actionable concepts that have the potential to catalyze the region's economic development.



Port of Delcambre

RESILIENCE

Resilience — a community’s ability to plan for, respond to, and bounce back from disruptive natural or economic events — typically is proportional to a community’s cultural, economic and environmental conditions. Coastal Acadiana businesses face threats from flooding, high winds, and severe storms, including hurricanes. Industry operations typically are located in flood plains, coastal zones or on the ocean. As a result, many seafood businesses are unable to find affordable flood insurance and must operate without insurance, assuming significant business risks.

A single flood or storm could put many businesses permanently out of business. Consequently, weather threatens not only individual businesses but the entire Acadiana seafood supply chain. State and parish programs that assist businesses and communities plan for and respond to environmental hazards can have a significant impact on the local economy and community stability.



Oyster boat damaged by Hurricane Isaac

POTENTIAL PROJECTS AND PROGRAMS

Strategies to enhance the resilience of Acadiana’s seafood industry fall into three categories: increasing accessibility of insurance, mitigating supply chain impacts through strategic planning, and reducing business’ flood risk.

Increasing Accessibility of Insurance

There are several potential interventions that can increase the availability of affordable flood insurance for the seafood industry, including:

- **Policy change** – Innovative policy structures and options could increase the affordability and accessibility of insurance.
- **Accessing new insurance** – Seafood businesses could operate secondary businesses to become eligible for new types of insurance. For example, a fisherman could deploy assets in ecotourism in the offseason and become eligible for tourism insurance, which could be used in the event of a flood or storm.

Mitigating Supply Chain Impacts through Strategic Planning

Some ways that entities can plan strategically to minimize supply chain-wide impacts of flood and storm events include:

- **Shipping route planning** – Businesses can consider disaster impacts and emergency routes when designing transportation and shipping routes.
- **Construction** – When constructing new facilities, businesses can employ best practices such as recommended elevation heights to prevent flood damage.
- **Safe harbor** – The region could construct a safe harbor for docking during storm events to minimize fleet damage. One potential location is the Port of Delcambre.

Reducing Businesses' Flood Risk

While insurance and mitigation are essential, it is also important for businesses and facilities to consider the vulnerability of their assets' locations when constructing new facilities. For example, communities or groups building new cold storage facilities should attempt to locate in flood-safe regions. Additionally, infrastructure that cannot be relocated should be elevated on stilts or pilings to the height recommended to protect against flood damage. The same is true of new processing facilities and entrepreneurial centers. State or parish programs could be developed to help mitigate flood risk to critical industry infrastructure.

ALIGNING INDUSTRY WITH ECONOMIC DEVELOPMENT INITIATIVES

Evaluating the seafood supply chain through an economic development lens reveals misalignment between the industry and economic development activities at the local, state and federal levels. We evaluated economic development activities at the local (Vermilion, Iberia, and St. Mary Parishes), regional (Acadiana Planning Commission and One Acadiana), state (Louisiana Economic Development, Louisiana Seafood Promotion and Marketing Board), and federal (USDA, EDA, SBA) levels. The needs of the Coastal Acadiana seafood industry are of interest at every level. However, these needs are not represented in the economic development priority planning process.

To align the industry with economic development activities and programs, three main strategies need to be employed:

- **Establish a central, statewide, coordinating entity for the seafood industry to interact with, instead of the many touch points across a plethora of agencies.**
- **Include the seafood industry in economic development strategy and prioritization efforts.** *The industry should be prioritized due to its contributions to the Louisiana economy, its cultural identity along the coast, and its sustainability as a renewable resource.*
- **Establish a unified voice for the industry that can represent seafood interests consistently in legislative and economic development efforts.**

Need for a Central Coordination Entity

The seafood industry does not have a clear, single point of contact within Louisiana State Government. While agricultural businesses are aligned with the Department of Agriculture, and oil and gas companies are aligned with the Department of Natural Resources, the seafood industry must navigate a state-level web that, depending on need, may include:

- Department of Wildlife and Fisheries
- Louisiana Seafood Promotion and Marketing Board
- Department of Agriculture
- Louisiana Economic Development

While the industry recognizes and appreciates the efforts of each agency, the lack of a unified seafood strategy across agencies adds transaction costs, resulting in agency service gaps. With disparate agencies struggling to support the growth of Louisiana's seafood industry, industry professionals do not have a clear understanding of each agency's seafood-related activities and/or how these agencies can assist their operations. Streamlining seafood industry and state agencies interaction would help align state-level activities around industry priorities and would improve communications between stakeholders and decision makers.

Need to Include Seafood in Economic Development

While verbal support for the industry from elected officials and economic developers is unquestioned, the regional industry has not been fully integrated in economic development strategic plans. This study engaged economic developers at the local, regional, state, and national levels. Across all levels, officials recognized the importance of the industry and expressed a desire to provide assistance. However, officials also expressed concern that the industry is often frayed and not aligned around specific issues. This makes it difficult for elected officials and economic developers to identify and champion initiatives that will make significant impacts on the industry, region, and state.

Whether at the local, regional, or state level, economic development agencies create industry priorities and/or target industries that can drive the creation of jobs and economic growth. The seafood industry's contributions to Louisiana's economy, its preservation of cultural identities along the coast, and its sustainability as a renewable resource create cumulative value that should garner attention and prioritization at the local, regional, and state levels.

Need to Establish a Unified Voice for the Industry

Multiple government and economic development sources identified the lack of a unified industry voice as the reason why Louisiana's seafood industry has been left out of economic development initiatives. While the industry does have sector/species-specific representation on the Louisiana Seafood Promotion and Marketing Board, as well as State Task Forces in Crab,

Oysters, Crawfish and Shrimp, a lack of alignment between the industry and regional and state economic development priorities persists.

Recent initiatives like the passing of the LA Shrimp and Crawfish Labeling Bill (HB 335) and local participation in groups that lobby for legislation at the national level indicate that the regional stakeholders in this industry are motivated, engaged, and eager to participate in initiatives to grow the industry. However, most of these businesses are small, competitive, and limited in time resources. Placing the burden of unifying a single industry voice on local businesses would fail to recognize the full potential of creating a unifying organization with the capacity to affect change and ultimately communicate the seafood industry's value-added contributions to regional/state economies and culture.

POTENTIAL PROJECTS AND PROGRAMS

Through our research, we identified several strategies to better align the coastal seafood industry with economic development efforts at the local, regional, and state levels. These strategies fall into two categories: unifying the industry around specific needs and priorities and aligning the industry with local, regional, and state economic development initiatives.

Unifying the Seafood Industry Around Specific Economic Development Needs

As specifically noted in meetings with state elected officials, the seafood industry does not approach economic development at the state and regional levels with a unified voice. This is unsurprising considering that the industry does not have a clear path into the State's operations, such as those available to the agriculture and oil and gas industries. Additionally, state and local economic development has not historically prioritized the seafood industry as a growth or target sector. Thus, the Coastal Acadiana seafood industry must develop a means for communicating its needs and priorities to local, regional, and state economic developers.

As a starting point, this study identified the following areas around which to focus a unified voice:

- A. The seafood industry as an economic and cultural driver in Acadiana and Louisiana –**
While the contributions of the industry are made through the efforts of many small businesses, the cumulative impact and reach of the seafood industry is the state's best kept secret. Beyond its economic contributions, the seafood industry preserves a way of life and culture that is directly tied to the image and spirit of Louisiana. However, along with its coastal wetlands, the economic and cultural contributions of the Coastal Acadiana seafood industry are also deteriorating. Elected officials and economic developers need to position the seafood industry as a target industry and facilitate the establishment of a clear and unified industry voice that can be leveraged when fighting for support in Baton Rouge and on Capitol Hill.

B. Workforce Development – The industry is aging and clearly concerned about the lack of new talent entering the workforce. Without workforce development assistance, this gradual decline in employment is likely to continue. Addressing workforce needs will require creativity, persistence, and resources. Specific programs are detailed in the “*Labor and Succession*” section of this report.

