# PERCEPTIONS OF MARINE AQUACULTURE IN COASTAL TOURIST DESTINATIONS IN THE US SOUTHEASTERN REGION

FINAL REPORT September 28, 2012-May 31, 2015

submitted

July, 31 2015

to

South Carolina Sea Grant Consortium

### **Report Editors**

Laura W. Jodice & William C. Norman

#### **Principal Investigators**

William C. Norman
Dept. of Parks, Recreation & Tourism Management
Clemson University

Phone: 864-617-3582 wnorman@clemson.edu Laura W. Jodice Research Associate Dept. of Parks, Recreation & Tourism Management Clemson University Phone: (864)656-2209 jodicel@clemson.edu

### **Associate Investigator**

Julie Davis
Living Marine Resources Extension Specialist
S.C. Sea Grant Extension Program
102 Beaufort Industrial Village, Suite 102
Beaufort, SC 29901-0189
Phone: 843-255-6060 ext. 112
Julie.Davis@scseagrant.org

### Ph.D. Students

Guliz Coskun & Sanghoon Kang Department of Parks, Recreation & Tourism Management Clemson University

A report sponsored by the South Carolina Sea Grant Consortium pursuant to National Oceanic and Atmospheric Administration Award No. NA10OAR4170073



This report was prepared by Clemson University as a result of work sponsored by the S.C. Sea Grant Consortium with NOAA financial assistance number NA10OAR4170073. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the South Carolina Sea Grant Consortium or NOAA.

# Table of Contents

| Acronyms and Abbreviations                         | iii |
|--|-----|
| Acknowledgements                                   | iii |
| Introduction                                       | 1   |
| Goals & Objectives                                 | 2   |
| Methods  | 3   |
| Results & Discussion                               | 5   |
| Conclusions & Recommendations                      | 8   |
| References   | 10  |
| Appendix A – Stakeholder and Focus Group Questions | 12  |
| Appendix B – Ph.D. Dissertations                   | 14  |
| Appendix C – Community Profile Summary             | 16  |
| Appendix D – Stakeholder Interview Summary         | 20  |
| Appendix E – Focus Group Summary                   | 21  |
| Appendix F – Consumer Survey Results               | 23  |
| Appendix G – Tourist Survey                        | 29  |
| Appendix H – Resident Survey                       | 50  |

# Acronyms and Abbreviations

FL – Florida
NERR – National Estuarine Research Reserve
NMFS – National Marine Fisheries Service
NOAA – National Ocean and Atmospheric Administration
NWR – National Wildlife Refuge
SCDNR – South Carolina Department of Natural Resources
SC – South Carolina

# Acknowledgements

Several people served as valued advisors on this project. Chuck Adams (Florida Sea Grant Marine Economist) advised us during the initial proposal process and helped us identify communities, connect with Florida aquaculture industry leaders and recruit University of Florida students to assist with data collection. Leslie Sturmer (Regional Shellfish Aquaculture Extension Agent, University of Florida IFAS Extension /Florida Sea Grant), Paul Zajicek (Division of Aquaculture, Florida Department of Agriculture and Consumer Services), Craig Watson (University of Florida, Tropical Aquaculture Laboratory), Nancy Hadley (South Carolina Department of Natural Resources), Frank Blum (SC Seafood Alliance), and Amber Von Harten (South Atlantic Fishery Management Council) all provided assistance with identifying and connecting with the communities for the study and identifying stakeholders to include in the interviews. Special thanks to seafood and tourism industry stakeholders who made time for interviews, contributed valuable advice for the development of the consumer survey and helped us learn more about their community. Also thank you to the Clemson University and University of Florida graduate students who helped make the data collection possible.

## Introduction

Marine aquaculture (i.e., mariculture) and tourism are both considered important economic diversification strategies in coastal fishing communities facing the decline of wild-capture fisheries. While tourism development continues to be important to the economy and sustainability of U.S. coastal communities, the growth of marine aquaculture has been limited by economic, regulatory, and socio-political barriers that have created unfavorable conditions for investment (Knapp, 2012; NOAA Fisheries, 2011). Conflict over privatization of marine fish and waters and a focus by commercial fishermen, coastal residents, non-government organizations, and environmentalists on the negative rather than positive effects of mariculture have generated negative public perceptions about aquaculture. Understanding public support is valuable to anticipating conflict and generating regional policies and strategies that respond to stakeholder concerns about aquaculture. Furthermore, developing effective communication with the public, media, politicians and regulators is important to countering negative perceptions and opposition (Knapp, 2012).

The issues surrounding aquaculture are particularly relevant to those who are stakeholders in the coastal community where marine aquaculture is occurring (Katranidis, Nitsi & Vakrou, 2003; Robertson, Carlsen & Robertson, 2000). Important stakeholders include tourism business leaders, marine resource managers, commercial seafood harvesters, processors and retailers, residents and visitors. Furthermore, local maricultured products supplement the supply of local seafood, which is increasingly being promoted to visitors as a unique feature of the coastal experience. Information on public opinion can be used to develop regional and national marketing and outreach strategies for locally farmed seafood products in partnership with the tourism sector. This type of outreach is particularly valuable in cases were inshore marine protected areas or other popular coastal recreation areas are also used by marine farmers and by coastal tourists and recreationists. Integration of well-designed aquaculture education into tourism experiences and other communication channels at the community level could serve as a means to build support for sustainable aquaculture investment and development.

The relationship between coastal experiences, knowledge, beliefs and support for nearshore aquaculture development is not clear. In places like New Zealand, rapid proliferation of nearshore aquaculture in coastal communities that were also popular tourist destinations created problems for public support, despite the opportunities for economic diversification and tourism partnerships (Jodice, Hull, & Sassenberg, 2009). Previous research in the U.S. has focused on open ocean aquaculture in New Hampshire (Tango-Lowy & Robertson, 1999; Robertson, Carlsen & Robertsen, 2000; Robertson, Carlsen & Bright, 2002) and may not be applicable for decision-making for inshore mariculture because open ocean aquaculture may not be perceived as directly impacting coastal activities or aesthetics. Researchers have found variability in seafood preferences and knowledge among coastal tourists and residents (e.g., Jodice & Norman, 2007; Tango-Lowy & Robertson, 1999; Robertson, Carlsen & Robertsen, 2000; Robertson, Carlsen & Bright, 2002). Research has also found that variability in knowledge about aquaculture influences opinions (Katranidis, Nitsi & Vakrou, 2003) and differences in experience with seafood influences preferences (Gempesaw, Bacon, Wessells and Manalo, 1995). However, Robertson et al. (2002) found that providing "balanced" information (benefits vs. impacts) caused more negative attitudes about open ocean aquaculture.

This study focused on six coastal communities in South Carolina (n=3) and Florida (n=3) which both have substantial economic dependence on coastal tourism and support a variety of marine fisheries related industries, including aquaculture. The economic impact of domestic tourism in South Carolina was \$12.2 billion in 2014, with 58.8% of this occurring in the coastal counties of Horry, Charleston and Beaufort (includes Hilton Head) (U.S. Travel Association, 2015) and total tourism spending in Florida was \$82.0 billion in 2014 (Visit Florida, 2015). These states offer a variety of both land-based and submerged land

environments for marine aquaculture development in the same coastal areas that are popular for tourism and marine recreation. Both states focus on hard shell clam (*Mercenaria mercenaria*) and oysters (*Crassostrea virginica*), and are interested in development of Sunray Venus clams (*Macrocallista nimbosaclams*). However, the level and direction of aquaculture development is different in each state. South Carolina has about a third of the number of saltwater farms as Florida, but had an increase in the number of farms (primarily hard shell clams) from 2002 to 2007. Florida has among the largest number of saltwater aquaculture farms in comparison to other states. Hard shell clam and oyster culture comprised about one-fourth of the state's aquaculture production and generated a total economic impact of \$53 million in 2007 (Adams, Hodges & Stevens, 2008). However, there was a dramatic decline in the number of farms from 2002 to 2007 (NASS, 2007a, b). In 2013, molluscan aquaculture sales in FL and SC totaled \$20 million and \$2 million, respectively (USDA Census on Aquaculture, 2013).

The communities selected for the study where McClellanville, Isle of Palms and Beaufort in South Carolina and Cedar Key, Apalachicola, and Sebastian in Florida. These communities were all previously profiled as fishing communities (Jacob & Jepson, 2000; Jepson, Kitner, Pitchon, Perry & Stoffle, 2002; Impact Assessment, Inc., 2005). The study approach included focus groups with tourists, interviews with community stakeholders, and consumer surveys of tourists and residents in targeted communities. Focus group and stakeholder interview results were used for development of the consumer surveys. Results are summarized here, with a focus on comparing residents and tourists on key variables assessed by the consumer surveys.

# Goals & Objectives

This project directly addressed the National Sea Grant Aquaculture Research 2012 priority listed in section I.B.(2)(c) "Socio-economic research targeted to understand aquaculture in a larger context: Research on the social and economic issues associated with current and new marine aquaculture," specifically "public perception of aquaculture." The project also addressed SC Sea Grant Consortium objectives and strategies for Sustainable Coastal Development and Economy and for Sustainable Fisheries and Aquaculture, which are comparable to those strategies listed under National Sea Grant focus areas: Sustainable Coastal Development and A Safe and Sustainable Seafood Supply. The primary goal of this project was to examine public perceptions of marine aquaculture in coastal tourism destinations in the southeastern U.S. region (South Carolina and Florida) as a means to inform outreach and marketing strategies targeting tourists and residents at the community level and to provide a baseline understanding of public perceptions in a region were aquaculture development involved a low level of visible infrastructure in nearshore waters.

#### The project had three objectives:

- Objective 1: Identify perceptions of community representatives (i.e., residents, business representatives and tourism and aquaculture management professionals) regarding opportunities and threats related to marine aquaculture presence in coastal tourism communities.
- Objective 2: Assess public (resident and tourist) perceptions (i.e., beliefs about opportunities and threats, trust in managers and industry, intent to support expansion) of aquaculture in six coastal communities where aquaculture and tourism are present and explore the influence of seafood preferences and behaviors, aquaculture related experiences and self-assessed knowledge about aquaculture on these perceptions.
- Objective 3: Use study results to identify and describe targeted marketing/outreach strategies and
  disseminate recommendations to aquaculture industry associations and agencies, coastal community
  level tourism development and planning representatives, and state and federal marine resource
  managers.

## Methods

### Community selection and stakeholder interviews

Researchers first formed an advisory panel for each state. Advisory members included Sea Grant extension specialists, representatives from state marine resource management and agriculture agencies responsible for aquaculture, and aquaculture industry leaders. The advisory panels were asked to suggest six communities (i.e., three for each state) for inclusion in the study. Their suggestions were matched with tourism economic data and reports profiling fishing communities (Jacob & Jepson, 2000; Jepson, Kitner, Pitchon, Perry & Stoffle, 2002; Impact Assessment, Inc., 2005). Brief interviews with community leaders, recommended by advisory panel members, were conducted to confirm that the selection was appropriate for the study and welcomed by the community. Selection criteria included type(s) of aquaculture, level of marine aquaculture development and involvement, and level of economic dependence on tourism. The goal was to select communities that represented variability in the level of aquaculture and tourism investment and involvement.

Preliminary lists of stakeholders to be interviewed for the South Carolina and Florida communities were developed with help from advisory panel members and a review of community level websites (tourism and seafood businesses and management). Advisory panels and Julie Davis assisted with review of invitation lists for onsite interviews and with highlighting key informants. Researchers then sent invitation letters and scheduled interviews with those willing and available to participate during the time when interviewers were available to visit each community. Stakeholders were offered a \$50 incentive gift card for participation. Interview questions focused on the relative importance of tourism and mariculture in the community, perceptions on consumer interests in seafood and related experiences, and relationships between the tourism and mariculture economies (Appendix A, Table A.1). Stakeholder interviews and notes were reviewed and used as input to the design of a consumer surveys to be administered to tourists and residents of the communities involved in the study, during Year 2 of the project.

### **Consumer focus groups**

Two focus groups were conducted, one for each state. Participants were a convenience sample recruited from the Clemson, South Carolina area and who had recently traveled to either the Florida or South Carolina coast. Recruitment occurred through faculty and staff email lists at Clemson University. The recruitment letter indicated it was permissible to forward the announcement to another community member (i.e., did not have to be a Clemson University employee). The first 24 respondents (12 per state) to the announcement, who fit the criteria for participation, were selected. The email recruitment letter included a link to an online survey used to screen for the following characteristics: 21 years or older, traveled for pleasure to the South Carolina or Florida coast in the last year (spending at least one night), available for the scheduled focus group date and time, and demographic diversity (gender, age and marital status).

Focus groups were conducted in a classroom on the Clemson campus near where public parking was available. Respondents were promised a \$25 gift card (at the end of the focus group) as an incentive for participation. The project investigator led each focus group with assistance from the research team. Both focus groups were audio-recorded. Focus group questions were semi-structured and open-ended and focused on understanding behaviors and attitudes about seafood, especially aquacultured seafood, in general and at the coastal destination (Appendix A, Table A.2). Results were transcribed and reviewed to identify emergent themes for development into consumer survey items.

### **Consumer surveys**

Researchers developed two consumer surveys (i.e., tourist and resident) to examine public perceptions of marine aquaculture in three coastal communities in South Carolina and three in Florida. Both surveys were developed for online administration and included questions about seafood consumption at home, beliefs about marine farming impacts, beliefs about the quality of farmed vs. wild seafood, awareness of marine farming in the community, knowledge about marine farming, importance of seafood source labeling, interest in marine farming related opportunities, and support for marine farming in the coastal community.

The sampling goal was to obtain completed surveys from 100 tourists and 100 residents for each community. In order to obtain a sufficient sample size for residents and tourists, the county where the community was located, or in the case of more rural communities (i.e., Cedar Key and Apalachicola), adjacent coastal counties were included in the sampling frame. The resident sample was purchased from a reliable address database company that had served multiple research projects at Clemson University. This approach provided a total of 35,801 resident email addresses for the Florida and South Carolina counties in which the study communities occurred. The address company sent the online survey link using an invitation letter developed by the researchers and provided statistics on "click through" by the recipients. Three reminders were sent at one week intervals based on Dillman (2007). Resident response was initially low for Florida communities; therefore, residents were also included when tourist intercepts occurred in Florida. Tourists were intercepted (for collection of email address) in the South Carolina communities during summer of 2014 and in Florida communities during fall of 2014 and winter and spring of 2015 (Florida residents were also intercepted during this time).

A link to the survey was emailed to intercept respondents one week after the intercept, and non-respondents received three reminders sent at one week intervals, based on Dillman (2007). Six graduate students from Clemson assisted with intercepts in South Carolina, and two graduate students and two recent graduates from University of Florida assisted with Florida intercepts (paid as intermittent workers). The online survey invitation was sent to intercepted participants via the Qualtrics software used to administer the online survey. The survey data presented in this report were analyzed using SPSS software, and analysis focused on comparing residents and tourists with parametric (independent samples t-test), nonparametric (Chi-square test) tests and ordinary least squares (OLS) multiple linear regression modeling.

#### Outreach

Results were integrated into a presentation for initial workshops in July 2015 to discuss the status and future of working waterfronts on the South Carolina coast. Future efforts will include development of peer reviewed publications, including papers generated from two Ph.D. dissertations (Appendix B), and presentation at the International Congress on Coastal and Marine Tourism conference in November 2015, a panel at the National Working Waterfront & Waterways Symposium in November 2015, and the National Shellfisheries Association/World Aquaculture Society meeting in February 2016. A report summarizing project results will be prepared for electronic distribution to leaders and stakeholders in each of the participating communities and a comparative case study will be developed from the qualitative and quantitative data.

## Results & Discussion

### **Community selection**

Three communities in South Carolina (McClellanville, Isle of Palms and Beaufort) and three in Florida (Cedar Key, Apalachicola and Sebastian) were selected. These communities had varying levels of investment in clam and/or oyster mariculture, a past history of dependence on commercial fishing and subsequent decline, and varying levels of tourism development and investment. Information available on each community (i.e., prior NOAA NMFS profiles, recent census data, community and county webpages) was summarized into preliminary case profiles (Appendix C). Table 1 provides a conceptual matrix to illustrate the relative levels of tourism infrastructure and mariculture involvement among the communities.

Table 1. Relative comparison of the six selected communities

|                         | Level of Tourism Infrastructure   |               |                    |  |  |
|-------------------------|-----------------------------------|---------------|--------------------|--|--|
| Mariculture Involvement | High                              | Moderate      | Low                |  |  |
| High                    |                                   | Cedar Key, FL |                    |  |  |
| Moderate                | Beaufort, SC<br>Isle of Palms, SC |               | McClellanville, SC |  |  |
| Low                     |                                   | Sebastian, FL | Apalachicola, FL   |  |  |

#### Stakeholder interviews

The research team conducted 22 interviews with stakeholders in the South Carolina communities during November 2013 and March 2014. These interviews included nine aquaculture industry representatives, one SC DNR aquaculture manager, three tourism management/development managers, four ecotourism operators, two restaurant industry representatives, two marine recreation operators, and one NWR protected area manager. The research team conducted 28 interviews with stakeholders in the Florida communities during late February, 2014. These included 10 aquaculture industry representatives, nine ecotourism industry representatives, six tourism development managers, two restaurant managers, and one NERR protected area manager. All but two interviews were audio-recorded. Stakeholder interviews highlighted several issues that were integrated into the consumer survey. A summary of the stakeholder responses is provided in Appendix D.

#### **Consumer focus groups**

Response to the recruitment for focus groups included 16 individuals who had traveled to the Florida coast, and 23 individuals who had traveled recently to the South Carolina coast. Twelve respondents from each group were selected to participate in the corresponding focus group, and the remaining respondents were informed they were on a wait list (i.e., in case a person dropped out prior to the focus group date). Eight individuals (4 males, 4 females; aged 28 to 64 years old) participated in the Florida focus group and 11 individuals (7 females, 4 males; aged 21 to 66 years old) participated in the South Carolina focus. Several themes emerged from the focus groups and were used to develop the two consumer surveys. A summary of the focus group responses is included in Appendix E.

#### **Consumer surveys**

The purchased email service that was used to contact residents provided 24,105 addresses for residents in South Carolina and 13,192 addresses for residents in Florida. The "click through" rate (i.e., recipient

clicked on the link in the email) was 1.7% (n=1654) for the South Carolina addresses and 1.2% (n=731) for the Florida addresses (Appendix F). Table F.1 provides a summary of the number of effective invites (based on "click through" or intercept) and completed surveys for residents and tourists for each state. There were 304 completed surveys from Florida residents – i.e., 731 resident database invites which resulted in a 22.3% response rate (n=163) and359 email invites from intercepts which had a 39.3% response rate (n=141). Response from the 1654 South Carolina resident invites resulted in 409 (24.7%) completed questionnaires. Intercepts for Florida tourists resulted in 491 invitations and a 55.6% response rate (n=273). Intercepts for South Carolina tourists resulted in 856 invitations and a 42.3% response rate (n=362).

The number of completed questionnaires at the community level is summarized in Table F.2.Communities were delineated by county or region, such that the analysis for Isle of Palms and McClellanville was combined into one county (Charleston) and the Cedar Key and Apalachicola communities included respondents from the three counties associated with each of these regions. This approach was due to restrictions created by the resident survey sampling (i.e., the email database was divided at the county, not city level) and the need to assure a sufficient sample size.

Nearly one-fourth (24%) of the 301 Florida resident responses were from Cedar Key (n=73), 36% were from Apalachicola (n=107) and 40% were from Sebastian (n=121). For the South Carolina resident responses (N=N=410), 38% were from Beaufort County (n=154) and 62% were from Charleston County (n=246). Over one-half (54%) of Florida tourist respondents were from Cedar Key (N=146,), Apalachicola had 88 responses (32%) and Sebastian had 38 tourist responses (14%). For the South Carolina tourist survey (N=357), 33% were from Beaufort (n=117) and 67% were from Charleston County (n=240).

Demographics are summarized in Table F.3. The majority of respondents from South Carolina were male (tourist = 51%, resident = 53%) and from Florida were female (tourist = 63%, resident = 62%). At the state level, the mean age for resident respondents was significantly older than for tourist respondents (i.e., South Carolina: tourist = 48.9, resident = 61.3; Florida: tourist = 49.0; resident = 55.1). The majority of respondents in all subgroups except for Florida residents had a Bachelor's degree or higher (i.e., South Carolina: tourist = 65%, resident = 66%; Florida: tourist = 60%; resident = 46%). The majority of tourists from both states were employed full-time (South Carolina = 58%; Florida = 56%); however, residents in each state had a higher portion of retirees (South Carolina = 42%; Florida = 39%) than the tourist subgroups (South Carolina = 19%, Florida = 22%). Two-thirds to three-quarters of respondents in each subgroup were married. Also, the majority of tourist respondents where white (South Carolina = 88%, Florida = 91%). The majority of all respondents made at least \$50,000 per year, with one-quarter to one-third making \$100,000 or more.

A significantly higher proportion of Florida (86%) tourists were repeat visitors (in the last two years) to their primary destination (i.e., where they were intercepted) than South Carolina (78%) tourists  $[X^2 (1, N = 1347) = 12.24, p <.01]$ . However, there was no significant difference between the mean number of trips taken by Florida (Mean = 5.2 trips) and South Carolina (Mean = 4.2 trips) tourists to their primary destination in the last two years. Mean trip length for tourists was 2.4 days for Florida and 2.9 days for South Carolina. South Carolina residents (Mean = 24.6 years) lived in their present county longer than Florida residents (Mean = 19.2 years).

Resident and tourist results were compared on several variables including the influence of beliefs, awareness and knowledge on support for marine aquaculture in the community. Analysis included independent samples t-tests for Likert scale questions, Chi-square analysis for categorical variables, and OLS multiple linear regression modeling to examine variables predicting support. What follows is a review of the notable findings for each of the key variables and the regression analysis:

- Seafood consumption at home: The number of residents (97%) who ate seafood was significantly higher than tourists (92%) [X² (2, N = 1314) = 18.68, p <.001]. Table F.4 reports frequency of seafood consumption at home and at restaurants for tourists and residents in their home community. A significantly higher proportion of residents than tourists are seafood at least once a week at home and at least once a week at restaurants near their home.
- Beliefs about marine farming impacts on the community/destination (Table F.5): Tourists and residents agreed most strongly with the ideas that marine farming creates local jobs, helps the local economy, increases the availability of sustainable local seafood and help preserve the fishing culture. Tourists' agreement was significantly higher than residents' for the idea that marine farming attracts tourism to the area; however the level of agreement was only moderate. Tourists and residents had a low level of agreement with the negative beliefs that marine farming restricts adjacent land uses, conflicts with marine boating or recreation.
- General beliefs about the quality of farmed vs. wild seafood (Table F.6): Tourists and residents agreed most strongly with the ideas that farmed seafood is more available for purchase, more environmentally sustainable and a better value for the money. However, tourists agreed significantly more strongly than residents with the ideas that farmed seafood is more available for purchase and a better value for the money. For both subgroups, there was only a moderate to low level of agreement that farmed seafood is safer, cleaner, fresher, healthier, better tasting or better in quality.
- Awareness of marine farming in the community/destination: The majority of tourists (56%) were not aware that marine farming was occurring at their primary destination. The majority of residents (63%) were aware that that marine farming was occurring in their community.
- Knowledge about marine farming (Table F.7): Tourists and residents rated themselves as not very knowledgeable about all marine farming topics for this variable, including the quality of marine farmed and wild-caught seafood, safety of marine farmed seafood, environmental sustainability of marine farms, and where marine farms are located in the water. However, knowledge ratings by residents were significantly higher than for tourists on all knowledge items.
- <u>Importance of seafood source labeling</u> (Table F.8): For both residents and tourists, when and where the seafood was harvested were the most important labels that impact their decision on which seafood to purchase. A recognizable brand name was rated as the least important. Residents placed significantly more importance than tourists on all seafood source labelling items.
- <u>Interest in marine farming related opportunities in the community</u> (Table F.9): Tourists and residents were generally more likely to be interested in eating farmed seafood at a festival, touring a marine farm, listening to a tour provider talk about marine farming, attending a culinary event with marine farmers and chefs, bringing home fresh seafood from a marine farm and talking to a marine farmer. Residents were significantly more likely than tourists to tour a marine farm, bring home fresh, canned or frozen seafood from a marine farm, talk to a marine farmer, listen to a chef talk about farmed seafood, use a map with marine farm areas so they can avoid them while boating or visit a processing plant for farmed seafood. Tourists were significantly more likely than residents to use a smartphone app to find local farmed seafood.
- Support for marine farming (Table F.10): Both residents and tourists are moderately positive about marine farming in their community or primary destination. However, residents were significantly more positive than tourists about how marine farming affects their support of the local seafood industry. Tourists were significantly more positive than by residents about how marine farming affects their key recreational activities and the impact of marine farming on the scenery.

• <u>Influence of beliefs, knowledge and awareness on support</u> (Table F.11): Two linear regression models (one for each subgroup) were run to examine the influence of positive and negative beliefs about marine farming, knowledge and awareness on support for marine farming in the community/destination. Composite means (i.e., mean the ratings for the items in the scale) were used in this analysis for all variables except for awareness, and all scales had a Chronbach's Alpha greater than 0.8. Awareness was a dummy coded variable (0=no, 1=yes). The regression model for tourists was significant and explained 32.4% of the variability in their support; however, belief in negative impacts was not significant. The regression model for residents was significant and explained 59.7% of the variability in their support; however, awareness was not significant. In both models, positive beliefs about the marine farming was the best predictor of support for marine farming followed by knowledge of marine farming.

# Conclusions & Recommendations

There was moderate support and agreement among tourists and residents with the positive beliefs about the current level of marine farming in Florida and South Carolina. Positive beliefs, knowledge, and awareness (tourists only) positively influenced support for marine farming in the community or primary destination.

The low ratings of knowledge about aquaculture were consistent with prior studies (Tango-Lowy & Robertson, 1999; Robertson et al., 2002; and Robertson et al., 2000). The positive relationship between self-assessed knowledge and support was somewhat contrary to the finding of Robertson and Carlsen (2000) which determined that providing "balanced" information about aquaculture (benefits vs. impacts) caused more negative attitudes about open ocean aquaculture. Both tourists and residents were interested in interacting with marine farming through culinary opportunities and tours. Efforts to increase these opportunities and to include interpretation of marine farming as part of marine tours, restaurant menu features and other outreach approaches should attract both tourists and residents interested in learning more about where their seafood comes from and help improve awareness and knowledge about local marine farmed products and activities on the water.

The study also found consumers generally believed the quality of marine farmed seafood was lower than wild-caught seafood, but that both tourists and residents believed farmed seafood was important to the local seafood supply and fisheries economy. The research also revealed where seafood comes from (the location) was more important than the "brand" to consumers. Seafood companies that are promoting a brand name should be sure to highlight information about the harvest location. This is already happening for clams and oysters in the regions included in this study.

This research serves as a baseline for consumer/public opinion, which will be useful if expansion of mariculture in South Carolina and Florida is planned. The study also highlights the perceived value of maricultured products as a means to boost local supply of sustainable seafood and economic resilience of the fishing industry. Stakeholders in the region are regularly concerned about the availability of local seafood meeting the increased demand resulting from tourism promotional campaigns featuring local seafood. The study indicated that there is moderate awareness and acceptance of local farmed seafood from the region (i.e., clams and oysters). The study results will be useful to tourism and aquaculture entrepreneurs in assessing the location of their business (i.e., relative to other tourist and waterfront areas) as well as marketing maricultured products to both tourists and residents.

This study provided information that will supplement NOAA National Marine Fisheries Service efforts to maintain social science profile data about fishing communities. The communities in this study were last profiled by Jacob & Jepson (2000) and Jepson, et al. (2002). Data from stakeholder interviews and the consumer survey can be used by researchers to develop case study profiles for use by fisheries and coastal managers in the future.

One of the limitations of the study was the problem of defining community boundaries. The researchers were constrained in part by the problem of acquiring resident addresses and obtaining a sufficient sample size for the consumer survey. In addition, the sampling for residents was primarily based on an email list that was gathered through commercial means, and for tourists was based on intercepts. Also, sampling was limited to people who had email addresses.

Future research should focus on examining the perceptions and activities of landowners along the creeks and estuaries where active mariculture practices are occurring, as a means to better understand the potential for conflicts at the resident level and to examine resident practices related to water quality. In addition, research should examine the relationship between marine spatial planning and the role of coastal protected areas in assuring retention of areas suitable (and with good water quality) for expansion of mariculture.

Finally, for this final summary report, the analysis was not conducted at the state or community level and did not present descriptive findings from all of the questions that were included in the two consumer surveys (see Appendix G for the Tourist Survey instrument and Appendix H for the Resident Survey instrument). Additional in-depth qualitative and quantitative analysis will be conducted utilizing the transcripts from the focus groups and stakeholder interviews and data from both the tourist and resident consumer surveys.