C. Logistics and Transportation – While the industry’s logistics and transportation capabilities have evolved over the years, there is a need for continued improvement to meet the demands of today’s growing markets. The Coastal Acadiana seafood industry appears to be struggling to overcome the time and geographic discrepancies associated with selling fresh seafood. Producers and processors voiced concern over pricing and feel the price they receive is not reflective of their product’s quality. On the other hand, buyers across the country are looking for fresh, domestic product. The following recommendations would better connect supply and demand for Louisiana’s seafood products by improving the logistics and transportation capabilities of the industry.

- i. Identifying buyer markets that are seeking fresh product and that will pay a premium price for the product.
- ii. Improving the producers’ and processors’ methods for handling fresh product at the point of catch and point of processing
- iii. Improving the industry’s understanding of how transportation can enable them to move products in ways that help them command a premium price in the market.
- iv. Recruiting or growing a transportation business that will recognize Coastal Acadiana seafood as a potential growth partner in their business.

Alignment and Inclusion in Local, Regional and State Economic Development Initiatives

To capitalize on economic development programs and emerging market opportunities the industry needs to create a unified voice. Additionally, the industry would begin to create momentum in their efforts through consistent, strategic efforts that seek to grow the “overall pie” and to help further position Louisiana as a leader in the global seafood industry. The Coastal Acadiana seafood industry has access to the following economic development partners:

- Parish Economic Development
 - Vermilion
 - Iberia
 - St. Mary
- Regional Economic Development
 - One Acadiana
 - Acadiana Planning Commission

- State Economic Development
 - Department of Wildlife and Fisheries
 - Department of Agriculture
 - Louisiana Economic Development
 - Louisiana Seafood Promotion and Marketing Board
- Federal Economic Development
 - United States Department of Agriculture
 - National Oceanic and Atmospheric Administration
 - Economic Development Administration
 - U.S. Small Business Administration

In most cases, the inclusion of seafood in economic development strategies does not require calling for new programming or tooling, but rather the application of existing programs and tools to the seafood industry. For example, workforce development and logistics/transportation are issues that also challenge other industries in Louisiana. Because of this, economic development agencies already have a variety of programs and tools that can be adapted to fit the needs of the seafood industry. Some of the programs the seafood industry can be introduced to include the Louisiana Economic Development (LED) Job Connections website, Louisiana Community and Technical Colleges Workforce Solutions program, LED's Trade Adjustment Assistance Program, and LED's Rapid Response Program. These and other economic development programs will be discussed in subsequent topic sections and a detailed list is provided in Appendix A.

LOGISTICS

The greatest deficiency in the Coastal Acadiana seafood supply chain primary functions is in their logistics and transportation capabilities. The industry has evolved in an ad hoc fashion based on immediate needs and has historically distributed frozen products because of a lack of logistics and transportation options. The next two sections will address specific logistics and transportation needs in the region. Strategies to address each area are also presented.

Ice Availability

Over the past 10 years, the supply of ice in the region has been unreliable. Moreover, many remaining ice plants are in dire need of repairs and upgrades. However, because the fishing industries that purchase ice from ice plants are declining, some of the plants' key customer bases are shrinking, in turn hindering the ability of ice plants to remain profitable. With this uncertain financial outlook, it is challenging for ice plant owners to secure financing for renovations or construction.



Ice is a requirement for fresh seafood.

Without reasonably priced and readily available ice, docks and processors have begun to fill the void by setting up small-scale ice plants. The docks and processors often provide ice in advance, with fishers paying for the ice when they unload and sell their catch to the dock or processor. While the docks and processors provide much-needed ice, this transaction structure may foster a power imbalance and create a situation where a fisher is overly dependent on a specific processor.

Cold Storage

Cold storage is in high demand in Coastal Acadiana. For most businesses, the limited availability of cold storage is not a business-threatening supply challenge. However, it does become problematic at certain times of the year and it also poses a serious problem for business growth.

The seasonal nature of fishing presents a specific challenge when it comes to cold storage, because many seafood companies do not require a consistent amount of cold storage year-round. Instead, they require a high volume of cold storage at certain times of year, and small volumes of cold storage at other times of year. It can be exceedingly difficult for seafood companies to match their highly variable need for cold storage with an interested provider, as few cold storage providers are willing to “hold” space in the seafood off-season for free. Thus, they typically require clients to secure the space they need seasonally by paying for an entire year of space.

Notably, all the seafood businesses interviewed identified the shortage of cold storage as a key obstacle to their future growth. The lack of cold storage in the region is causing business to travel outside of the region for storage. For example, companies like LA Bait are transporting frozen product to a cold storage facility in Baton Rouge, more than an hour away. Addressing the obstacle that seasonality and cold storage co-create is a key to bolstering seafood business development.

Refrigerated Storage

There is an opportunity for Louisiana seafood producers to sell fresh, never frozen, seafood products to markets around the country. The fresh seafood market provides a price premium that does not exist in the frozen markets and represents a critical economic development opportunity for Coastal Acadiana. However, the fresh market requires short-term refrigerated storage and transportation capacity that is currently limited in the region.

Without large seafood producers in Acadiana, the market potential of fresh, locally sourced product is dependent upon a distribution channel that can accumulate inventory from multiple, smaller producers. Currently, small producers are not active in providing fresh product because refrigerated storage and accompanying distribution channels are lacking.

Unlocking Future Opportunities

If the ice availability and cold storage warehouse availability challenges can be resolved, there are numerous business opportunities for Coastal Acadiana.

- **Supplying restaurants** – Historically, restaurants have not purchased local seafood in part because local seafood providers could not guarantee predictability in supply. Increasing the availability of frozen seafood, which can be stored longer and therefore provide a more stable supply, could address this obstacle. This would require more cold storage warehouse capacity, located in strategic locations for efficient product distribution.
- **Producing new products** – Consistent availability of cold storage can pave the way for seafood companies to develop and distribute new products. For example, while value-added direct-marketing products have sold successfully on a small scale, for such products to sell regionally or nationally they must be available on an as-needed basis. Thus, the availability of cold storage access is critical.
- **Accessing new markets** – If products can be reliably stored fresh and frozen, Louisiana seafood companies can potentially access new markets throughout the U.S. and internationally. The distribution of fresh and frozen seafood poses several challenges that will be addressed in subsequent sections. With that said, the region cannot address distribution challenges until it creates capacity in frozen and refrigerated storage.



Ice and cold storage facilities must be reliable.

POTENTIAL PROJECTS AND PROGRAMS

Establish Cold/Refrigerated Storage Operation

A prerequisite for the establishment of cold storage in Coastal Acadiana is the identification of an operator and establishment of a sustainable operating plan. To be successful in the existing supply chain, cold storage must operate efficiently and support the operations of both upstream producers/processors and downstream transportation providers and customers. Managing this type of operation profitably requires having product on shelves throughout the year.

Regionally, local economic developers can assist a cold/refrigerated storage operator by identifying and connecting them with regional producers and processors in seafood and other perishable industries. In turn, the storage operator can build relationships with seafood companies that produce products seasonally and at different times of the year. This would allow for mutual benefit, such that the months of high cold/refrigerated storage need for one company are the months of low storage need for another. These relationships could be fostered between seafood companies or between seafood and non-seafood companies. Such partnerships could enable storage companies to overcome the need to require clients to “financially hold” storage capacity in the off-season. Funding for this initiative could be solicited from the USDA Office of Rural Development and the Community Facilities Direct Loan and Grant Program.

Cold Storage Cooperative

There are numerous federal and state programs that could support a cooperatively owned and operated cold storage facility. Through a co-operative model, the operator and users of the storage facility are all investors in its operations and subsequently work together to ensure its success. The USDA Office of Rural Development has a co-op program that may be a source of seed funding for this type of operation. Note that the long-term success of a co-op is tied to an effective operator and a sustainable business plan that extends beyond initial seed funding.

Strategically locating such a facility could strengthen its probability of success. For example, a proposed location within an economic development zone or in an opportunity zone could unlock new incentives and/or funding streams. In the case of Coastal Acadiana, a location with close access to major highways or airports would strengthen the potential impact of the facility. Stakeholders suggested that locating a cold storage facility in New Iberia, on route 90 near the airport, could be effective for Coastal Acadiana. Potential funding sources for this initiative include the USDA Office of Rural Development Cooperative Program and the Socially Disadvantaged Groups Grant.