## References

- Adams, C., A.Hodges, and T. Stevens. (2008). Estimating the Economic Impact for the Commercial Hard Clam Culture Industry on the Economy of Florida (Final Report).
- Carson, D. (2011). State puts Sebastian on notice over non-compliant Working Waterfront.
  - VeroNews.com, September 29, 2011. Accessed on July 23, 2015 at
  - $http://www.veronews.com/news/sebastian/government/state-puts-sebastian-on-notice-over-non-compliant-working-waterfront/article\_6d5bfdf0-ea9e-11e0-ab07-001a4bcf6878.html$
- Dillman, Don A. (2007). Mail and Internet Surveys (second edition). Hoboken, NJ: John Wiley & Sons, Inc.
- Florida Sea Grant. (2013). Apalachicola Bay Oyster Situation Report. http://www.flseagrant.org/wp-content/uploads/tp200\_apalachicola\_oyster\_situation\_report.pdf
- Gempesaw, C.M., J. R.Bacon, C. R. Wessells & A. Manalo. (1995). Consumer Perceptions of Aquaculture Products. American Journal of Agricultural Economics, Vol. 77, No. 5, Proceedings Issue (Dec., 1995), pp. 1306-1312
- Impact Assessment, Inc. (2005). Identifying Communities Associated with the Fishing Industryalong the Florida Gulf Coast. Report prepared for the U.S. Department of Commerce, NOAA Fisheries Southeast Regional Office, St. Petersburg, Florida.
- Jacob, S. & M. Jepson. (2000). Defining and Identifying Fishing-Dependent Communities in Florida. Uraban Anthropology and Studies of Cultural Systems and World Economic Development, 29 (3): 221-253.
- Jepson, M., K. Kitner, A. Pitchon, W. W. Perry & B. Stoffle. (2002). Potential Fishing Communities in the Carolinas, Georgia and Florida: An effort in baseline profiling and mapping. Report prepared for the South Atlantic Fishery Management Council and National Ocean and Atmospheric Administration, National Marine Fisheries Service. Accessed on July 23, 2015 at
  - $http://sero.nmfs.noaa.gov/sustainable\_fisheries/social/documents/pdfs/communities/2013/s\_atl\_communities.pdf$
- Jodice, L., Hull, J. and Sassenberg, U. (2009). Aquaculture and Tourism in the Coastal Zone: Conflict and Innovation in New Zealand. Presentation at Coastal Zone 09: Revolutionary Times: Catching the Wave of Change, July 19 to 23, 2009, Boston, Massachusetts.
- Jodice, L.W. and Norman, W. (2007). Interest in "virtual" and "real" shrimp related experiences among coastal and shrimp festival tourists in South Carolina, USA. In Proceedings of the 5th Coastal & Marine Tourism Congress, Auckland, New Zealand, Sept. 11-14, 2007.
- Katranidis, S., E. Nitsi & A. Vakrou. (2003). Social acceptability of aquaculture development in coastal areas: the case of two Greek islands. Coastal Management, 31: 37-53.
- Knapp, G. (2012). The Political Economics of United States Marine Aquaculture. In proceedings of the 39th UJNR Aquaculture Panel Symposium on "The Present and Future of the Aquaculture Industry," published as *Bulletin of the Fisheries Research Agency*, Number 35, Fisheries Research Agency of Japan, January 2012.
- Liverman, M. (2012). Wakulla Co. to receive \$500K from BP to promote tourism. ABC 27 WTXL http://www.wtxl.com/news/local/wakulla-co-to-receive-k-from-bp-to-promote-tourism/article\_6519268e-2a9b-11e2-bce5-0019bb30f31a.html
- Mazur, N. & A. Curtis. (2006). Risk Perceptions, Aquaculture, and Issues of Trust: Lessons From Australia. Society and Natural Resources, 19:791–808.
- NASS (National Agriculture Statistics Service). (2007<sup>a</sup>). Census of Aquaculture 2007. USDA, Washington, D.C. <a href="http://www.agcensus.usda.gov/Publications/2002/Aquaculture/">http://www.agcensus.usda.gov/Publications/2002/Aquaculture/</a>.
- NASS (National Agriculture Statistics Service). (2007<sup>b</sup>). Census of Agriculture 2007. USDA, Washington, D.C. < http://www.agcensus.usda.gov/Publications/2007/Full\_Report/>

- NASS (National Agriculture Statistics Service). (2013). U.S. Department of Agriculture 2012 Census of Aquaculture, Volume 3, Special Studies, Part 2. Report #AC-12-SS-2. Accessed July 31, 2015 at http://www.agcensus.usda.gov/Publications/ 2012/Online\_Resources/Aquaculture/
- NOAA Fisheries. (2011). Fisheries of the United States 2010. Silver Spring Maryland. Accessed March 26, 2012 from <a href="http://www.st.nmfs.noaa.gov/st1/fus/fus10/index.html">http://www.st.nmfs.noaa.gov/st1/fus/fus10/index.html</a>>.
- Pillion, Dennis. (2013). NOAA declares fishery disaster for Apalachicola oysters http://blog.al.com/gulf-coast/2013/08/noaa\_declares\_fishery\_disaster.html
- Robertson, R.A., E.L. Carlsen & M.A. Robertson. (2000). Open ocean aquaculture telephone survey: summary report. NSGL# NHU-S-00-001.
- Robertson, R. A. E.L. Carlsen & A. Bright. (2002). Effect of information on attitudes towards offshore marine finfish aquaculture development in northern New England. Aquaculture Economics and Management," 6(1/2):117-126.
- Robertson, R. A. and E. Carlsen (2000). Effect of Balance Information on Attitudes Towards Open Ocean Aquaculture in New England. Gerald Kyle, ed., Proceedings of the Northeastern Recreation Research Symposium, April 11-14, 1999. http://nsgl.gso.uri.edu/nhu/nhur00009.pdf
- Rockwell, L. (2012). Oil Money Post BP Oil Spill, Bed-Tax Collection Rates Up. Florida Trend. http://www.floridatrend.com/article/14764/oil-money--post-bp-oil-spill-bed-tax-collection-rates-up
- Tango-Lowy, T. & R. A. Robertson. (1999). Assessment of Tourists' Attitudes Toward Marine Aquaculture: A Preliminary Investigation of UNH's Sea Grant Discovery Passengers. Proceedings of the 1999 Northeastern Recreation Research Symposium, 1999 April 11-14; Bolton Landing, NY. Comp. and Ed. Gerard Kyle. Gen. Tech. Rep. NE-269. Newtown
- Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station.
- U.S. Travel Association. (2015). The Economic Impact of Travel on South Carolina Counties 2014. Accessed July 31, 2015 at https://www.scprt.com/files/Research/SC%202014%20TEIM% 20Report.pdf.
- Visit Florida. (2015). Tourism Fast fact. Accessed July 31, 2015 at http://www.visitflorida.org/about-us/what-we-do/tourism-fast-facts/.

# Appendix A – Stakeholder and Focus Group Questions

### Table A.1. Community Stakeholder Questions

For community Leaders (includes conservation groups, city managers, long-time residents)

- What do you know about local marine aquaculture? Where does it occur, what products are grown, history, who is doing it?
- What is your awareness of aquacultured product availability locally?
- Are you aware of any conflicts between industry members involved in aquaculture (mariculture) and tourists or residents engaged in marine recreation or other daily activities?
- Are there differences between second home owners/ neo-natives and longtime residents in how they view the local seafood, commercial fishing and aquaculture industry?
- To what extent to residents support or not support the local seafood industry, particularly marine aquaculture?
- Do you consider aquaculture important in promoting/advertising your community? If so, why and what approach or slogans are appropriate/currently used?
- What types of questions would you like to see in the consumer survey we are developing?(targeting residents and tourists and focused on assessing perspectives on, awareness and interest in aquaculture/mariculture)

Tourism industry managers and representatives (includes ecotourism businesses, environmental education)

- Are you highlighting the aquaculture industry at all? Aware of existence of industry and where they operate?
- In what ways do you think tourists would be interested in learning about/experiencing marine aquaculture in this community?
- Do you consider aquaculture important in promoting/advertising your community? If so, why and what approach or slogans are appropriate/currently used?
- Are you differentiating between shrimp industry and the mariculture (clams, oysters) industries (including how product is harvested, "processed" etc. on the coast)?
- Outreach and education Do you include what shellfish aquaculture looks like and where it is occurring (on shore, off shore infrastructure)?
- Are you aware of any conflicts between tourism providers/businesses and the marine aquaculture industry? Are there any negatives you can think of regarding the presence of marine aquaculture in coastal waters?
- Are you aware of any benefits that are provided to tourism from the presence of marine aquaculture on the coast?
- Community development strategies involving tourism
  - o Any grants or community development initiatives that are focused on highlighting fishing or aquaculture at the destination?
- What types of questions would you like to see in the consumer survey we are developing?(targeting residents and tourists and focused on assessing perspectives on, awareness and interest in aquaculture/mariculture)

#### Aquaculture industry representatives

- How do you promote your product?
- Are you more focused on selling to <u>national markets or local?</u>

- Does your <u>business plan accommodate changes in tourist population</u> (seasonal differences in local consumers)?
- Are there regulatory restrictions that affect your ability to develop your business?
- Are there <u>environmental issues or disasters</u> that affect or have affected your ability to develop your business?
- Other known <u>conflicts or support regarding aquaculture</u> in your area?
  - Conflict with community or tourism development
  - o Conflicts with marine recreationists or other water dependent businesses
  - o Residents who don't support aquaculture
- What types of <u>relationships in the community</u> are important to your business (e.g., other growers, organizations, agencies, retailers, other marketing linkages, financial sources)?
- What types of questions would you like to see in the <u>consumer survey</u> we are developing?(targeting residents and tourists and focused on assessing perspectives on, awareness and interest in aquaculture/mariculture)

#### Table A.2. Focus Group Questions

- 1. How did seafood fit into your <u>most recent trip</u> to the coast? (thought about before while planning or fit in while you were there BEFORE OR DURING)
  - Purchase
  - Dining
  - Watching fishing boats
- 2. Was "local" seafood important to your activities?
- 3. When you were visiting the SC or FL coast, were you <u>aware</u> if there was marine aquaculture occurring in the area?
  - What types of evidence would tell you/told you that aquaculture was occurring? (e.g., signs or buoys on water, boats, product availability, advertising, on menu, educational display, seeing farmer on water)
  - Evidence in other coastal destinations? (i.e., have you been to other coastal areas in US or abroad where you saw evidence of aquaculture) some other place where it was obvious?
- 4. If you had an <u>opportunity to interact</u> with marine aquaculture on the SC or FL coast, how would you like to do it?
  - What would interest you?
  - Have you ever done this?
- 5. General perceptions/attitudes about marine aquaculture
  - What do you know about marine aquaculture? How did you learn about it? (e.g., sources, experiences)
  - Can you think of <u>any reason to object to or support</u> marine aquaculture in the place you visited in SC or FL?
    - o What features/attributes might cause you to support or object to marine aquaculture (e.g., food safety/quality; structures on water)
    - o Positive or negative impact on your coastal experience?
- 6. <u>Preference for local</u> aquacultured products vs. wild-caught vs. imported aquaculture when eating
  - Origin, freshness, inspection, price, reputation (region, grower)
  - Preference for restaurants which highlight certain types of seafood

# Appendix B – Ph.D. Dissertations

Coskun, Guliz. (2015). "Application of hierarchical linear modelling in a tourism context: understanding couple's intention to purchase local food in South Carolina." A Dissertation presented to The Graduate School of Clemson University, In Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in Parks, Recreation, and Tourism Management.

#### **ABSTRACT**

Despite the collective nature of tourism activity, the research focusing on group behavior in tourism literature is very rare. People usually travel with groups, mostly with their families who have influence on their travel decisions. Food is one of the unique aspects of a destination which has become a marketing tool for tourism planners and an important travel decision. An understanding of the preference of local food among tourists will create positive impact on the region and exploring the underlying factors of this preference will be beneficial for future marketing plans. The purpose of this study was to understand the factors influencing local food purchase intention of tourist couples visiting coastal areas of South Carolina through the use of modified Theory of Reasoned action and provide a better understanding of their decision making process by using Hierarchical Linear Modelling (HLM) as data analyzing technique. Data was collected in Charleston and Beaufort, South Carolina from 190 tourist couples in October 2014. The variables influencing intention to purchase wild caught and aquacultured oysters were tested. Results show that even if women have negative attitude towards oysters, their intention to purchase local seafood is not different than men. Positive importance of eating oysters in the destination has stronger influence on intention to purchase seafood at the individual and couple level. Study results also indicate as couples get older they influence each other in a positive way. This study provided theoretical implications by applying a modified Theory of Reasoned action in the tourism decision-making process, methodological implications by bringing a new way to understand this process by testing the relationships at the individual and couple level. In addition to theoretical and methodological implications this study offered practical implications by providing insight into the tourist's intention to purchase aquacultured and wildcaught oysters during their vacation.

Kang, Sanghoon. (In preparation). "Examining spatial aspects of tourist behavior on the South Carolina coastal area of the United States." A Dissertation to be presented to The Graduate School of Clemson University, In Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in Parks, Recreation, and Tourism Management.

#### **ABSTRACT**

This dissertation explored three themes with regard to spatial aspects of the tourist behavior in a coastal tourism region. Based on Hägerstrand (1970)'s space-time constraints concept, three independent analyses were conducted. Space-time constraints are authority constraints, capability constraints, and coupling constraints. Shoval (2012)'s definitions of space-time constraints for tourism research were adapted for this dissertation research, which were the purpose of trip, the length of visit, and the composition of travel party, respectively. The purpose of the three analyses were to examine the relationship between space-time constraints and spatial patterns of travel; ICTs use (i.e., smartphone use) and tourists' unplanned destination visit; and space-time constraints and the characteristics of the networks of tourists' multi-destination movement. This research was conducted as a part of a National Oceanic and Atmospheric Administration project "Perceptions of marine aquaculture in costal tourist destinations in the US southeastern region." The overall aim of the project was to examine tourists' perceptions of, attitude toward, and preferences of marine aquaculture, including seafood. The study sites

for this dissertation study included coastal locations where marine aquaculture presents in the state of South Carolina, U.S.A. Tourists visiting Beaufort, Isle of Palms, or McClellanville areas were randomly intercepted for collection of their email addresses during the fall of 2014. The population of this study was thus tourists who visited those three South Carolina coastal areas during 2014 fall season. This study confirmed that tourists' spatial patterns of travel are significantly associated with their space-time constraints and tourists' information search was not only occurred before trip but also occurred during trip. Surprisingly, the study revealed that a smartphone use did not significantly increase unplanned destinations visited in the context of multi-destination travel. Finally, the results social network analysis revealed the importance of relational marketing strategy in implementing destination marketing strategies.