Establishing an Ice Plant in the Port of Delcambre

A reliable ice plant is desperately needed in the shrimp port in Delcambre. The existing, aging facility is often broken down and unable to provide this critical resource. The absence of a reliable ice supply has forced shrimpers to use alternative product chilling systems such as mechanical refrigeration of sea water to hold their catch while fishing. Some of the refrigeration systems on boats are poorly designed and inadequate, causing additional product quality problems.

Establishing a consistent and reliable supply of ice in the Port of Delcambre is paramount. The existing, aging private sector plant needs to be upgraded or replaced. The Port of Delcambre has explored various options for the establishment of a reliable ice supply and should continue formulating a plan for this critical resource. Potential funding sources for this infrastructure investment include the State of Louisiana's Restoration Tax Abatement and the USDA Office of Rural Development Rural Economic Development Loan and Grant Program.

TRANSPORTATION

The transportation of seafood is a primary competence that connects producers and processors to markets. In Coastal Acadiana, producers and processors are located in rural areas, creating geographic discrepancies that have historically prohibited the distribution of fresh product outside the immediate area. Accordingly, the majority of shrimp and fish from Coastal Acadiana are sold out-of-area as frozen products. Shrimp processors have established networks that distribute frozen product in container load quantities throughout the U.S. However, local knowledge of distribution and logistics appears to be limited at the producer level.

The establishment of reliable transportation channels is dependent upon the handling of product at the first point of contact, the availability of supply in significant quantities, and the capabilities of a distribution company to reach markets in a timely manner. For some products, like blue crab, the transportation channel is sufficiently developed to allow for the production, processing, and distribution of fresh crab outside of Coastal Acadiana. Currently, blue crab is being transported by truck and air multiple times a week to Maryland. However, many small producers still do not have enough supply to justify a transportation company sending a truck to a rural area.

Though transportation poses some problems, seafood stakeholders did not identify transportation to be the largest barrier for the growth of their businesses. This may be because the industry has used traditional practices over the years and has not produced enough supply to create new opportunities in transportation on their own. Still, stakeholders noted that improved transportation and logistics options could expose local seafood producers to new market opportunities. Most producers have not been exposed to opportunities that are possible through sophisticated transportation networks. Currently, the region does not have single producers with the requisite volume for this company to serve. Thus, producers have limited marketing opportunities for fresh product because they cannot reach consumer demand outside of the region in a timely manner.

The exact interventions needed to improve the transportation capabilities in Coastal Acadiana vary by the species of seafood, understanding of transportation options, and availability of a significant quantity of product. Underlying the development of these capabilities is the identification of markets with significant demand and purchasing power. In the sections below, we describe a potential distribution network and related transportation projects and programs.

POTENTIAL PROJECTS AND PROGRAMS

Developing a Joint Ground Freight Pick Up Location

Distribution requires the presence of seafood products in significant quantities. In the case of fresh seafood, transportation companies evaluate the total weight of product and can accommodate different products in the shipment. This creates an opportunity for small producers in Coastal Acadiana if small product volumes can be combined to establish a larger volume for the transportation company. It could be highly advantageous for subsets of small- to medium-size producers in Louisiana to organize one pick-up location where they could transfer product to third-party logistics providers like Refrigerated Express. Such coordination would make the pick-up economically viable for those providers and, in so doing, provide local producers with access to new markets. This location could be a processing house, retail store, or location with safe, available refrigeration space.

Additionally, Louisiana Direct Seafood could identify new market opportunities for seafood products in Maryland. A shipping schedule for these additional products could be aligned with the existing transportation schedule of blue crabs already heading to Maryland. Louisiana Direct Seafood could also identify market opportunities for other local products by following existing channels that carry local products to distant customers.

Exploring Transportation of Fresh Seafood

Shellfish are typically more economical to transport by air than other seafood because they have higher weight to volume ratios, and, as such, shellfish distributors can secure better freight deals. Currently, Southwest Airlines ships a significant amount of blue crab from New Orleans to Maryland multiple times a week. Given the success of this transportation channel, there is an opportunity to link fresh producers with third-party providers like Southwest Airlines and Refrigerated Express.

While many producers and stakeholders recognize transportation limitations, they have not yet acted. Coastal Acadiana region has a tremendous opportunity to build needed transportation capability by leveraging the efforts of strategic partners like Louisiana Sea Grant, Louisiana Direct Seafood program, Louisiana Entrepreneurship and Economic Development Center at UL Lafayette, and the successful Delcambre Seafood and Farmers' Market. Additionally, Louisiana Economic Development and regional economic developers from One Acadiana and the Parishes of Vermilion, Iberia, and St. Mary have all been engaged and are eager to assist in helping this industry grow. Through these strategic partners, there is an opportunity to engage logistic providers in educational sessions for producers/processors, in the evaluation of regional strategic plans for the coastal seafood industry, and potentially in development plans from individual companies.

In turn, strategic partners can become more engaged in identifying market opportunities that are aligned with companies' transportation capabilities. For example, the Acadiana Regional Airport in New Iberia is centrally located and open for cargo traffic. A newly established industrial park and the pursuit of sound variances could open the region to domestic and international air cargo. Leveraging traditional economic development tools from USDA, LA EDA, EPA, the State of Louisiana, and local organizations can position the region to move products into new markets and establish the region as a transportation hub for seafood in the southern United States. Coastal Acadiana's location on the Gulf, within three hours of the Houston and New Orleans markets, uniquely positions it to take advantage of these transportation development opportunities.

WORKFORCE DEVELOPMENT

Labor is a key supply challenge for the seafood industry in Coastal Louisiana. Across businesses, the seafood industry is struggling to adequately staff operations (captains, deck hands, truck drivers, and seafood processing workers). Many business owners see labor as the most critical bottleneck preventing the growth of their businesses. As one stakeholder noted, *"labor is a huge issue."* The current shortage of labor derives from an absence of interested local laborers and continuous challenges with obtaining H2B visas.

Shortage of H2B Visas

Due to federal immigration policy, there was an absence of H2B visas available nationally in 2017 and 2018. This shortage of H2B visas challenged the majority of Acadiana seafood businesses we interviewed because local laborers are often uninterested in performing the work H2B laborers have historically completed. Moreover, businesses experience low retention rates among local laborers willing to do work previously done by H2B visa labor. Whereas H2B workers are considered an excellent workforce, it is hard to motivate domestic workers to show up and remain through the processing season.



H2B workers at shrimp processing plant

Absence of Local Laborers

Few local workers from Coastal Acadiana are interested in entering the seafood industry. Seafood businesses identified several factors that could explain the lack of local interest in the industry. These include:

- The opportunities for employment in the commercial fishing sector are largely unknown to potential employees.
- There is a perception that fishing is not a high-skilled job and/or not a high paying job. This perception aligns with nationwide trends in declining percentage of Americans working in blue-collar professions and increasing percentages of Americans working in service professions.
- There is a perception that the industry is declining.
- Shrimping is less profitable than it was 20 years ago due to competition from global shrimp markets.

Tomorrows Succession Problems

Unfortunately, labor challenges for Louisiana's seafood industry do not stop with today's business needs but extend into the future. Many seafood businesses, especially fishermen, face uncertain futures. It is unclear if their business will continue and, as such, unclear how current assets can be sold or transferred to a new generation.

Nowhere is this more pronounced than in the Vietnamese shrimping fleet. Currently, there are 147 federally permitted shrimping vessels in the Louisiana Vietnamese fishing fleet and 54 of these vessels operate out of Coastal Acadiana. Indeed, the Vietnamese fleet accounts for 70% of the federally permitted shrimping vessels in the three parishes. This fleet is declining due to the aging workforce and the lack of available replacement crew members. Many fishermen in the Vietnamese shrimping fleet do not encourage their children to become shrimpers.



The Vietnamese shrimping fleet comprises 70% of the federally permitted vessels in Coastal Acadiana.

The broad labor challenges facing the seafood industry are exacerbated due to the high degree of expertise required to operate shrimping boats and language barriers between Vietnamese captains/deckhands and American or Latin American crewmembers. With few workers entering the fleet, the future of the fleet and the ability of boat owners to sell their boats to new generations of fishermen is in jeopardy.