# Appendix C – Community Profile Summary

Table C.1 Community comparison

| Table C.1 Commu  | linty companson   | T  |   | I   |
|--|---|--|---|---|
| Community (Survey region)  McClellanville (Charleston County, SC)            | Tourism Activity  No hotels; lodging is primarily vacation rentals; commitment to maintaining rural, historical culture; no easily accessible beaches | Nearby parks<br>and protected<br>areas<br>Cape Romain<br>NWR, Francis<br>Marion<br>National Forest | Involvement in mariculture* 21 SCDNR permits (all within CRNWR boundary)  | Conflicts?  Dependent on boat ramps in Cape Romain NWR  |
| Isle of Palms<br>(Charleston<br>County, SC)                                  | Large resort on the beach; a beach community associated with a larger destination (i.e., Charleston)  | Cape Romain<br>NWR; Charles<br>Pickney; Fort<br>Moultrie<br>National<br>Monument                   | 9 SCDNR permits<br>(Dewes Inlet;<br>Sullivans Island)   | Jet skis over<br>clam areas<br>ripping up<br>bags, wake<br>causing<br>problems for<br>collection  |
| Beaufort<br>(Beaufort<br>County, SC)   | Several hotels, and<br>historical waterfront;<br>beach attraction is<br>Huntington Island<br>State Park   | ACE Basin<br>NERR  | 13 SCDNR<br>permits; new<br>Oyster culture<br>development in<br>ACE Basin area  | Dependent on<br>boat ramps in<br>ACE Basin<br>NERR  |
| Cedar Key<br>(Levy County,<br>Dixie County,<br>Citrus County,<br>FL)         | Some small hotels,<br>mostly day trip<br>visitors; tourism<br>industry embraces<br>clam mariculture<br>industry and<br>ecotourism                     |  | High level (333 clam leases); successful clam farming industry with strong support from FL Sea Grant Extension                        | Some resident<br>concern about<br>trucks loading<br>in<br>neighborhood<br>areas                   |
| Appalachicola<br>(Franklin<br>County, Gulf<br>County, Wakulla<br>County, FL) | Low level of<br>development but<br>recently received<br>money from BP for<br>tourism advertising;<br>Nearby beach is St.<br>Georges                   | St. Marks NWR  | Moderate (44 clam<br>leases); primarily<br>traditional oyster<br>harvest - impacted<br>by post BP spill<br>overharvest and<br>drought | Traditional<br>oyster<br>fishermen are<br>negative about<br>introduction of<br>marine<br>farming. |
| Sebastian<br>(Indian River<br>County, FL)                                    | Some waterfront<br>resorts, but tourist<br>activity is low<br>relative to nearby<br>destinations closer to<br>the beach (e.g., Vero<br>Beach)         |  | Low/Moderate (31 clam leases); introduction of clam farming after net ban; decline after destructive hurricane.                       |   |

<sup>\*</sup>Note that permits in South Carolina are not comparable in size to leases in Florida (which are primarily 2 acres in size).

The following provides a more detailed summary profile of each community:

- Apalachicola: Apalachicola (including East Bay) has relied on an abundant harvest from Apalachicola Bay for generations. This harvest has included shrimp, oysters, blue crab, etc. Apalachicola is probably best known for its commercial oyster harvest. These oysters are harvested off of public grounds from small boats, typically crewed by 2-3 people, using hand-operated tongs. This is a rural community with a low level of tourism investment. A fishery disaster for Apalachicola oysters was declared in August, 2013 due to a 60 percent decline in oyster harvest and 44 percent reduction in revenues, from the previous year (2012) (Pillion, 2013; Florida Sea Grant, 2013) The decline in oysters is primarily attributed to drought, but also over harvest during the period following the Deepwater Horizon disaster (i.e., BP Oil Spill) in spring of 2010. In 2013, there was some interest in the in oyster aquaculture. However, there was substantial concern and resistance among the wild oyster harvesters who believed that permits for oyster aquaculture (focused on Alligator Harbor) could interfere with the fishery in Apalachicola Bay. The region is part of a multi county area considered impacted by the BP oil spill, and received funding from BP for tourism development and marketing as consolation for lost revenue in 2010 (Rockwell, 2012; Liverman, 2012). The region was also set to receive funding from Restore Act program, which was passed by Congress on June 29, 2012. The community has a large seafood festival in the fall, and attracts visitors stopping on their way to Panama City or heading to St. Georges Island and people seeking a quiet vacation in a rural area.
- Cedar Key: Cedar Key is a rural community, with a dependence on tourism and commercial fishing. The only wild harvested product in Cedar Key is oysters, and the rest of the seafood harvest is from clam farming. Aquaculture is the life-blood and tradition of the place and the third generation of clam farmers are now entering the industry. The community transitioned from commercial fishing to hard shell clam mariculture following the 1995 Florida "net ban". This successful transition was highlighted in Cedar Key Everlasting, which was designed to educate the public about the sustainable benefits of shellfish aquaculture (http://shellfish.ifas.ufl.edu/cedar-key-everlasting/). A University of Florida/Sea Grant extension specialist, with expertise in clam mariculture, has been assigned to the area for several years. The community is the clearest example (among all six communities selected for this study) of integration of the mariculture industry into the promotion and development of the destination for tourism. Cedar Key is still being marketed as an 'old time commercial fishing village' and there are several regionally famous seafood restaurants that highlight the local clam industry. This community was also eligible for Restore Act funding. In addition, Cedar Keys National Wildlife Refuge is important for ecotourism and viewed as providing good water quality for clam mariculture. The community has some small hotels and often attracts in-state, day trippers and tourists traveling the Florida coast. The two big consistent draws to Cedar Key are nature-based tourism and old-town charm (art shops, etc.). The other big draws are the Seafood Festival and the Art Festival.
- Sebastian: The Sebastian area was selected for inclusion in the study because it has a long tradition of commercial fishing. The commercial fishing industry in this community transitioned to clam mariculture following the "net ban" in 1995. However, the real estate boom in the 1990s and early 2000s resulted in a reduction of water-dependent access for fishers. People who lived close to water for fishing saw taxes rising due to purchase of neighboring land at high price for waterfront homes and were forced to sell due to inability to pay high taxes. This forced fishers to depend on public boat ramps. The clam farming industry in Sebastian thrived until 2004, when hurricane Frances wiped out the clam farms, boats, docks and the Sebastian fishing industry in general. There was some limited effort beginning in 2012 to expand clam farming in the area, but otherwise the industry has struggled. More recently, the Florida Organic Aquaculture LLC indicated plans to develop a colossal shrimp farm in Fellsmere. The Sebastian Working Waterfront Collaborative, a two-acre piece of property in the City of Sebastian, received funding from the Stan Mayfield Working Waterfronts Program, but

there were conflicts and problems (Carson, 2011). The region is part of "Florida's Research Coast" and Harbor Branch Oceanographic Institution and the UF IRREC (http://irrec.ifas.ufl.edu/aquaculture/) facility are nearby. The community has some moderately sized hotels/resort properties near the waterfront but does not seem to be as popular as Vero Beach and other neighboring resort areas closer to the beaches. The community has a seafood Festival in the fall.

- Beaufort: Beaufort/Port Royal is a tourist destination that has a mixture of involvement in mariculture and commercial fisheries and a historical waterfront, it is relatively undeveloped in the nearshore area (mostly marshes) and has a nearby popular beach area. The primary beach attraction is Huntington Island State Park, which is on a barrier island off the coast of Beaufort. There are 21 mariculture permit areas in coastal areas surrounding this community - in St. Helena, Paris Island/Broad River and Coosaw River. The Gullah Geechee fishing community is on St. Helena. There is a new oyster mariculture permit (2-year experimental) in the nearby Ace Basin area (St. Helena Sound), and this operation plans to use a new Oyster Growing cage system (pers comm Nancy Hadley, SCDNR and Taylor Sites). Beaufort/Port Royal has a long history of commercial fishing and recent dependence on shrimping (Jepson et al., 2002). However, price decline associated with imports has impacted the shrimp industry over the last ten years. The downtown Beaufort area is a historic district and significant effort has gone into development of the Henry C. Chambers Waterfront Park which is home to the Beaufort Water Festival, Taste of Beaufort, Shrimp Festival, and Gullah Festival. The Waddell Mariculture Research and Development Center is operated by Marine Resources Research Institute of the SCDNR and is located on the Colleton River in Beaufort County. They will schedule tours upon request. The area has a moderate level of tourism development, and has several hotels nearby. Visitors frequently include those attending graduation ceremonies at Marine Corps Recruit Depot on Parris Island. Tourism managers in the area are very familiar with the local fishing industry.
- Isle of Palms: This barrier island community has a relatively high level of tourism involvement and a secondary level of fishing dependence (Jepson et al., 2002). While nearby Mt. Pleasant (Shem Creek) was been classified as primarily involved in fishing (Jepson et al., 2002), this community has also suffered from decline of the shrimp industry. The Isle of Palms area currently has 9 mariculture permit areas (4 in the Dewes Inlet area; and 5 in Breach Inlet near Sullivans Island). Isle of Palms has a well-developed resort (Wild Dunes), attractive beaches, and several local restaurants. The area became a vacation spot in the late 19th century. In 1929, a bridge was constructed for automobile access. During Hurricane Hugo in 1989 much of the island was flooded by the storm surge. A beach restoration project was undertaken in 2008. The community is near Charleston, and some popular historic sites, including Fort Moultrie. There are fishing contests organized out of the Isle of Palms Marina. The main focus in their marketing strategy is their beach. Boating opportunities include kayaks, canoes, sailboats, fishing boats and even luxury harbor cruises. There are some conflicts between jet skiers and clam mariculture farmers (e.g. jet skis rip up net bags used for clams) and some marine farmers have concerns about the impacts of activities associated with the golf course at Wild Dunes Resort (e.g., dredging the inlet for sand).
- McClellanville: This community has traditionally derived its livelihood from the sea and coastal marshes by fishing, shrimping and oystering and was profiled as a primarily involved fishing dependent community by Jepson et al (2002). The community is currently more focused on mariculture (hard clams) and oysters off the coast. There are 21 SCDNR mariculture permits in coastal creeks feeding into Cape Romain Harbor to the north and Bulls Bay to the south, all within the boundary of Cape Romain National Wildlife Refuge (NWR) which has headquarters and a visitor's center in Awendaw (Sewee Visitor & Environmental Education Center). Clam farmers use the boat ramps in the NWR to access their sites. The community has a low level of tourism development (hotels and condominiums) relative to other coastal communities in South Carolina and is focused on

maintaining its rural, historical character. The area does not have a traditional sandy beach coastline like people might imagine when they think of nearby destinations like Myrtle Beach. There are two beaches in the Cape Romain NWR but the only nearby buildings are two lighthouses (both of which are on the National Register of Historic Places). While there are several vacation rentals which are houses and cottages, there are no hotels. The mayor of the town has been involved with the seafood industry and processing for many years, and also runs Carolina Seafood which is a full-service stop for commercial fishermen that finds good outlets (e.g., retail markets) for fresh local commercial catch. They also sell directly to consumers.

# Appendix D – Stakeholder Interview Summary

This summary highlights emergent themes that were used to inform development of the consumer surveys for tourists and residents.

- Seafood industry members feel that promoting the seafood brand name is important, but chefs/restaurants prefer to promote the seafood based on the region.
- Some ecotourism groups are interested in or are already highlighting local seafood, including a tour focused on local mariculture.
- There are differences between farmed and wild-caught seafood, for example, farmers believe maricultured clams are better than wild clams (taste, tenderness) also farmed clams are available year round, while wild clams and ovsters are not available during the summer.
- There is skepticism about the accuracy of sustainable seafood listings and consumer knowledge about seafood that is local (i.e., can consumers differentiate local from non-local?)
- Visitors who are repeats go to local favorite spots (i.e., less likely to change "plans"). People who are low income or visiting for military graduation are looking for familiar chains (even for seafood) but still go to some key local attractions and shops.
- Some consumers are buying direct from seafood harvesters
- Some locals, including nature centers, ecotourism businesses and marine operators are asked by visitors where to find local seafood.
- The only visible infrastructure of the industry is clam boats, and these are often dirty.
- From the marine farming perspective, there are some conflict issues with tourists or residents and these include boat wakes, competition at the boat ramp, recreational fishing or boating over clam permit areas, concerns about silting caused by coastal development and dredging, concerns about impacts of pesticides or herbicides on water quality, and concern that fishermen are more focused on environmental protection than residents or tourists.
- People looking for local seafood are more likely to go to certain regions on the coast than others.
- Some tourism promotion managers are aware mariculture is occurring, others are not aware.
- Shrimp boats are considered to be iconic for the coast, but there is concern about the decline in the fishery and loss of this "imagery" and culture. Consumers eating near the waterfront and viewing shrimp boats assume that the restaurants are serving local, but that is not always the case.
- Tourism promotors would like to know about consumer efforts to learn about seafood asking locals questions about seafood and trying to learn where seafood comes from.
- Stakeholders involved in management of coastal marine protected areas (i.e., NWR, NERR) noted that these areas are important to local water quality which supports the mariculture industry, and for tourists interested in visiting more rural areas.

# Appendix E – Focus Group Summary

Focus group respondents were generally uninformed about seafood – how to cook it, what to purchase, and the differences between farmed and wild-caught. However, they were open to learning more. Some had the general impression that farmed seafood was bad, poor quality or cheap, with specific reference to salmon and catfish, and that wild-caught was more expensive, higher quality and better tasting.

It is interesting because [of] the negative comments, I never bought farm raised seafood product. But only because of ignorance, I really do not know about how hygienic it is or what they feed them. I have heard some reports that salmon get some kind of grain that has some treatment to it. So I am just totally skeptical and rather go fresh. But if I knew more about it, I will definitely be open-minded. I am all about that sustainable stuff.

You know they sell salmon, tilapia, shrimp, all of that at the grocery store, that is where we buy it because we live in upstate, and if it says farm raised, I do not think I want that.

My understanding is that there is something else in the fish that is caught wild that counteracts the effect of the mercury. So you do not have to worry about the mercury.

Those who were aware of marine farming at the coastal destination thought it was good for the economy. However, most of the respondents were unaware that clam and oyster farming was occurring on the Florida or South Carolina coast, or about the difference/similarity between farmed and wild-caught clams and oysters. The idea that marine farming was occurring on the coast was appealing as a change that was sustainable.

I like that the farm raised fishing especially for shellfish is sort of changing the dynamic for what the coast is valuable for, so if we can start using some of that area for more earth friendly activity than putting up a condo, because marchland and shore lands is really good for places to do that kind of thing.

Some respondents were repeat visitors to the same destination on the coast. Some of them had traditions of purchasing local seafood, sometimes from the same local harvester or retailer, and cooking it in their favorite dish during the trip. Some have favorite a seafood restaurant that they always go to. Some regularly went to the docks when the boats were coming in.

Especially when the kids are little we went down there every afternoon to see what they caught, often they have things for sale we just take it back to the condo and cook it; so fresh. The difference between... they did not even taste like same fish.

Some visitors plan to purchase local seafood when they go to the Florida or South Carolina coast (eating seafood is a regular part of the trip).

You have your favorites. You always try to hit once.

Also, most respondents viewed seafood at the coast as being fresh seafood. This perception about fresh and local was partly associated with knowing the water that the seafood comes from and that there was little time between the harvest and purchase dates.

Here [in Clemson, SC] we do not get fresh seafood. But down there we have a conception that it is fresh, the ocean is right there, the restaurant is right there. It has got to be fresh. We always think that it will taste better because we are on vacation.

Respondents looked for local seafood restaurants or retailers and suggested that "local" was an attribute that symbolizes "good seafood". Some respondents used reviews available on the internet or a smartphone browser to find places to eat seafood or relied on advice from locals to determine where to find/eat local seafood. Some respondents assumed that seafood at the coast was local and did not typically ask the restaurant about the source. Also while safety, local and freshness were important qualities, those less experienced with seafood lacked confidence about how to determine if seafood is actually local or good quality.

Some respondents indicated that they associated knowing where the seafood comes from with better quality, that they were willing to pay the higher price based on the story, and that this local seafood tastes better. The atmosphere (e.g., watching the boats) was considered an important part of the seafood eating experience.

Variety in types of seafood was important (i.e., it's not just about shrimp), and respondents expressed interest in clams, oysters, crab, and finfish.

# Appendix F – Consumer Survey Results

Table F.1. Response rates for tourist and resident survey groups in Florida and South Carolina

| <b>Survey Group</b>    | Invites          | <b>Completed surveys</b> | <b>Response Rate</b> |
|------------------------|------------------|--------------------------|----------------------|
| FL Coastal Tourist     | 491 <sup>2</sup> | 273                      | 55.6%                |
| FL Resident            | 732 <sup>1</sup> | 163                      | 22.3%                |
| FL Resident Intercepts | $359^{2}$        | 141                      | 39.3%                |
| SC Coastal Tourist     | $856^{2}$        | 362                      | 42.3%                |
| SC Resident            | $1654^{1}$       | 409                      | 24.7%                |

Purchased database email invites are based on "click through", <sup>2</sup>Invites are based on intercepts and do not currently include email bounces.

Table F.2. Number of completed tourist and resident surveys for each community.

| _   | Tourist or Resident |              |  |
|---|---------------------|--------------|--|
|   | Tourist             | Resident     |  |
| Community   | (% state, total)    | (% of State) |  |
| Cedar Key, FL (Levy, Dixie, Citrus)               | 146 (54%)           | 73 (24%)     |  |
| Apalachicola, FL (Franklin, Gulf, Wakulla County) | 88 (32%)            | 107 (36%)    |  |
| Sebastian, FL (Indian River)                      | 38 (14%)            | 121 (40%)    |  |
| Total FL  | 272 (43%)           | 301 (42%)    |  |
| Beaufort (Beaufort)                               | 117 (33%)           | 156 (38%)    |  |
| Isle of Palms/McClellanville (Charleston)         | 240 (67%)           | 254 (62%)    |  |
| Total SC  | 357 (57%)           | 410 (58%)    |  |
| TOTAL   | 629                 | 711          |  |

Table F.3. Demographic profiles for South Carolina and Florida tourist and resident subgroups.

|                 |                                  | South C    | Carolina   | Florida    |            |  |
|-----------------|----------------------------------|------------|------------|------------|------------|--|
| Den             | nographic                        | Tourist    | Resident   | Tourist    | Resident   |  |
| Age             | Mean                             | 48.9       | 61.3       | 49.0       | 55.1       |  |
| Gender          | Male                             | 153 (51%)  | 176 (53%)  | 89 (37%)   | 100 (38%)  |  |
|                 | Female                           | 146 (49%)  | 158 (47%)  | 153 (63%)  | 161 (62%)  |  |
|                 | Total                            | 299 (100%) | 334 (100%) | 242 (100%) | 261 (100%) |  |
| Education Level | Less than 12th grade, no diploma | 1 (0%)     | 0 (0%)     | 1 (0%)     | 6 (2%)     |  |
|                 | High school graduate             | 19 (6%)    | 16 (5%)    | 20 (8%)    | 31 (12%)   |  |
|                 | Some college, no degree          | 53 (18%)   | 67 (20%)   | 39 (16%)   | 66 (25%)   |  |
|                 | Associate degree                 | 34 (11%)   | 31 (9%)    | 35 (15%)   | 40 (15%)   |  |
|                 | Bachelor's degree                | 87 (29%)   | 116 (35%)  | 76 (32%)   | 58 (22%)   |  |
|                 | Graduate or professional degree  | 108 (36%)  | 105 (31%)  | 67 (28%)   | 62 (24%)   |  |
|                 | Total                            | 302 (100%) | 335 (100%) | 238 (100%) | 263 (100%) |  |

|                   |  | South C     | Carolina    | Flor        | rida       |
|-------------------|--|-------------|-------------|-------------|------------|
| Dem               | ographic                                   | Tourist     | Resident    | Tourist     | Resident   |
| Employment        | Employed (FT)                              | 174 (58%)   | 129 (39%)   | 135 (56%)   | 112 (42%)  |
| Status            |  |             |             |             |            |
|                   | Employed (PT)                              | 25 (8%)     | 24 (7%)     | 17 (7%)     | 20 (8%)    |
|                   | Student                                    | 18 (6%)     | 3 (1%)      | 9 (4%)      | 5 (2%)     |
|                   | Homemaker                                  | 6 (2%)      | 12 (4%)     | 5 (2%)      | 9 (4%)     |
|                   | Unemployed                                 | 16 (5%)     | 9 (3%)      | 10 (4%)     | 6 (2%)     |
|                   | Retired                                    | 58 (19%)    | 141 (42%)   | 53 (22%)    | 96 (36%)   |
|                   | Other                                      | 3 (1%)      | 17 (5%)     | 12 (5%)     | 16 (6%)    |
|                   | Total                                      | 300 (100%)  | 335 (100%)  | 241 (100%)  | 264 (100%) |
| Marital status    | Never married                              | 53 (18%)    | 17 (5%)     | 56 (23%)    | 34 (13%0   |
|                   | Now married                                | 220 (74%)   | 250 (75%)   | 143 (60%)   | 169 (65%)  |
|                   | Married but separated                      | 4(1%)       | 5 (2%)      | 4 (2%)      | 2 (1%0     |
|                   | Widowed                                    | 2 (1%)      | 21 (6%)     | 6 (2%)      | 20 (8%)    |
|                   | Divorced                                   | 19 (6%)     | 41 (12%)    | 30 (13%)    | 34 (13%)   |
|                   | Total                                      | 298 (100%)  | 334 (100%)  | 239 (100%)  | 259 (100%) |
| Ethnicity/Race    | White                                      | 263 (88%)   | ND          | 219 (91%)   | ND         |
|                   | Black, African                             | 15 (5%)     | ND          | 10 (4%)     | ND         |
|                   | American, or Negro                         | - ( /       |             | - (,        |            |
|                   | American Indian or                         | 2 (1%)      | ND          | 0 (0%)      | ND         |
|                   | Alaska Native                              | _ (-,-,     |             | 5 (5,5)     |            |
|                   | Asian (Chinese,                            | 12 (4%)     | ND          | 4 (2%)      | ND         |
|                   | Filipino, Japanese,                        | 12 (170)    | 112         | . (270)     | 112        |
|                   | Korean, Vietnamese)                        |             |             |             |            |
|                   | Native Hawaiian                            | 0 (0%)      | ND          | 0 (0%)      | ND         |
|                   | Other                                      | 6 (2%)      | ND          | 8 (3%)      | ND         |
|                   | Total                                      | 298 (100%)  | ND          | 241 (100%)  | ND         |
| Household income  | < \$10,000                                 | 7 (3%)      | 8 (3%)      | 5(2%)       | 7 (3%)     |
| Trousenoid income | \$10,000 - \$14,999                        | 3 (1%)      | 4 (1%)      | 5(2%)       | 9 (4%)     |
|                   | \$15,000 - \$24,999                        | 7 (3%)      | 8(3%)       | 14 (6%)     | 12 (5%)    |
|                   | \$25,000 - \$34,999                        | 11 (4%)     | 18 (6%)     | 22 (10%)    | 36 (16%)   |
|                   | \$35,000 - \$49,999                        | 16 (6%)     | 31 (10%)    | 35 (16%)    | 38 (16%)   |
|                   | \$50,000 - \$74,999                        | 64 (23%)    | 53 (18%)    | 49 (22%)    | 53 (23%)   |
|                   | \$75,000 - \$74,999                        | 50 (18%)    | 77 (25%)    | 41 (18%)    | 28 (12%)   |
|                   | \$100,000 - \$199,999                      | 89 (32%)    | 84 (28%)    | 44 (19%)    | 44 (19%)   |
|                   | \$200,000 - \$199,999<br>\$200,000 or more | 26 (10%)    | 20 (6%)     | 11 (5%)     | 5(2%)      |
|                   | Total                                      | 20 (10%)    | 303 (100%)  | 226 (100%)  | 232 (100%) |
|                   | 10lal                                      | 2/3 (10070) | 303 (10070) | 220 (10070) | 232 (100%) |

Table F.4. Frequency of seafood consumption at home by tourists and residents (Chi-square)

|                  |   | Frequency a | at home – at home  | 1            |
|------------------|---|-------------|--------------------|--------------|
| Subgroup         | > Once<br>a week                            | Once a week | Once every 2 weeks | Once a month |
| Tourist (N=516)  | 17%   | 30%         | 19%                | 34%          |
| Resident (N=642) | 22%   | 35%         | 22%                | 21%          |
|                  | Frequency at home - restaurant <sup>2</sup> |             |                    |              |
|                  | > Once<br>a week                            | Once a week | Once every 2 weeks | Once a month |
| Tourist (N=506)  | 7%  | 17%         | 24%                | 52%          |
| Resident (N=613) | 7%  | 23%         | 28%                | 41%          |

 $<sup>^{1}</sup>$  X<sup>2</sup> (3, N = 1158) = 27.80, p < .001;  $^{2}$  X<sup>2</sup> (3, N = 1119) = 12.69, p < .05.

Table F.5. Positive and negative beliefs of tourists and residents about marine farming impacts on the community/destination (t-test)

|   | Tourist (N=519)   |      | Resident | (N=591) |
|---|-------------------|------|----------|---------|
| Marine farming                                  | Mean <sup>1</sup> | SD   | Mean     | SD      |
|   |                   |      |          |         |
| Positive  |                   |      |          |         |
| creates local jobs.                             | 3.67              | 0.79 | 3.75     | 0.72    |
| helps the local economy.                        | 3.65              | 0.76 | 3.69     | 0.75    |
| increases availability of sustainable local     |                   |      |          |         |
| seafood.  | 3.61              | 0.74 | 3.69     | 0.73    |
| helps preserve the fishing culture.             | 3.35              | 0.79 | 3.38     | 0.83    |
| helps preserve the rural culture.               | 3.25              | 0.78 | 3.22     | 0.80    |
| benefits marine wildlife.                       | 3.24              | 0.76 | 3.30     | 0.81    |
| enhances recreational fishing.                  | 3.23              | 0.74 | 3.15     | 0.78    |
| enhances the marine environment.                | 3.12              | 0.75 | 3.15     | 0.76    |
| attracts tourism to the area.*                  | 2.99              | 0.81 | 2.86     | 0.86    |
| helps improve local water quality.              | 2.99              | 0.75 | 3.00     | 0.81    |
| makes the scenery interesting.                  | 2.92              | 0.71 | 2.85     | 0.79    |
| increases my personal attachment to the area.   | 2.83              | 0.83 | 2.81     | 0.91    |
| Composite Mean                                  | 3.24              | 0.56 | 3.24     | 0.58    |
| Negative  |                   |      |          |         |
| restricts adjacent land uses.                   | 3.10              | 0.65 | 3.17     | 0.71    |
| conflicts with marine boating.                  | 2.82              | 0.74 | 2.78     | 0.74    |
| causes me to use other areas for my recreation. | 2.68              | 0.80 | 2.68     | 0.80    |
| Composite Mean <sup>2</sup>                     | 2.75              | 0.68 | 2.73     | 0.68    |

<sup>&</sup>lt;sup>1</sup>Scale is 1=Strongly Disagree, 5=Strongly Agree; <sup>2</sup>Does not include "restrict adjacent land uses" due to low Chronbach's alpha with this item included; \*Significantly different at p<.05.

Table F.6. General beliefs among tourists and residents about the quality of farmed vs. wild seafood (t-test)

| Farmed seafood is                | Tourist (N=502)   |      | Reside | ent (N=619) |
|----------------------------------|-------------------|------|--------|-------------|
| than wild caught seafood.        | Mean <sup>1</sup> | SD   | Mean   | SD          |
| more available for purchase*     | 3.54              | 0.89 | 3.36   | 0.83        |
| more environmentally sustainable | 3.37              | 0.92 | 3.35   | 0.92        |
| a better value for the money*    | 3.23              | 0.84 | 3.07   | 0.87        |
| safer                            | 2.98              | 0.89 | 2.92   | 0.91        |
| cleaner                          | 2.96              | 0.92 | 2.92   | 0.94        |
| fresher                          | 2.96              | 0.88 | 2.87   | 0.90        |
| healthier                        | 2.85              | 0.92 | 2.79   | 0.90        |
| better tasting                   | 2.80              | 0.85 | 2.68   | 0.79        |
| better in quality                | 2.79              | 0.91 | 2.72   | 0.89        |

<sup>&</sup>lt;sup>1</sup>Scale is 1=Strongly Disagree, 5=Strongly Agree; \*Significantly different at p<.05.