It is important to note that succession planning and labor challenges will only further exacerbate the current labor shortage. The inherent value proposition that the fishing industry offers to young workers is that by working hard, they can establish a career path, make good money, eventually purchase their own vessel, and later sell their vessel to secure their retirement. But when potential young workers see the profitability and succession challenges currently plaguing the industry, they also see that they could be unable to earn sufficient income, transfer fishing assets, and secure retirement. Succession challenges signal to young workers that the value proposition of a life in fishing may not be viable. As such, young workers do not enter the industry. Without young workers, succession problems only increase, further eroding the industry's value proposition. In this way, the absence of younger workers and unclear succession planning negatively reinforce one another in a cycle detrimental to the health of the industry.

If this cycle can be broken through targeted workforce development programs, the industry has the potential to start a positive cycle of job creation and predictable succession planning. A future that was once unclear could become a sea of opportunity.

POTENTIAL PROJECTS AND PROGRAMS

Local Workforce Development Program for Shrimping Deckhands

Louisiana Sea Grant could convene thought leaders to create a workforce development program to train and attract workers to the shrimping industry. This initiative could be developed as a registered apprenticeship program, incorporating time on shrimping boats as part of the curriculum. The program could be advertised in coastal parishes by sharing narratives of employment opportunities and emphasizing the benefits of seasonal work: deckhands can work for six months and make a year's salary or alternate between positions in multiple seasonal or shift-based coastal industries. Louisiana Sea Grant could collaborate with the Louisiana Community and Technical Colleges Workforce Solutions program, Louisiana Economic Development (LED) Job Connections website, LED's Trade Adjustment Assistance Program, and LED's Rapid Response Program to launch such a program, which would likely require compensating participating boat captains and possibly attendees. Potential funding sources for developing this program include a USDA Technical Assistance Grant and the Louisiana Workforce Commission Registered Apprenticeship program.

Targeted H2B Visa Program

There is a need for the region to join efforts with the broader Gulf of Mexico seafood industry in organizing a comprehensive lobbying effort to expand H2B legislation and ensure a steady flow of workers. An H2B visa program that targets H2B visa workers with experience or interest in commercial fisheries should be developed. The industry should

pursue efforts similar to previous campaigns recruiting H2B workers from Vietnam. Future efforts should also explore sourcing workers from Mexico and Central America.

Local Workforce Development Programs for Captains and Deckhands

Educational curriculums to help Louisianans establish and grow fishing businesses could be developed to assist young people in building fishing and business management skills. High schools, technical schools, and community colleges could develop specific curriculums targeted to the seafood industry in Coastal Acadiana. These programs could teach technical skills, business management, and business planning skills. It would be integral to bring the educational sessions to the coast and host sessions at facilities near fishing operations. This would ground educational sessions in the needs of the seafood industry and reduce the amount of time fishers must spend away from their operation. The development of these curricula could leverage funding from the State of Louisiana's Wise Fund, the USDA Office of Rural Development Farm Labor Housing Direct Loans and Grants program, and/or the Louisiana Economic Development Workforce Development program.

FOSTERING INNOVATION

Bolstering seafood economic development requires supporting innovative entrepreneurs who capitalize on existing market opportunities and create new ones. With its entrepreneurial culture, Acadiana is already home to several seafood innovators. Across this study, we identified three areas of innovation in the seafood industry:

- **Vertical integration**
- **Business start-ups meeting an existing market need, and**
- **Product innovation that creates new markets by developing new products and services.**

Vertical Integration: Omega Protein

Omega Protein, located in Vermilion Parish, converts menhaden captured by Omega fishermen into fishmeal, fish oil products, and components for animal feed formulation companies. The Omega plant has extensive vertical integration. They own and operate harvest vessels and a fleet spotter aircraft and develop their own workforce. Each vessel is operated by a 16-person crew and is accompanied by two aluminum purse-seining boats. The purse-seining boats are built from scratch on-site at the Omega plant. It has an in-house net repair facility, manufacturing facility, and shipyard. Through vertical integration, Omega Protein can effectively manage operational costs and efficiently address problems.

Filling an Existing Market Need: The LA Bait Story

Before LA Bait Products, Inc. (LA Bait) was founded in 2011, Louisiana fishermen were purchasing bait from suppliers on the east coast. With a \$1 million grant from the Louisiana Department of Wildlife and Fisheries, LA Bait was established to respond to the existing bait shortage for the Gulf Coast crab and crawfish industries.

Kirk Mitchell, one of the founding members of LA Bait, operates LA Bait's main menhaden fishing vessel. The company processes and packs bait riverside at a newly constructed processing facility. Unlike many of their rivals, LA Bait provides individually frozen bait pieces, as opposed to whole-frozen packages. This enables fishermen to only thaw the bait they need and avoid the waste and unpleasant smell of thawed bait sitting on a hot boat throughout the day. In doing so, LA Bait differentiated their bait product from competitors. However, despite their affordable price and quality product, LA Bait has struggled to capture consistent market share because of competition from east coast menhaden suppliers with relationships in Louisiana.

LA Bait's owners see two primary opportunities to grow the business and capture market share. The first is to improve the marketing, branding, and packaging of their product. Improved branding would allow fishermen to distinguish their product from other bait products when purchasing bait dockside. The second opportunity is to somehow resolve their offseason cash flow challenge. LA Bait is currently searching for a solution and sees resolving this challenge as key to their future growth.

Creating New Market Opportunities: Big D's

Douglas and Chrystal Olander established Big D's as a fish wholesaler in 2001 in response to challenges and declines in the shrimping industry. Seeing a market demand, Big D's began specializing in black drum caught in the Vermilion Bay region year-round. Today, Big D's operates a fuel, fish, and shrimp dock. Big D's is the largest harvester of black drum in Louisiana, selling whole, fresh-caught fish to major fish distribution houses in New Orleans. Big D's also operates a small processing plant where Vermilion Bay Sweet brand black drum are filleted, packed, frozen, and distributed. Big D's sells direct to restaurants and the public via the Louisiana Direct Seafood Program. Their production of drum filets continues to expand each year and has become a significant component of his business.

The opportunity from Value-added products

Through the Louisiana Direct Seafood Program, LSU AgCenter and Louisiana Sea Grant personnel are assisting small microprocessors with the development of a wide variety of value-added seafood products. Examples include black drum, hand peeled and deveined shrimp, garfish, oysters, snapper, grouper, catfish, and many others. Their work focuses on high-quality, frozen, vacuum-packed products that are packed during peak production and sold for higher profits during the off-season. These specialty boat-to-table seafood packs are becoming widely known as the best in local frozen seafood products. This micro-processing development effort has been expanding rapidly over the past several years and a focused workshop called "Beyond the Boat" was held at LSU in January 2019 to share knowledge. We expect micro-processing to become more important to the development of value-added products in the Louisiana seafood industry.

There are many additional opportunities to leverage this micro-processing expertise and develop new value-added seafood products in Coastal Acadiana.

POTENTIAL PROJECTS AND PROGRAMS

Seafood Innovation and Demonstration Laboratory

LSU AgCenter and Louisiana Sea Grant could establish a seafood innovation and demonstration laboratory allowing them to work with entrepreneurs to demonstrate seafood processing, packaging, and marketing techniques. The laboratory could help businesses overcome hurdles such as ensuring products meet FDA guidelines, packaging methods, and quality standards. Additionally, the seafood demonstration laboratory could be co-located with a cold storage facility, refrigerated storage facility, and small processing facility to enable small- and medium-size seafood producers from around Acadiana to have a one-stop shop for growing their seafood businesses. Potential funding sources for this educational initiative include a USDA Office of Rural Development Rural Economic Development Loan or Grant, a USDA Office of Rural Development Community Facilities Direct Loan or Grant, or a USDA Office of Rural Development Value-Added Producer Grant.

Small Business Consulting and Mentoring

Alongside the Seafood Innovation & Demonstration Laboratory, business consulting and mentoring services could be provided to seafood industry practitioners. As previously mentioned, workforce development and business succession are business challenges (or opportunities) that currently plague the industry. While there are many grants available to assist the development of the seafood industry, there is a severe shortage of grant writers with skills needed to adequately assist a small business in preparing a grant application.

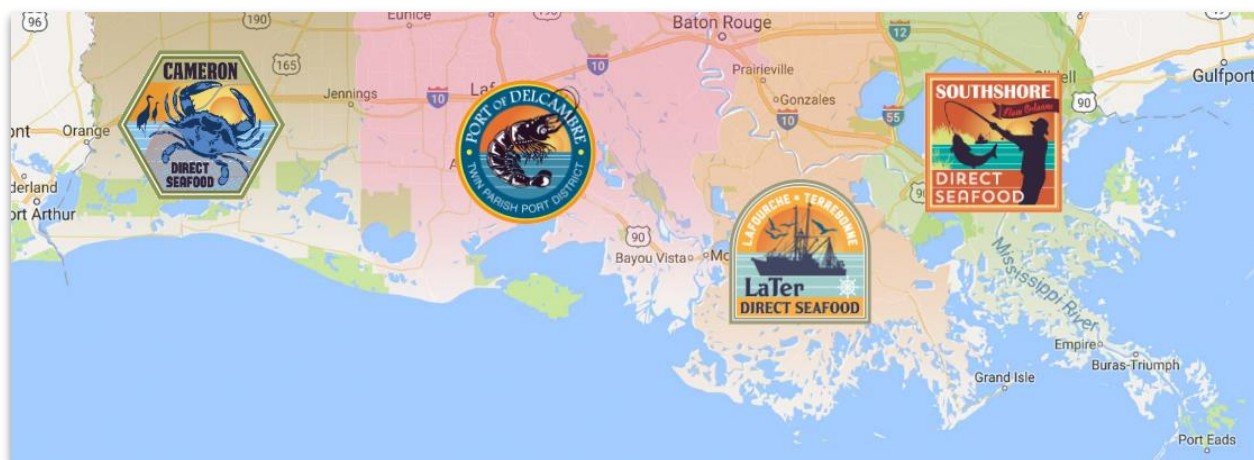
The time commitments needed to operate in this industry prohibit small businesses from traveling to Lafayette, Baton Rouge, or New Orleans for assistance. Assistance needs to move into the field and approach the industry in ways that are convenient and tailored to their needs. The LSU AgCenter, Louisiana Sea Grant, and the UL Lafayette MBA Program could partner to deliver this necessary technical assistance. Collaboratively, these programs should seek funding to establish a Seafood Innovation and Demonstration Laboratory and to provide small business consulting and mentoring services. Alongside LSU AgCenter and Louisiana Sea Grant's established staff, additional funding could support graduate assistants from UL Lafayette's MBA Program, internships, and potentially faculty engagement.

MARKETING AND BRANDING

Across the region and throughout the seafood supply chain, stakeholders identified marketing as an area for improvement. The success of the Louisiana Direct Seafood Program and the Delcambre Seafood and Farmers Market has created enthusiasm in the region and provided market opportunities for shrimp, crab, fish, oysters, and other seafood products. These experiences have educated the industry and shown what is possible, at least at a local level.

Producers and processors seeking to sell products to consumers and retail markets recognize that fresh, high quality, branded products can command higher prices in the market. As such, the producer and/or processor must educate the customer on the value of a superior product. This is already happening throughout the oyster market in the U.S., which is effectively using branding to educate customers and to position oyster marketing around place of origin and water quality. This practice has enabled oyster producers to help chefs and seafood marketers “tell the story” of the oyster boat or farm and explain why the customer should pay a premium. As shown on Oysterater.com, the branding of oysters spans the coast of the U.S. from Apalachicola Oyster (Florida), to (Alabama), to Olympia Oyster (Washington).

In turn, there is an opportunity to identify methods for engaging fishers/processors in discussions on value-added marketing methods and to assist in effectively positioning their brands in targeted markets. As shown in the spotlights below, the region has proven to be innovative and eager to make changes that improve the competitive positioning of Louisiana wild-caught seafood.



Map showing Louisiana Direct Seafood Programs. Delcambre Direct, Cameron Direct, LaTer Direct, and SouthShore Direct seafood programs.

SPOTLIGHTS

Bayou Carlin Cove and Delcambre Seafood & Farmers' Market

The Delcambre Seafood Market has 50-80 vendors and serves over 900 cars each month. Producers pay \$250 a year to participate in the physical market and have their products listed online. Occasionally, the port will organize a flash market where they gather producers who normally sell at the Delcambre Seafood Market in a location other than the Delcambre port.

Louisiana Direct Seafood Program

Louisiana Direct Seafood Program is a direct marketing program which operates the Delcambre Direct, Cameron Direct, LaTer Direct, and SouthShore Direct seafood programs. Each of these programs provides customers with direct access to purchasing seafood products from commercial fisherman. This program began through a partnership between the Port of Delcambre, LSU AgCenter, and LSU Sea Grant.



Entrance to the Bayou Carlin Cove

Growth into E-Commerce

The Delcambre Direct Seafood program is currently leading the region and state's efforts to position value-added local seafood within a market by creating an e-commerce presence. The LouisianaDirectSeafoodShop.com has been launched and features multiple products from Coastal Acadiana.

Improving the Competitiveness of LA Shrimp & Crawfish



Gov. John Bel Edwards and Michael Lesnick, Meridian Institute, converse at a local economic development event.

Gov. John Bel Edwards joined local and state officials, fishermen, and community leaders to sign HB 335 in July 2019, which requires food service establishments serving imported crawfish or shrimp to inform patrons that the seafood is of foreign origin. "This legislation protects Louisiana's hardworking fishermen who help drive the state's economy and preserve an important part of our cultural heritage," said Gov. Edwards. "Crawfish and shrimp are foundations of Louisiana's seafood industry and HB 335 is vital to ensuring the industry remains strong and competitive."

POTENTIAL PROJECTS AND PROGRAMS

Branding and Marketing of Locally Produced and Processed Products

The people and culture in Coastal Acadiana are key to effectively positioning local seafood in the minds of chefs and consumers throughout the U.S. While frozen seafood from this region has made its way into retail channels, the distribution of fresh product has been limited to local markets or to channels where transportation has been a facilitating factor, as is the case with live and fresh crabs. Outside of crabs, the portfolio of fresh seafood has received limited traction in the market outside of Acadiana.

To improve the branding and marketing of local seafood, the region must develop means for educating producers and processors about how they can add value to their operations through marketing and branding. In particular, the following marketing items need to be addressed:

- Identifying market opportunities and target markets
- Building a channel to reach target markets, including transportation considerations
- Creating branding that helps consumers understand what the product is and how it is different from other, similar products. Products can be differentiated in the following ways:
 - **Point of origin** – Product packaging can identify seafood origin by the state, parish, city, or body of water from which it originates.
 - **Producer** – Packaging can leverage the amazing stories of the small businesses in this industry to create a captivating narrative of the product’s origin. This creates an experience for consumers in the marketplace. Places like Granger Seafood, Delcambre Direct, and St. Mary Seafood are successful examples of how this strategy can be implemented.
 - **Packaging** – Sea Grant and the Louisiana Direct Seafood program have shown that packaging can make a significant impact on how a product is perceived in the marketplace. There are many opportunities to improve packaging and add value to producers who are not participating in the Louisiana Direct program.
 - **Recipes** – While Louisiana is renowned for its food culture, this industry does not effectively leverage this culture in its marketing efforts. Consumers may be willing to pay premium prices for Louisiana seafood if they were confident they could effectively prepare a dish that connects them to the people and culture of Acadiana.

Programs that address the above marketing needs may be able to leverage funding from the USDA Office of Rural Development’s Value-Added Producer Grant (VAPG) program to accomplish these goals.

Expand Delcambre Direct to Improve Acadiana's E-Commerce Capabilities

The Coastal Acadiana seafood industry has historically conducted business through traditional, direct marketing channels with industrial buyers and consumers. Louisiana Sea Grant and the Delcambre Direct Seafood Program have enabled the Coastal Acadiana Region to reach consumers through dockside and monthly seafood and farmers markets. Additionally, the region has numerous docks that continue to provide direct channels to downstream processors, markets, and restaurants. It is important to note that the Delcambre Direct Seafood Program serves as the model upon which the Cameron Direct, LaTer Direct, and SouthShore Direct programs in other Louisiana regions were based.