Table F.7. Tourist and resident knowledge about marine farming (t-test)

|   | Tourist (N=551) |      | Resid<br>(N=6 |      |
|---|-----------------|------|---------------|------|
| Knowledge about Marine Farming                              |                 | SD   | Mean          | SD   |
| Quality of marine farmed and wild-caught seafood*           | 1.76            | 0.99 | 2.08          | 1.08 |
| Economic impacts of the marine farming industry*            | 1.70            | 0.96 | 1.98          | 1.09 |
| Safety of seafood produced by marine farming*               | 1.70            | 0.95 | 1.98          | 1.03 |
| Environmental sustainability of marine farms*               | 1.68            | 0.90 | 1.95          | 1.04 |
| Nutritional benefits of seafood produced by marine farming* | 1.62            | 0.92 | 1.88          | 1.02 |
| History of marine farming*                                  | 1.40            | 0.76 | 1.71          | 1.03 |
| When marine farmed seafood is available for purchase*       | 1.56            | 0.93 | 1.82          | 1.06 |
| Growing techniques used by marine farmers*                  | 1.54            | 0.86 | 1.94          | 1.08 |
| Where marine farmed areas are located in the water*         | 1.47            | 0.84 | 2.02          | 1.16 |
| Marine farming regulations and permitting*                  | 1.32            | 0.73 | 1.52          | 0.86 |
| Composite mean*   | 1.57            | 0.74 | 1.89          | 0.91 |

<sup>&</sup>lt;sup>1</sup>Scale is 1=Not at all knowledgeable, 5=Extremely knowledgeable; \*Significantly different at p<.05

Table F.8. Tourist and resident ratings of the importance of seafood source labeling (t-test)

| How important is the following information to your | Tourist (1        | N=531) | Resident (N=640) |      |  |
|--|-------------------|--------|------------------|------|--|
| decision on which seafood to purchase?             | Mean <sup>1</sup> | SD     | Mean             | SD   |  |
| When the seafood was harvested*                    | 4.07              | 1.09   | 4.35             | 0.92 |  |
| Where the seafood was harvested*                   | 3.66              | 1.16   | 4.13             | 0.93 |  |
| How the seafood was harvested*                     | 3.20              | 1.26   | 3.69             | 1.13 |  |
| Is labelled "wild-caught"*                         | 3.10              | 1.38   | 3.65             | 1.23 |  |
| Who harvested the seafood*                         | 2.89              | 1.27   | 3.49             | 1.25 |  |
| Is labelled "marine farmed"*                       | 2.85              | 1.34   | 3.32             | 1.31 |  |
| Has a recognizable brand name*                     | 2.34              | 1.33   | 2.86             | 1.32 |  |

<sup>&</sup>lt;sup>1</sup>Scale is 1=Not Important, 5=Extremely Important; \*Significantly different at p<.05.

Table F.9. For people who eat seafood, a comparison of tourist and resident interest in marine farming related opportunities in the community (t-test).

| What is the likelihood that you would engage in the following   | Tourist           |      | Resident |      |
|---|-------------------|------|----------|------|
| marine farming related opportunities, if available in or near   | (N=466)           |      | (N=552)  |      |
| your coastal region?  | Mean <sup>1</sup> | SD   | Mean     | SD   |
| Eat farmed seafood at a seafood festival                        | 3.65              | 1.18 | 3.51     | 1.12 |
| Tour a marine farm*   | 3.15              | 1.23 | 3.44     | 1.19 |
| Listen to a tour provider talk about marine farming             | 3.12              | 1.17 | 3.28     | 1.13 |
| Attend a culinary event at a local marine farm with farmers and |                   |      |          |      |
| chefs present   | 3.11              | 1.36 | 3.24     | 1.23 |
| Bring home fresh seafood from a marine farm*                    | 3.09              | 1.35 | 3.38     | 1.14 |
| Talk to a marine farmer*  | 3.04              | 1.16 | 3.31     | 1.12 |
| Go to a restaurant where you can learn the story behind farmed  |                   |      |          |      |
| seafood   | 3.04              | 1.30 | 3.06     | 1.18 |
| Follow a "trail" focused on marine farming                      | 2.95              | 1.18 | 3.05     | 1.13 |
| Listen to a chef talk about farmed seafood*                     | 2.90              | 1.29 | 3.15     | 1.18 |
| Use a map with marine farm areas so I can avoid them while      |                   |      |          |      |
| boating*  | 2.74              | 1.17 | 3.02     | 1.20 |
| Use a smartphone app to find local farmed seafood*              | 2.74              | 1.35 | 2.39     | 1.21 |
| Visit a processing plant for farmed seafood*                    | 2.69              | 1.25 | 3.00     | 1.20 |
| Use a travel guide find local farmed seafood                    | 2.64              | 1.30 | 2.52     | 1.14 |
| Attend a cooking class on local farmed seafood                  | 2.60              | 1.32 | 2.70     | 1.20 |
| Bring home canned or frozen seafood products from a marine      |                   |      |          |      |
| farm*   | 2.48              | 1.24 | 2.82     | 1.17 |
| Order farmed seafood to be mailed to me from where I visited    | 2.35              | 1.13 | 2.46     | 1.10 |

<sup>&</sup>lt;sup>1</sup>Scale is 1=Extremely Unlikely, 5=Extremely Likely; \*Significantly different at p<.05.

Table F.10. Tourist and resident support for marine farming in the community (t-test)

| How did marine farming operations in your most recent coastal destination/in your community affect your | Tourist (N=549)   |      | Resident (N=619) |      |
|---|-------------------|------|------------------|------|
| opinions about the area in relation to the factors mentioned?   | Mean <sup>1</sup> | SD   | Mean             | SD   |
| Your support of the local seafood industry*   | 3.47              | 0.81 | 3.61             | 0.81 |
| Your willingness to revisit/Your interest in continuing to live in the area                             | 3.36              | 0.73 | 3.35             | 0.70 |
| Your perception of the area   | 3.28              | 0.70 | 3.32             | 0.70 |
| The natural environment   | 3.22              | 0.67 | 3.19             | 0.73 |
| Your key recreational activities*   | 3.17              | 0.59 | 3.08             | 0.55 |
| Its impact on the scenery*  | 3.15              | 0.61 | 3.05             | 0.62 |
| Your overall support of marine farming in the area  | 3.39              | 0.80 | 3.47             | 0.87 |
| Composite mean <sup>2</sup>   | 3.29              | 0.60 | 3.29             | 0.58 |

<sup>&</sup>lt;sup>1</sup>Scale is 1=Very Negative, 5=Very Positive; <sup>2</sup>Composite mean includes "Your willingness to revisit" for tourists and "Your interest in continuing to live in the area" for residents; \*Significantly different at p<.05

Table F.11. Summary of linear regression analyses for variables predicting support for marine farming in the community (OLS)

|                         | Tourists |         |         | Residents |          |          |
|-------------------------|----------|---------|---------|-----------|----------|----------|
| Variable                | В        | SE B    | Beta    | В         | SE B     | Beta     |
| (Constant)              | 1.539    | 0.143   |         | 1.276     | 0.113    |          |
| Belief (pos)            | 0.480    | 0.041   | 0.461** | 0.664     | 0.028    | 0.674**  |
| Knowledge               | 0.147    | 0.034   | 0.185** | 0.100     | 0.020    | 0.160**  |
| Awareness <sup>1</sup>  | 0.134    | 0.050   | 0.113*  | 0.039     | 0.038    | 0.033    |
| Beliefs (neg)           | -0.038   | 0.033   | -0.043  | -0.129    | 0.023    | -0.151** |
| $R^2$                   |          | .329    |         |           | .527     |          |
| Adjusted R <sup>2</sup> |          | .324    |         |           | .594     |          |
| F                       |          | 60.16** |         |           | 204.72** |          |

<sup>&</sup>lt;sup>1</sup>Dummy coded (0=No, 1=Yes); \*Significant at p<.01; \*\*Significant at p<.001

# Appendix G – Tourist Survey

You were selected to receive this questionnaire because you provided your contact information to a Clemson University or University of Florida representative while you were visiting the South Carolina or Florida coast. Thank you for agreeing to participate. Your input is highly valued. The questionnaire is expected to take about 15 minutes. When you complete the questionnaire you will have the option of entering the lottery for a \$100 gift card. The chance to win a gift card is available only to participants in this study. Please click NEXT to learn more about this study, your rights as a participant and confidentiality.

The Department of Parks, Recreation and Tourism Management at Clemson University is conducting this research to learn what tourists think about local seafood production and harvest in coastal communities that they visit. Results from the questionnaire will be summarized and included in research reports and published papers. These will be shared with the coastal communities involved in the study. Information specific to individuals will not be included in the summary or any other reports or papers produced from the study. Your answers to the questionnaire are very important to us. There are no known risks associated with this research. Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You are assured of complete confidentiality. At the end of the questionnaire, you may decide to provide your email address to participate in the drawing for a \$100 gift card. That email address and the one you provided initially will be deleted as soon as the data collection is complete and will never be shared. Your email address will never be placed on the questionnaire itself. Please click NEXT to respond to the questionnaire.

YOUR RECENT TRIP: The following questions ask you about your most recent trip to the coast, during which you were intercepted by a representative from Clemson University or University of Florida and asked to participate in this survey.

Please indicate the state in which you were intercepted at the coast. (This question requires a response so you are directed to the appropriate survey version)

- O Florida (1)
- O South Carolina (2)

If Florida Is Selected, Then Skip to Please indicate the name of the commu...If South Carolina Is Selected, Then Skip to Please indicate the name of the commu...

| Ple         | ease indicate the name of the community closest to where you were intercepted on the Florid   |
|-------------|---|
| coa         |   |
|             | Cedar Key, FL (1)   |
|             | Apalachicola, FL (2)  |
|             | Sebastian, FL (3)   |
|             | edar Key, FL Is Selected, Then Skip to Including this most recent trip, howIf Apalachicola, FL Is   |
|             | ected, Then Skip to Including this most recent trip, howIf Sebastian, FL Is Selected, Then Skip to  |
| Inc         | luding this most recent trip, how   |
| Ca          | ease indicate the name of the community closest to where you were intercepted on the South rolina coast   |
|             | Beaufort/Hilton Head, SC (1)  |
|             | Isle of Palms/Charleston, SC (2)  |
| )           | McClellanville, SC (3)  |
| loc<br>trip | eluding this most recent trip, how many times in the last two years have you visited this ration on the coast? (Fill in box with # below) Example: 1 = first trip, 2 = first plus another trip  nat was the main purpose of this most recent trip to the coast? |
|             | Vacation (1)  |
| O           | Business (2)  |
| O           | Visit friends & relatives (3)   |
| O           | Attending a special event (4)   |
| O           | Go to the beach (5)   |
| O           | Go boating (6)  |
| O           | Go fishing (7)  |
| O           | Eat out (8)   |
| O           | Visit second home/cottage/condo (9)   |
| O           | Visit attraction(s) (10)  |
| O           | Other (Please specify) (11)   |
|             |   |

|       | this most recent trip, how many nights did you stay in this location on the                     |
|-------|---|
| coa   |   |
|       | Day trip/no overnight (1)   |
|       | I stayed nights (fill in box with # of nights) (2)  |
| If Da | ay trip/no overnight Is Selected, Then Skip to With whom did you travel, on this mosIf I stayed |
|       | nights (fill Is Selected, Then Skip to What type of accommodations did you u                    |
| ** ** |   |
|       | at type of accommodations did you use on this most recent trip to the coast?                    |
| ,     | ease check all that apply) Rented cabin/cottage/home (1)  |
|       |   |
|       | Condominium (2)   |
|       | Time Share (3)  |
|       | Home of Friends/Relatives (4)   |
|       | Motel (5)   |
|       | Hotel (6)   |
|       | Resort (7)  |
|       | Campground (8)  |
|       | RV (9)  |
|       | Personal Vacation Home (10)   |
|       | Bed & Breakfast (11)  |
|       | Other (Please specify) (12)   |
| Wit   | h whom did you travel, on this most recent trip to the coast? (Please check all                 |
|       | apply)  |
|       | Alone (1)   |
|       | Spouse/Partner (2)  |
|       | Tour Group (3)  |
|       | Friends (4)   |
|       | Business group (5)  |
|       | Immediate family (including children) (6)   |
|       | Relatives (7)   |
|       | Other (Please specify) (8)  |
| Hov   | w many people, including yourself, were in your group, on this most recent trip to              |
|       | coast?  |
|       | Adults (indicate # in box): (1)   |
|       | Children - under 18 (indicate # in box): (2)  |

| Ho   | ow did you travel to your primary destination for this most recent trip to the   |  |  |  |  |
|------|--|--|--|--|--|
| coa  | ast?   |  |  |  |  |
| O    | Airplane & then rental car (1)   |  |  |  |  |
| O    | Airplane & then shuttle bus or van (2)   |  |  |  |  |
| O    | Personal car/motor vehicle (3)   |  |  |  |  |
| O    | Recreational Vehicle (4)   |  |  |  |  |
| O    | Boat (5)   |  |  |  |  |
| O    | Other (Please specify) (6)   |  |  |  |  |
|      | DUR GENERAL INTEREST IN SEAFOOD The following questions ask you about eating afood and your seafood preferences at home and when you are visiting the coast. |  |  |  |  |
| Do   | you eat seafood?   |  |  |  |  |
|      | Yes (5)  |  |  |  |  |
| O    | No (6)   |  |  |  |  |
| O    | I used to eat seafood, but I no longer do (7)  |  |  |  |  |
| If Y | es Is Selected, Then Skip to YOUR GENERAL PREFERENCES FOR SEAFOODIf No Is Selected, Then   |  |  |  |  |
| Ski  | Skip to End of Block If I used to eat seafood, but Is Selected, Then Skip to End of Block  |  |  |  |  |

YOUR GENERAL PREFERENCES FOR SEAFOOD: Some of the following questions ask about seafood that is local or produced by marine farming. Local refers to seafood that is caught or grown in the coastal state where you visited. Marine farming refers to cultivation or growing of marine organisms for food in saltwater (raising the product from egg to adult). This occurs in coastal waters and/or in tanks or pools filled with saltwater. Marine farming is a form of aquaculture that is also called "mariculture".