There is an opportunity for the Delcambre Direct Seafood Program to expand operations to facilitate e-commerce sales and, subsequently, reinforce its position as an innovative leader in the Gulf seafood market. As previously noted, the region has historically distributed primarily frozen seafood to markets outside of Acadiana, with the exception of blue crab. The establishment of a web presence can position the region in new external markets, assist the region by accumulating the requisite volume of supply needed to attract shipping services, and help businesses create new revenue channels. Funding for this expansion could be solicited from the Louisiana Economic Gardening Initiative.

Marketing Cooperative – Augmenting the Louisiana Direct Seafood Program

A marketing cooperative around seafood produced, processed, and packaged in Coastal Acadiana could be established, similar to the Acadiana Fishermen's Co-op, Inc. which focuses on live and peeled crawfish. Marketing cooperatives assemble and market commodities produced mostly by their members. Given the progress and momentum of the Delcambre Direct and Louisiana Direct Seafood programs, a marketing cooperative may be a means for expanding the program's participation and reach into the larger markets. Additionally, the co-op may also provide the location for assimilating the needed supply of seafood products that were previously mentioned in the transportation challenges facing the region. Potential funding sources to jump-start this initiative could be solicited from the USDA Marketing Cooperative, the USDA Office of Rural Business Development, and the Socially Disadvantaged Groups Grant program.



Port of Delcambre Marketing

ACCESS TO CAPITAL

Entities along the seafood supply chain, state leaders, and parish leaders will need access to capital in order to foster economic development. However, the region currently lacks an inventory of economic development programs, tools, and other funding sources that are aligned with the needs of its seafood industry. A description of funding sources related to grant and loan programs, economic development programs/tools, opportunity zones, and programs available through traditional lending institutions is provided in this section.

Appendix A provides an expanded inventory and aligns these programs with regional seafood projects that are tied to economic development strategies in this report.

GRANT AND LOAN PROGRAMS

Throughout the region, public agencies and private businesses are eligible for a multitude of government grant and loan programs. These programs are offered through a multitude of government entities, which include but are not limited to:

- **United States Department of Agriculture (USDA)** – Programs through Rural Business Development should be of interest to Coastal Acadiana seafood initiatives.
- **Louisiana Economic Development (LED)** – Programs offered specifically for small businesses, entrepreneurs, and workforce development (training) initiatives.
- **United States Small Business Administration (SBA)** – Administers the Small Business Innovation Research (SBIR) program and provides local small business consulting through Small Business Development Centers. The Louisiana Small Business Development Center is located in the LITE Center on the campus of UL Lafayette and offers high-quality technical assistance to existing and start-up small businesses, and to small business entrepreneurs in Louisiana at no cost to the client.
- **United States Environmental Protection Agency (EPA)** – The EPA assists public and private entities put previously contaminated land and/or facilities back into commerce through Brownfields and Land Revitalization programs.

While these programs are not new and are known within the region, the challenge for small businesses is navigating the application processes. There is a strategic need within the region to assist public and private organizations that are interested in applying for grants and loans. The following organizations assist companies in accessing these programs and other listed in Appendix A:

- **Parish & Regional Economic Development Organizations**
 - Vermilion Economic Development Alliance
 - Iberia Industrial Foundation
 - St. Mary Parish Economic Development
 - Acadiana Planning Commission
 - One Acadiana

- **University Based Business Assistance**
 - LSU – *LSUAg Center and Louisiana Sea Grant*
 - UL Lafayette – *Louisiana Entrepreneurship & Economic Development Center*
 - UL Lafayette – *Small Business Development Center*

ECONOMIC DEVELOPMENT PROGRAMS/TOOLS

In Coastal Acadiana, there are a variety of economic development tools that can be leveraged to stimulate growth in the seafood industry. Tools related to the aforementioned economic development strategies are presented below and detailed in Appendix A.

Special Taxing Districts provide a mechanism for supporting new construction, expansion or renovation projects within a defined district. Some examples may include but are not limited to:

- Port Authority District
- Economic Development Districts
- Community Development Districts

Workforce Development programs available through Louisiana Economic Development include:

- Incumbent Worker Training Program
- Registered Apprenticeship Program
- Louisiana Job Connection
- Rapid Response Program
- Louisiana Community and Technical College Workforce Solutions

Additional economic development programs and services available in Coastal Acadiana:

- Federal
 - USDA Rural Development
 - Federal- State Partnership - Delta Regional Authority
 - Economic Development Administration
 - Environmental Protection Agency
- Louisiana Economic Development (LED)
 - Small Business Programs

- Parish & Regional Economic Development Organizations
 - Vermilion Economic Development Alliance
 - Iberia Industrial Foundation
 - St. Mary Parish Economic Development
 - Acadiana Planning Commission
 - One Acadiana
- Regional Utility Providers
 - Cleco Holdings (CLECO)
 - SLEMCO Power
 - South Louisiana Electric Cooperative Association (SLECA)

OPPORTUNITY ZONES

Opportunity Zones (OZ) are an economic development tool that stimulate economic development and job creation in economically distressed communities or census tracts. This federal program was established by the Tax Cuts and Jobs Act in December 2017. According to IRS.gov, Opportunity Zones spur economic development by providing tax benefits to investors in the following ways:

1. Investors can defer tax on capital gains that are invested in a Qualified Opportunity Fund (QOF). The investor's tax on the invested capital gains is reduced by 10% if the investment in the QOF is held longer than 5 years. If the investment is held longer than 7 years, the investor's tax on the invested capital gains is reduced by 15%.
2. If the investor maintains the investment in the QOF for at least ten years, the investor is eligible for an increase in basis of the QOF investment equal to its fair market value on the date that the QOF investment is sold or exchanged.

A key element of this program is that investors in OZs do not have to live in the designated zone. Thus, investors from around the country can invest in zones located in Coastal Acadiana. The challenge for Coastal Acadiana is to identify and market investable projects that exist within the local zone. The Acadiana Planning Commission and economic developers from Vermilion, Iberia, and St. Mary Parishes are currently preparing a prospectus for each local OZ and are actively looking for investable projects that can be highlighted in these prospectuses.

It is important to note that these projects must create a return on investment. Investors can support an existing business or the establishment of a new initiative. Potential seafood related projects identified in this study may include, but are not limited to:

- Cold/Fresh Storage
- Ice Plant
- Transportation Co-operative
- Marketing Co-operative

Opportunity Zones are designated in each of the Coastal Acadiana Parishes. These zones are located in Abbeville (Vermilion Parish), New Iberia (Iberia Parish), and Baldwin (St. Mary Parish). While none of these sites are located on the coast or include a dock, all zones are in close proximity to the coast, have access to highway and air infrastructure, and contain buildings that could be repurposed for seafood industry related initiatives.

In addition to the benefits in the OZ program, investors can layer or “twin” these initiatives with other economic development incentives/programs. For example, an OZ investment in New Iberia may also be eligible for a brownfields program, historical tax credit, and Louisiana restoration tax abatement program. State and federal economic development programs are further discussed in the next section.

LENDING INSTITUTIONS

While there is grant funding available, some fishermen struggle to secure funds from traditional lending institutions. Fishermen must have a two- to three-year banking history for their business to be bankable, which can be problematic. A potential solution would be establishing a five-year transition program where a fisherman can access a loan package comprised of loans from a local bank and the U.S. Small Business Administration. This program would help fishermen establish a five-year banking history to support future lending. Additionally, economic developers noted that there is a need to educate banks on how to vet fisheries projects so fishing businesses can more easily secure loans. This could be a project area on which local banks (i.e., Gulf Coast Bank, Bank of Abbeville, Morgan City Bank & Trust, Hancock Whitney, etc.) and/or the U.S. Small Business Administration could work collaboratively.

V. Conclusion and Future Direction

CONCLUSION

The vitality of Coastal Acadiana communities depends on the ability of residents to support themselves and their families. Targeted economic development in the seafood industry offers these communities the chance to improve livelihoods and raise the standard of living for current and future generations. This report presents numerous strategies for stimulating growth in Louisiana's seafood supply chain, encouraging long-term sustainability and strengthening resilience in an industry critical to Acadiana's economy and cultural identity.

The development opportunities explored in this report were drawn from interviews with business stakeholders and community leaders across local and state governments. Stakeholders and leaders expressed a deep cultural connection to Louisiana seafood while acknowledging the industry's challenges and shortcomings. Key themes identified in these conversations were the need for enhanced coordination among business and government actors, more effective communication about the value of Louisiana seafood, and impactful collaboration across the supply chain. If addressed, these interventions could grow local economies and provide much-needed support to rural coastal communities.

Specific strategies for future success include aligning the seafood industry with existing and potential economic development initiatives; addressing barriers to industry expansion like logistics, transportation, and workforce development; sharing information about sources of capital to make targeted investments; and capitalizing on the entrepreneurial spirit of the residents of Acadiana to pursue new opportunities, access untapped markets, and harness the unique aspects of their products for branding. Grants, tax dollars, rural development programs, loans, and other funding opportunities should be leveraged to implement these recommendations and build a more sustainable, resilient seafood supply chain that can continue to be a cornerstone of Coastal Acadiana economies.



Louisiana State Sen. Bret Allain; Dr. Carrie Castille of USDA; the Olander family; and the coastal seafood research team.

FUTURE RESEARCH

While many issues have been addressed during this study, there are topics in need of further exploration. These range from tactical items like engaging the industry in ecotourism to issues which address the strategic direction of gulf seafood and the market viability of aquaculture. Future research areas are listed below.

Economic Development

Further investigation is needed to better align the Coastal Acadiana seafood industry with economic development strategies at the local, regional and state levels.

- **Research Issue 1:** Are other coastal regions of Louisiana's seafood industry also misaligned with economic development resources? The Coastal Acadiana region needs to determine if the lack of economic development activity is industry-wide or region-specific. If it is region-specific, the region is positioned to research best practices in the state.
- **Research Issue 2:** Louisiana is the largest producer of fresh seafood in the Gulf of Mexico, yet there is little in the way of economic development events. Are there opportunities for Louisiana to host an industry trade show or exposition that will bring potential customers, businesses, and investors into the state?
- **Research Issue 3:** The Twin Parish Port Commission in Delcambre, Louisiana generates revenue through a local tax. This tax has helped establish a new boat launch, marina, and seafood and farmer's market. The industry needs to investigate revenue generating strategies that can be aligned with industry needs, cultural preservation, and regional economic development priorities.
- **Research Issue 4:** How can the industry maximize the strength of the Louisiana Seafood Promotion Board and Marketing Board and Louisiana Economic Development to create growth opportunities in Louisiana?

Connecting Coastal Acadiana to the Broader Domestic and Global Markets

Future research is needed to better understand how Coastal Acadiana can position itself for investments in seafood-related businesses like transportation, warehousing, import/exporting, food manufacturing, wholesaling, and retailing.

- **Research Issue 1:** A business feasibility study is needed to establish a baseline on the investment needed to create the cold/fresh storage and innovation hub.
- **Research Issue 2:** What products are U.S. markets seeking that they cannot receive? Are these products currently produced in Coastal Acadiana?
- **Research Issue 3:** There is a regional void in assistance for grant application preparation and submission. The economic development agencies, UL Lafayette, and LA Sea Grant need to study the feasibility of creating some type of grant writing capacity that focuses on working with businesses and the regional industry in the pursuit of grants, loans, and other financial programs.

Aquaculture

While NOAA has been discussing aquaculture in the Gulf of Mexico for some time, its immediate future is still uncertain. The Coastal Acadiana region has vast experience in on-shore aquaculture crawfish and alligator operations. The region does not currently have any salt-water aquaculture farms. With that said, the region is home to Omega Protein, a subsidiary of Cooke Aquaculture.

- **Research Issue 1:** With domestic seafood production accounting for only 10% of seafood consumed in the U.S., what role will aquaculture play in meeting the market's demand for seafood?
- **Research Issue 2:** Louisiana's Rig to Reefs program fosters collaboration with oil and gas companies after an offshore structure's value has expired. Can the Rigs to Reefs programs be used to establish infrastructure around which an aquafarm can be developed?
- **Research Issue 3:** Is the Louisiana seafood industry interested in developing salt water aquaculture opportunities?

Ecotourism and Seafood

Coastal Acadiana is home to a burgeoning ecotourism industry. Many of the ecotourists who come to the area eagerly anticipate the opportunity to eat delicious Cajun seafood. However, much of the seafood tourists will consume does not originate from Louisiana. Ecotourism requires the prioritization of Louisiana seafood to achieve an authentic Louisiana experience. As such, there are ample opportunities for seafood businesses to partner with ecotourism businesses to provide Louisiana seafood. Additionally, there are opportunities to integrate seafood education with existing ecotourism industries. Ecotourism can provide both additional income for fisherman in the offseason and a market demand for innovative seafood experiences.

- **Research Issue 1:** Regarding seafood marketing initiatives, how do Louisiana's efforts compare to those in other states? Examples of other state efforts include the Alaska Seafood and Marketing Board and the Gulf of Maine Responsibly Harvested initiative.
- **Research Issue 2:** Although tourists enjoy the fruits of the industry while dining in restaurants, is the region missing tourism opportunities related to engagement and experience? Ecotourism opportunities include:
 - Charters for food & culture tourists who seek engagement with seafood producers and the processes they use to "catch" seafood.
 - Campers seeking engagement with producers and the experience of cooking seafood themselves at a campsite.

FUTURE DIRECTION

This report constitutes stage one of a three-part effort. We intend to move from Coastal Acadiana to the full coastal extent of Louisiana. If fully supported, this work will stretch to include additional rural communities that may face similar or different challenges. We fully expect new geographies to have unique traits when it comes to the seafood supply chain, but they may also bear similarities to the themes we discovered in Coastal Acadiana. By building on this work, we will be able to examine both region-specific issues and drivers, and broader, state-wide themes facing the seafood industry in rural communities.

We are taking a “clustered” approach to coastal parishes, in which we systematically evaluate the seafood industry and supply chain on a more local/regional basis and engage communities at an appropriate scale. Findings at these scales in rural communities will then be systematically reviewed across regions to develop recommendations and a summary of findings across the state. Analyzing inflection points in the seafood supply chain both regionally and state-wide will allow us to identify projects that can catalyze economic development within and across rural coastal Louisiana parishes. Moreover, the specific interventions that we identify will already be aligned with support from key community leaders and synergistic with current economic development plans.



Deborah Atwood, Meridian Institute; Jim Gossen, Gulf Seafood Foundation; Dr. Carrie Castille, Louisiana USDA Director of Rural Development; and Geoffrey Stewart, Ph.D., UL Lafayette at Port of Delcambre.

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Appendix A

TABLE: RELEVANT BUSINESS SUPPORT, GRANT, LOAN, TAX, AND WORKFORCE DEVELOPMENT PROGRAMS

Note that this table is meant to be a source of information and inspiration but is not an exhaustive list of potential funding sources.

Category (Alphabetized)	Sponsoring Entity	Program Name	Description	Applicability
Bond Program	US Department of Labor	The Fidelity Bonding Program	Provides an employer with a bonded insurance guarantee for hiring hard-to-place job seekers as new employees.	Workforce development
Business Services Support	Louisiana LED	CEO Roundtables	Peer groups that give executives the opportunity to discuss business practices and management strategies with other executives who deal with similar growth challenges.	Business mentoring and business expansion
Business Services Support	Louisiana LED	Economic Gardening Initiative	Provides customized core business strategies, market research, qualified sales leads, and improved internet and technology tailored to your growing needs.	Expand Delcambre Direct to Improve Region's Web Presence and E-commerce Capabilities
Business Services Support	LSU and Louisiana LED	Louisiana Veteran Entrepreneurship Program	Provides training to give veterans the tools needed to develop their business ideas, including business planning, marketing, financing, capital formation, and other aspects of business development.	Stimulate entrepreneurship and encourage new workers to enter industry
Business Services Support	State of Louisiana	Small and Emerging Business Development Program	Provides for developmental assistance, including entrepreneurial training, marketing, computer skills, accounting, legal and industry-specific assistance.	Stimulate entrepreneurship and encourage new workers to enter industry

Business Services Support	Louisiana LED	LED FastStart	A state workforce program offered as an incentive to eligible companies that locate or expand in Louisiana. LED FastStart provides customized employee recruitment, screening, training development, and training delivery at no cost to qualifying projects and companies.	Support Cold Storage Facilities
Grant and Loan Program	USDA Rural Development	The Rural Economic Development Loan & Grant Program	Provides funding for rural projects through local utility organizations. USDA provides zero-interest loans to local utilities which they, in turn, pass through to local businesses (ultimate recipients) for projects that will create and retain employment in rural areas. The ultimate recipients repay the lending utility directly. Eligible projects include business incubators, facilities and equipment for training, business expansion, and start-up venture costs.	Seafood Demonstration and Innovation Laboratory
Grant and Loan Program	USDA Rural Development	Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants	Assists rural small businesses and agricultural producers by conducting and promoting energy audits and providing renewable energy development assistance (REDA). The assistance must be provided to agricultural producers and rural small businesses. Funds can be used for lighting, cooling units, electric irrigation motors, equipment upgrades, and HVAC.	Facility upgrading.