In your hometown, how frequently do you eat seafood?

| Ž                           | Once a day (1) | Several times a<br>week (2) | Once a week (3) | Once every 2<br>weeks (4) | Once a month<br>(5) |
|-----------------------------|----------------|-----------------------------|-----------------|---------------------------|---------------------|
| Prepared at home (1)        | •              | •                           | •               | •                         | •                   |
| Prepared at restaurants (2) | •              | •                           | •               | •                         | 0                   |

When you visit the coast, please indicate how important it is that your seafood is...

| İ                               | Not Important<br>(1) | Slightly<br>Important (2) | Somewhat<br>Important (3) | Important (4) | Very Important<br>(5) |
|---------------------------------|----------------------|---------------------------|---------------------------|---------------|-----------------------|
| Harvested locally (1)           | •                    | •                         | •                         | •             | •                     |
| Wild-caught (2)                 | •                    | •                         | O .                       | •             | O                     |
| Farmed in marine waters (3)     | 0                    | 0                         | 0                         | 0             | •                     |
| Environmentally sustainable (4) | •                    | •                         | •                         | •             | •                     |
| Safe from pollutants (5)        | •                    | •                         | •                         | •             | •                     |

When you visit the coast, please indicate your level of confidence in your ability to determine if

the seafood you are purchasing is...

|                                 | Not confident<br>(1) | Slightly<br>confident (2) | Somewhat confident (3) | Confident (4) | Very confident<br>(5) |
|---------------------------------|----------------------|---------------------------|------------------------|---------------|-----------------------|
| Harvested locally (1)           | •                    | •                         | •                      | •             | •                     |
| Wild-caught (2)                 | <b>O</b>             | •                         | •                      | •             | O                     |
| Farmed in marine waters (3)     | 0                    | •                         | 0                      | 0             | 0                     |
| Environmentally sustainable (4) | •                    | •                         | •                      | •             | O                     |
| Safe from pollutants (5)        | •                    | •                         | •                      | •             | O                     |

How important is the following information to your decision on which seafood to purchase when you visit the coast?

| you visit the co                    | Not Important | Slightly      | Somewhat      | Important (4) | Extremely     |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|
|                                     | (1)           | Important (2) | Important (3) |               | Important (5) |
| How the seafood was harvested (1)   | 0             | •             | •             | •             | 0             |
| When the seafood was harvested (2)  | •             | 0             | 0             | 0             | <b>O</b>      |
| Where the seafood was harvested (3) | 0             | 0             | 0             | 0             | •             |
| Who harvested the seafood (4)       | O             | 0             | 0             | 0             | 0             |
| Has a recognizable brand name (5)   | •             | •             | •             | •             | 0             |
| Is labelled "wild-caught" (6)       | •             | •             | •             | •             | <b>O</b>      |
| Is labelled "marine farmed" (7)     | 0             | 0             | 0             | 0             | <b>O</b>      |

The following questions ask about seafood you ate during your most recent trip to the coast (where you were asked to participate in this survey)

Before you left on your trip to the coast, did you plan to eat local seafood at coast? ("Local" is seafood that is caught or grown in the coastal state you visited.)

**O** Yes (1)

O No (2)

While you were at the coast, did you eat seafood?

• I ate seafood at the coast. (1)

O I did not eat seafood at the coast (2)

If I ate seafood at the coast. Is Selected, Then Skip to How many times did you eat seafood du...If I did not eat seafood at th... Is Selected, Then Skip to If available at the coastal destinat...

How many times did you eat seafood during this most recent trip to the coast?

Please indicate which types of seafood you ate on this most recent trip (by checking in column A). For those seafood items you ate, please indicate if you knew that this seafood was a product of marine farming (column B), if you knew that it was "local" (column C) and if you would eat it again (column D).

|  | A. I ate this on my<br>most recent trip (1) | B. I knew it was a<br>marine farmed<br>product (2) | C. I knew it was locally harvested (3) | D. I would eat this product again. (4) |
|--|---|--|--|--|
| Clams (cooked) (1)   |   |  |  |  |
| Clams (raw) (2)  |   |  |  |  |
| Oysters (cooked) (3)                                       |   |  |  |  |
| Oysters (raw) (4)  |   |  |  |  |
| Blue Crab (5)  |   |  |  |  |
| Stone Crab (6)   |   |  |  |  |
| Lobster (7)  |   |  |  |  |
| Scallops (8)   |   |  |  |  |
| Mussels (9)  |   |  |  |  |
| Shrimp (10)  |   |  |  |  |
| Fish (e.g., cod,<br>flounder,<br>grouper,<br>snapper) (11) |   |  |  |  |
| Other (Please specify) (12)                                |   |  |  |  |

If available at the coastal destination, what is the likelihood that you would engage in the following marine farming opportunities during your visit to the coast? Please indicate likelihood

on a scale of 1 = "Extremely unlikely" to 5 = "Extremely likely".

| on a scale of 1   | on a scale of 1 – Extremely unificely to 3 – Extremely fixely. |              |             |            |                         |  |
|---|--|--------------|-------------|------------|-------------------------|--|
|   | Extremely<br>Unlikely (1)                                      | Unlikely (2) | Neutral (3) | Likely (4) | Extremely Likely<br>(5) |  |
| Attend a culinary event at a local marine farm with farmers and chefs present (4) | 0  | 0            | 0           | 0          | 0                       |  |
| Listen to a<br>chef talk<br>about farmed<br>seafood (5)                           | •  | •            | •           | •          | •                       |  |
| Bring home<br>fresh seafood<br>from a marine<br>farm (6)                          | 0  | 0            | 0           | •          | 0                       |  |
| Bring home canned or frozen seafood products from a marine farm                   | O  | 0            | 0           | O          | 0                       |  |
| Eat farmed<br>seafood at a<br>seafood<br>festival (8)                             | •  | •            | •           | •          | 0                       |  |
| Use a travel<br>guide find<br>local farmed<br>seafood (10)                        | •  | •            | •           | •          | •                       |  |
| Use a smartphone app to find local farmed seafood (11)                            | •  | •            | •           | •          | •                       |  |
| Attend a cooking class on local   | •  | •            | •           | •          | •                       |  |

| farmed<br>seafood (14)  |   |   |   |   |   |
|---|---|---|---|---|---|
| Go to a<br>restaurant<br>where you<br>can learn the<br>story behind<br>farmed<br>seafood (15) | • | • | • | • | • |

Please indicate your views on farmed seafood (grown in the United States) when compared to wild-caught seafood (harvested in the United States). Farmed seafood is \_\_\_\_\_ than wild-caught seafood.

|  | Strongly<br>Disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly Agree<br>(5) |
|--|--------------------------|--------------|-------------|-----------|-----------------------|
| better tasting (1)                     | •                        | •            | •           | •         | •                     |
| healthier (2)                          | •                        | •            | •           | •         | O                     |
| cleaner (3)                            | •                        | <b>O</b>     | •           | •         | •                     |
| safer (4)                              | •                        | •            | •           | •         | O                     |
| fresher (5)                            | •                        | •            | •           | •         | O                     |
| better in quality (6)                  | •                        | •            | •           | •         | •                     |
| more environmentally sustainable (7)   | •                        | •            | •           | •         | •                     |
| more available for purchase (8)        | •                        | •            | •           | •         | •                     |
| a better value<br>for the money<br>(9) | •                        | •            | •           | •         | •                     |

YOUR UNDERSTANDING ABOUT MARINE FARMING The following questions ask you about marine farming. Marine farming refers to cultivation or growing of marine organisms for food in saltwater (raising the product from egg to adult). This occurs in coastal waters and/or in tanks or pools filled with saltwater. Marine farming is a form of aquaculture that is also called "mariculture".

| Did you hear the term | "mariculture" | before participati | ng in this | survey? |
|-----------------------|---------------|--------------------|------------|---------|
| O Yes (1)             |               |                    |            |         |

O No (2)

Did you know that marine farming was occurring in the coastal waters near the area you visited, during your most recent trip to the coast?

- O Yes, I knew this before I traveled to the area. (1)
- O I did not know when I planned the trip, but learned this during the trip (2)
- O No (3)

Please rate your knowledge (relative to the average person) about marine farmed seafood in or near the coastal region that you most recently visited. Rate each of the following statements, on a scale of 1 = "Not at all knowledgeable" to 5 = "Extremely knowledgeable".

|   | Not at all Knowledgeable (1) | Slightly<br>Knowledgeable<br>(2) | Somewhat<br>Knowledgeable<br>(3) | Very<br>Knowledgeable<br>(4) | Extremely<br>Knowledgeable<br>(5) |
|---|------------------------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|
| Where marine<br>farmed areas<br>are located in<br>the water (1)   | •                            | •                                | •                                | •                            | •                                 |
| Growing techniques used by marine farmers (2)                     | •                            | •                                | •                                | •                            | •                                 |
| Environmental sustainability of marine farms (3)                  | •                            | •                                | •                                | •                            | •                                 |
| Economic impacts of the marine farming industry (4)               | •                            | •                                | •                                | •                            | •                                 |
| Marine farming regulations and permitting (5)                     | •                            | •                                | •                                | •                            | •                                 |
| Quality of<br>marine farmed<br>and wild-<br>caught<br>seafood (6) | •                            | •                                | •                                | •                            | •                                 |
| Safety of<br>seafood<br>produced by<br>marine<br>farming (7)      | •                            | •                                | •                                | •                            | •                                 |
| Nutritional<br>benefits of<br>seafood<br>produced by<br>marine    | O                            | O                                | O                                | O                            | •                                 |

| farming (8)  |   |   |   |   |   |
|--|---|---|---|---|---|
| When marine<br>farmed<br>seafood is<br>available for<br>purchase (9) | • | • | • | • | • |
| History of marine farming (10)                                       | • | • | • | • | • |

Please indicate your level of agreement about marine farms in our near the coastal region that you recently visited. Marine farming...

| you recently vis   | Strongly     | Disagree (2) | Neither Agree    | Agree (4) | Strongly Agree |
|--|--------------|--------------|------------------|-----------|----------------|
|  | Disagree (1) |              | Nor Disagree (3) |           | (5)            |
| enhances the marine environment.                                     | O            | 0            | O                | O         | 0              |
| benefits<br>marine<br>wildlife. (2)                                  | 0            | •            | 0                | 0         | O              |
| increases<br>availability of<br>sustainable<br>local seafood.<br>(3) | •            | •            | •                | •         | •              |
| makes the scenery interesting. (4)                                   | •            | •            | •                | •         | •              |
| attract<br>tourism to the<br>area. (5)                               | •            | •            | •                | •         | •              |
| helps<br>improve local<br>water quality.<br>(6)                      | •            | •            | •                | •         | •              |
| restrict<br>adjacent land<br>uses. (7)                               | •            | •            | •                | •         | •              |
| helps the local economy. (8)   | 0            | 0            | 0                | 0         | 0              |
| helps<br>preserve the<br>rural culture.<br>(10)                      | •            | •            | •                | •         | •              |
| enhances<br>recreational<br>fishing. (12)                            | •            | •            | •                | •         | •              |
| increases my<br>personal<br>attachment to                            | •            | •            | •                | 0         | •              |

| the area. (13)   |   |   |   |   |          |
|--|---|---|---|---|----------|
| causes me to<br>use other<br>areas for my<br>recreation.<br>(14) | • | • | • | • | •        |
| conflicts with marine boating. (16)                              | • | • | • | • | <b>O</b> |
| creates local jobs. (17)   | • | • | • | • | O        |
| helps<br>preserve the<br>fishing<br>culture. (18)                | • | • | • | • | •        |

How did marine farming operations in your most recent coastal destination affect your opinions about the area in relation to the factors mentioned?

|  | Very Negative<br>(1) | Slightly Negative (2) | Neutral (3) | Slightly Positive<br>(4) | Very Positive (5) |
|--|----------------------|-----------------------|-------------|--------------------------|-------------------|
| Your perception of the area (1)                                    | 0                    | 0                     | 0           | 0                        | 0                 |
| Its impact on the scenery (2)                                      | •                    | •                     | •           | •                        | •                 |
| The natural environment (3)  | •                    | •                     | •           | •                        | •                 |
| Your key<br>recreational<br>activities (4)                         | •                    | •                     | •           | •                        | •                 |
| Your willingness to re-visit (5)                                   | •                    | •                     | •           | •                        | •                 |
| Your support<br>of the local<br>seafood<br>industry (6)            | •                    | •                     | •           | •                        | •                 |
| Your overall<br>support of<br>marine<br>farming in the<br>area (7) | •                    | •                     | •           | •                        | •                 |

If available at the coastal destination, what is the likelihood that you would engage in the following marine farming opportunities during your visit to the coast? Please indicate likelihood on a scale of 1 = "Extremely unlikely" to 5 = "Extremely likely"

| on a scale of $l =$ | "Extremely unlikely" | ' to $5 = \text{``Extremely likely''}.$ |  |
|---------------------|----------------------|---|--|
|                     |                      |   |  |

| on a scare of 1  | Extremely<br>Unlikely (1) | Unlikely (2) | Neutral (3) | Likely (4) | Extremely Likely<br>(5) |
|--|---------------------------|--------------|-------------|------------|-------------------------|
| Tour a marine farm (1)   | •                         | •            | •           | •          | •                       |
| Follow a "trail" focused on marine farming (2)   | •                         | •            | •           | •          | •                       |
| Listen to a<br>tour provider<br>talk about<br>marine<br>farming (3)                    | •                         | •            | •           | •          | •                       |
| Order farmed<br>seafood to be<br>mailed to me<br>from where I<br>visited (9)           | •                         | •            | •           | •          | •                       |
| Talk to a marine farmer (12)   | •                         | •            | •           | •          | •                       |
| Visit a processing plant for farmed seafood (13)                                       | •                         | •            | •           | •          | •                       |
| Use a map<br>with marine<br>farm areas so<br>I can avoid<br>them while<br>boating (16) | •                         | •            | •           | •          | •                       |

PLANNING FOR YOUR RECENT TRIP TO THE COAST The following questions ask you about planning you did for your most recent trip to the \_\_\_\_\_ coast (before and during the trip).