Grant and Loan Program	USDA Rural Development	Farm Labor Housing Direct Loans & Grants	Provides affordable financing to develop housing for year-round and migrant or seasonal domestic farm laborers. Farmers, associations of farmers and farmworkers, family farm corporations and non-profit organizations may apply.	Support labor for seasonal fishing businesses
Grant and Loan Program	USDA Rural Development	The Community Facilities Direct Loan & Grant Programs	Provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of rural communities, and does not include private, commercial or business undertakings.	Cold storage cooperative Seafood Demonstration and Innovation Laboratory
Grant Program	USDA Rural Development	The Value-Added Producer Grant (VAPG) Program	Provides grants to assist farmers and ranchers to create greater value for agricultural commodities and helps producers enter into activities related to the processing and/ or marketing of value-added products.	Development of Value-added products Seafood Demonstration and Innovation Laboratory
Grant Program	USDA Rural Development	The Rural Business Development Grants (RBDG) Program	Supports targeted technical assistance, training and other activities leading to the development or expansion of small and emerging private businesses in rural areas which will employ 50 or fewer new employees. Funds can be used for technical assistance, land development, incubators, community development etc.	Economic development - funds can be used to support the development of the innovation hub, incubator, etc.

Grant Program	USDA Rural Development	The Rural Cooperative Development Grant (RCDG) Program	Helps improve the economic condition of rural areas by helping individuals and businesses start, expand or improve rural cooperatives and other mutually-owned businesses through Cooperative Development Centers. Funds can be used for feasibility studies, business plans, training, and strategic planning.	Cold storage cooperative Transportation cooperative Marketing cooperative
Grant Program	USDA Rural Development	The Socially-Disadvantaged Groups Grant	Provides technical assistance to socially-disadvantaged groups through cooperatives and Cooperative Development Centers. Examples of technical assistance are feasibility studies, business plans, strategic planning, and leadership training.	Cold storage cooperative. Transportation cooperative. Marketing cooperative
Grant Program	EPA	Brownfields and Land Revitalization Program	Helps states, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields. Seeks to clean up a site/facility and return it to commerce. Seven different grant programs are available.	Locations that are out of commerce due to environmental issues. Examples may include oilfield service yards, old filling stations, dry cleaners, mechanic shops, etc.
Grant Program	State of Louisiana	Step Grant	Provides financial awards to state and territory governments to assist small businesses with export development.	Economic development strategies to facilitate exporting

Grant Program	State of Louisiana	The Wise Fund	Provides up to \$40 million per year to public postsecondary institutions to enhance degree and certification production and research in high demand fields to meet the state's future workforce and innovation needs.	Local workforce development program for seafood industry Captains
Loan Program	USDA Rural Development	The Business and Industry Guaranteed Loan (B&I) Program	Provides financial backing for rural businesses through guarantees up to 90 percent of a loan made by a commercial lender.	New business ventures and business expansions
Loan Program	State of Louisiana?	Small Business Loan and Guaranty Program	Provides loan guarantees to banks and other small business lenders in association with the SSBCI ranging from \$5,000 to \$1.5 million.	New business ventures and business expansions
Loan Program	Multiplier	Sustainable Seafood Fund	A pooled Fund to make partially forgivable loans to organizations and supply chain players that are tied directly to the accomplishment of targeted outcomes that can advance seafood sustainability. Provides low interest flexible loans in the range of \$25,000 - \$250,000 with the opportunity to have a portion of the loan forgiven.	New business ventures and business expansions
Loan Program	Lift Fund	Small business loans from \$500 to \$1 million	LiftFund, a 501(c)(3) non-profit organization, provides small business lending to those who do not have access to capital from typical lenders, such as traditional banks. Additionally, LiftFund provides educational services at no cost to borrowers, which are essential to foster self-sufficiency.	New business ventures and business expansions

Loan Program	TruFund Financial Louisiana	Small business and non-profit organizations loans; variety of loan programs for disaster recovery, women in business, new markets, workforce development, etc.	Promotes and fosters economic development within underserved communities and among disadvantaged populations. TruFund achieves this by providing innovative financial solutions that have TruImpact, revitalize communities and create jobs.	New business ventures and business expansions
Tax Incentive	State of Louisiana	Angel Investor Tax Credit	Provides an up to 25 percent tax credit for individual investors who invest in early stage, wealth-creating businesses that seek start-up and expansion capital.	Investment in early-stage seafood related start-up companies
Tax Incentive	US Federal Government	Enterprise Zone	Provides either a \$3,500 or \$1,000 tax credit for each certified net, new job created and either a state sales/use tax rebate on capital expenses or 1.5 percent investment tax credit for qualifying expenses.	Economic development tool to promote investment and expansion in the region
Tax Incentive	US Federal Government	Federal Opportunity Zone	Provides a federal tax incentive for investors to re-invest their capital gains into Opportunity Zones	Tax program to incentivize investment in specific census tracts
Tax Incentive	State of Louisiana	Quality Jobs	Provides up to a 6 percent rebate on annual payroll expenses for up to 10 years and either a state sales/use tax rebate on capital expenses or a 1.5 percent project facility expense rebate for qualifying expense	Training and workforce development
Tax Incentive	State of Louisiana	Restoration Tax Abatement	Provides a 100 percent property tax abatement for up to 10 years for the rehabilitation of an existing structure.	Restoring a marine or an ice house

Tax Incentive	US Federal Government	The Work Opportunity Tax Credit	Provides a federal tax credit available to employers for hiring individuals from certain target groups who have consistently faced significant barriers to employment.	Workforce development
Revenue Generation	Local, Parish, and State Government	<i>Ad Valorem</i> Millage on Property	Example is the establishment of a millage by the Twin Parish Port Commission in Delcambre, LA. Revenue was used to improve boat launch, marina, and seafood and farmers market infrastructures.	Port or economic development entity - construction of ice production and/or cold storage facilities
Workforce Development Program	Louisiana Workforce Commission	The Incumbent Worker Training Program	Creates training partnerships among the Louisiana Workforce Commission, business and industry, and training provides. It is designed to benefit business and industry by assisting in the skill development of existing employees, thereby increasing employee productivity and company growth.	Education for branding and marketing of locally produced and processed products
Workforce Development Program	Louisiana Workforce Commission	Registered Apprenticeship	A voluntary industry-driven training program in which an apprentice-eligible occupation is learned through a structured program of supervised on-the-job training; is clearly identified and commonly accepted throughout the industry; requires a minimum of 2,000 hours of work experience to learn; requires related supplemental instruction; and involves the development of manual, mechanical, and technical skills.	Deck hand apprenticeship program

Workforce Development Program	Louisiana LED	Louisiana Job Connection	A free, online job-matching website that connects Louisiana employers with qualified candidates.	Include the seafood industry
Workforce Development Program	Louisiana's Community and Technical Colleges	LCTCS Workforce Solutions	Leads and facilitates successful workforce training opportunities at all Louisiana and Technical College Campuses.	Include the seafood industry
Workforce Support Program	Louisiana LED	Rapid Response	An early intervention service that helps workers affected by major layoffs and plant closings qualify for new jobs. The goal of the program is to transition workers into re-employment as quickly as possible.	Include the seafood industry
Workforce Support Program	Louisiana LED	Trade Adjustment Assistance	Provides services to workers who lose their jobs or whose hours of work and wages are reduced because of international competition. TAA services, which are offered at no cost, may include training awards, job search a relocation allowances, income support, and health coverage tax credits.	Include the seafood industry