| Wł           | no planned this most recent trip to the coast? (Please check one)  |
|--------------|--|
| O            | Myself (1)   |
| O            | Family (2)   |
| O            | Friends (3)  |
| 0            | Spouse/Partner (4)   |
| 0            | Boyfriend/girlfriend (5)   |
| $\mathbf{C}$ | Joint Decision (6)   |
| 0            | Other (Please specify) (7)   |
| the<br>O     | you use a smartphone to search for travel information for this most recent trip to coast? Yes (5)  |
| O            | No, but I have a smarphone (2)   |
|              | No, I don't have a smartphone (3)  |
| dor          | o, but I have a smarphone Is Selected, Then Skip to How would you best describe the traveIf No, I n't have smartphone Is Selected, Then Skip to How would you best describe the traveIf Yes Is ected, Then Skip to If you used a smartphone for travel i |
| trip         | nat type of travel information did you search for on a smartphone BEFORE your most recent to to the coast? (Please check all that apply)  Destinations (1)  Attractions (2)  Restaurants (3)   |
|              | Activities (4)   |
|              | Hotels (5)   |
|              | Deals/Coupons (6)  |
|              | Flights (7)  |
|              | Where to buy local seafood (8)   |
|              | Where to eat local seafood (9)   |
|              | Other (Please specify) (10)  |

| Wh   | nat type of travel information did you search for on a smartphone DURING your most recent           |
|------|---|
| trip | to the coast? (Please check all that apply)   |
|      | Destinations (1)  |
|      | Attractions (2)   |
|      | Restaurants (3)   |
|      | Activities (4)  |
|      | Hotels (5)  |
|      | Deals/Coupons (6)   |
|      | Flights (7)   |
|      | Where to buy local seafood (8)  |
|      | Where to eat local seafood (9)  |
|      | Other (Please specify) (10)   |
|      |   |
|      | w would you best describe the travel pattern of your most recent trip to? A                         |
| des  | tination is defined as a city, a town, or a community.  |
| O    | Traveled to a primary destination, and stayed there the entire time. (1)                            |
| O    | Visited several destinations within the state, en route to and from a primary destination. (2)      |
| O    | Stayed at the primary destination throughout the vacation, and used it as a "base camp" from which  |
|      | to visit destinations within the state. (3)   |
| O    | Traveled within the state and sequentially visited a series of destinations in the state. (4)       |
| O    | Visited multiple destinations encompassing several states, and traveled from one to another, rather |
|      | than having a single focal state. (5)   |

In the blanks below, please list all of the destinations (i.e., cities, towns, or communities) that you visited, in order of visitation, during your most recent pleasure trip to the Then in the columns to the right, please indicate if that location was...(check all that apply) A) your primary destination (if there was one). B) a place you stayed overnight. C) a stop that you planned before going on the trip. A) It was my primary B) I stayed overnight. (2) C) I planned this stop destination. (1) before going on the trip. (3) 1. (1) 2.(2)3. (3) 4. (4) 5. (5) 6.(6)7. (7) 8. (8) 9. (9) 10. (10) YOUR BACKGROUND What country do you live in? O United States (1) Other (please specify) (2) \_ If United States Is Selected, Then Skip to What is your zip code? If Other Is Selected, Then Skip To Your gender? What is your zip code? What is your gender? **O** Male (1) O Female (2)

What is your age?

|              | hat is the highest level of education you have completed so far?                 |
|--------------|--|
|              | Less that 12th grade, no diploma (1)   |
|              | High School graduate (2)   |
| O            | Some college, no degree (3)  |
| O            | Associate degree (4)   |
| O            | Bachelor's degree (5)  |
| O            | Graduate or professional degree (6)  |
|              | hat is your employment status?   |
|              | Employed Full Time (1)   |
| O            | Employed Part Time (2)   |
| O            | Home maker (3)   |
| O            | Unemployed (4)   |
| O            | Student (5)  |
| O            | Retired (6)  |
| O            | Other (7)  |
| Wl           | hat is your current marital status?  |
| O            | Never Married (1)  |
| O            | Now Married (2)  |
| O            | Married but seperated (3)  |
| $\mathbf{C}$ | Widowed (4)  |
| O            | Divorced (5)   |
| Но           | w many children under 18 years old currently live in your household?             |
|              | hich of the following best describes your racial or ethnic background? White (1) |
| $\mathbf{C}$ | Black, African American, or Negro (2)  |
| O            | American Indian or Alaska Native (3)   |
| $\mathbf{C}$ | Asian Indian (4)   |
| $\mathbf{C}$ | Chinese (5)  |
| O            | Filipino (6)   |
| O            | Japanese (7)   |
| O            | Korean (8)   |
| O            | Vietanamese (9)  |
| O            | Native Hawaiian (10)   |
| O            | Other (11)   |

| Wł           | nat is your approximate household income?            |
|--------------|--|
| $\mathbf{C}$ | Less than \$10,000 (1)                               |
| $\mathbf{C}$ | \$10,000 - \$14,999 (2)                              |
| $\mathbf{C}$ | \$15,000 - \$24,999 (3)                              |
| $\mathbf{C}$ | \$25,000 - \$34,999 (4)                              |
| $\mathbf{C}$ | \$35,000 - \$49,999 (5)                              |
| $\mathbf{O}$ | \$50,000 - \$74,999 (6)                              |
| $\mathbf{O}$ | \$75,000 - \$99,999 (7)                              |
| $\mathbf{O}$ | \$100,000 - \$199,999 (8)                            |
| O            | \$200,000 or more (9)                                |
| Wł           | nich type of device did you use to take this survey? |
|              | Smartphone (1)                                       |
| _            | Tablet (2)   |
| O            | Computer (3)   |

Please use this box for any additional comments you want to provide.

Thank you for participating in this coastal tourism and seafood survey. We value your responses and appreciate the time you took to complete the survey. You are now eligible to enter a lottery for a \$100 gift card. There are 2 of these gift cards available via the lottery. If you would like to participate, please enter your email address below so that we may contact you if you are selected to receive one of the gift cards. Your email address will be kept confidential, won't be shared, and will be deleted upon completion of the study.

## Appendix H – Resident Survey

Thank you for your willingness to participate in this questionnaire for residents living in or near one of the six coastal communities included in our research study. These communities are Cedar Key, Sebastian and Apalachicola in Florida and McClellanville, Isle of Palms and Beaufort in South Carolina. The questionnaire is expected to take about 15 minutes. When you complete the questionnaire you will have the option of entering the lottery for a \$100 gift card. The chance to win a gift card is available only to participants in this study. Please Click NEXT to learn more about this study, your rights as a participant and confidentiality.

The Department of Parks, Recreation and Tourism Management at Clemson University is conducting this research to learn what residents of coastal communities think about local seafood production and harvest. Results from the questionnaire will be summarized and included in research reports and papers. These will be shared with the coastal communities involved in the study. Information specific to individuals will not be included in the summary or any other reports produced from the study. Your answers to the questionnaire are very important to us. There are no known risks associated with this research. Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You are assured of complete confidentiality. At the end of the questionnaire, you may decide to provide your email address to participate in the drawing for a \$100 gift card. That email address will be deleted as soon as the data collection is complete and will never be shared. Your email address will never be placed on the questionnaire itself. The email address used to send you the questionnaire invitation was acquired from a reputable company that provides addresses for university research purposes. This company will not have access to any of your responses to the questionnaire. Please click NEXT to respond to the questionnaire.

Please indicate the state in which you currently live and whether you live there year round or part of the year.

- O Florida (year round) (202)
- O Florida (part of the year) (203)
- O South Carolina (year round) (204)
- O South Carolina (part of the year) (205)
- O Neither Florida nor South Carolina (206)

If Florida (year round) Is Selected, Then Skip to Please indicate the county in which y...If Florida (part of the year) Is Selected, Then Skip to Please indicate the county in which y...If South Carolina (year round) Is Selected, Then Skip to Please indicate the county in which y...If South Carolina (part of the... Is Selected, Then Skip to Please indicate the county in which y...If Neither Florida nor South C... Is Selected, Then Skip to End of Survey

live and whether you live there year round or part of the year. Florida (year round) is Selected Please indicate the county in which you live in the state of Florida: • Gulf County (1) • Franklin County (2) • Wakulla County (3) O Dixie County (4) • Levy County (5) • Citrus County (6) O Indian River County (7) O Other (Please specify) (8) Answer If Please indicate the state in which you currently live and whether you live there year round or part of the year. South Carolina (year round) Is Selected or Please indicate the state in which you currently live and whether you live there year round or part of the year. South Carolina (part of the year) Is Selected Please indicate the county in which you live in the state of South Carolina: O Charleston County (1) O Beaufort County (2)

Answer If Please indicate the state in which you currently live and whether you live there year round or part of the year. Florida (part of the year) Is Selected or Please indicate the state in which you currently

Answer If Please indicate the state in which you currently live and whether you live there year round or part of the year. Florida (year round) Is Selected or Please indicate the state in which you currently live and whether you live there year round or part of the year. Florida (part of the year) Is Selected or Please indicate the state in which you currently live and whether you live there year round or part of the year. South Carolina (year round) Is Selected or Please indicate the state in which you currently live and whether you live there year round or part of the year. South Carolina (part of the year) is Selected

How many total years have you lived in this county?

O Other (Please specify) (3)

How important are the following ideas to you, as a resident of a community that is near the coast?

|   | Not Important<br>(1) | Slightly<br>Important (2) | Somewhat<br>Important (3) | Important (4) | Extremely<br>Important (5) |
|---|----------------------|---------------------------|---------------------------|---------------|----------------------------|
| Implementing conservation practices at home that help coastal water quality.  (1) | •                    | •                         | •                         | •             | •                          |
| Maintaining the rural culture of my community.                                    | •                    | •                         | •                         | •             | •                          |
| Attracting more tourists to my community.   | •                    | •                         | •                         | •             | •                          |

| Do v | vou | eat | seafood? | • |
|------|-----|-----|----------|---|
|      |     |     |          |   |

- **O** Yes (2)
- O No (3)
- O I used to eat seafood, but I no longer do (4)

If Yes Is Selected, Then Skip to YOUR GENERAL PREFERENCES FOR SEAFOOD ...If No Is Selected, Then Skip to End of Block If I used to eat seafood, but ... Is Selected, Then Skip to End of Block

YOUR GENERAL PREFERENCES FOR SEAFOOD: Some of the following questions ask about seafood that is local or produced by marine farming. "Local" refers to seafood that is caught or grown in the coastal state where you live. Marine farming refers to cultivation or growing of marine organisms for food in saltwater (raising the product from egg to adult). This occurs in coastal waters and/or in tanks or pools filled with saltwater. Marine farming is a form of aquaculture that is also called "mariculture".

How frequently do you eat seafood?

|                              | Once a day (1) | Several times a<br>week (2) | Once a week (3) | Once every two<br>weeks (4) | Once a month<br>(5) |
|------------------------------|----------------|-----------------------------|-----------------|-----------------------------|---------------------|
| Prepared at home (1)         | •              | •                           | •               | •                           | •                   |
| Prepared at restaurants. (2) | 0              | 0                           | 0               | 0                           | 0                   |

Please indicate how important it is that your seafood is...

| 1 rease indicate now important it is that your searood is |                      |                           |                           |               |                       |  |
|---|----------------------|---------------------------|---------------------------|---------------|-----------------------|--|
|   | Not Important<br>(1) | Slightly<br>Important (2) | Somewhat<br>Important (3) | Important (4) | Very Important<br>(5) |  |
| Harvested locally (1)                                     | •                    | •                         | •                         | •             | •                     |  |
| Wild-caught (2)   | •                    | •                         | •                         | •             | <b>O</b>              |  |
| Farmed in marine waters (3)                               | •                    | •                         | •                         | •             | •                     |  |
| Environmentally sustainable (4)                           | •                    | •                         | •                         | •             | •                     |  |
| Safe from pollutants (5)                                  | •                    | •                         | •                         | •             | •                     |  |

Please indicate your level of confidence in your ability to determine if the seafood you are purchasing is...

|                                 | Not confident<br>(1) | Slightly<br>confident (2) | Somewhat<br>confident (3) | Confident (4) | Very confident<br>(5) |
|---------------------------------|----------------------|---------------------------|---------------------------|---------------|-----------------------|
| Harvested locally (1)           | •                    | •                         | •                         | •             | O                     |
| Wild-caught (2)                 | •                    | •                         | •                         | •             | O                     |
| Farmed in marine waters (3)     | •                    | •                         | •                         | •             | <b>o</b>              |
| Environmentally sustainable (4) | •                    | •                         | •                         | •             | O                     |
| Safe from pollutants (5)        | •                    | •                         | •                         | •             | •                     |

How important is the following information to your decision on which seafood to purchase?

| Tiow important                      | Not Important (1) | Slightly<br>Important (2)              | Somewhat<br>Important (3) | Important (4) | Extremely Important (5) |
|-------------------------------------|-------------------|--|---------------------------|---------------|-------------------------|
| How the seafood was harvested (1)   | •                 | •••••••••••••••••••••••••••••••••••••• | •                         | •             | <b>o</b>                |
| When the seafood was harvested (2)  | •                 | •                                      | •                         | •             | <b>o</b>                |
| Where the seafood was harvested (3) | 0                 | •                                      | •                         | •             | <b>O</b>                |
| Who harvested the seafood (4)       | 0                 | 0                                      | 0                         | 0             | <b>O</b>                |
| Has a recognizable brand name (5)   | •                 | •                                      | •                         | •             | <b>o</b>                |
| Is labelled "wild-caught" (6)       | •                 | •                                      | •                         | •             | •                       |
| Is labelled "marine farmed" (7)     | •                 | •                                      | •                         | •             | 0                       |

How often do you eat each of the following seafood products?

| How often do y                                    | Never (1) | Almost never (2) | Sometimes (3)  | Often (4) | Very Often (5) |
|---|-----------|------------------|----------------|-----------|----------------|
| CI  | Never (1) | Aimost never (2) | Joinetimes (3) | Often (4) | very often (3) |
| Clams (cooked) (1)                                | 0         | •                | •              | •         | O              |
| Clams (raw) (2)                                   | 0         | •                | •              | •         | O              |
| Oysters (cooked) (3)                              | •         | •                | •              | •         | •              |
| Oysters (raw) (4)                                 | •         | •                | •              | •         | •              |
| Blue Crab (5)                                     | •         | •                | •              | •         | O              |
| Stone Crab (6)                                    | •         | •                | •              | •         | •              |
| Lobster (7)                                       | O .       | <b>O</b>         | O              | •         | O              |
| Scallops (8)                                      | O .       | <b>O</b>         | O              | •         | O              |
| Mussels (9)                                       | O         | •                | •              | •         | O              |
| Shrimp (10)                                       | O .       | •                | •              | •         | O              |
| Fish (e.g., cod, flounder, grouper, snapper) (11) | •         | •                | •              | •         | •              |
| Other (Please specify) (12)                       | •         | •                | •              | •         | •              |

What is the likelihood that you would engage in the following marine farming related opportunities, if available in or near your coastal region?

| opportunities, i  |                           |              |             | Likoley (4) | Futus no alcutitus      |
|---|---------------------------|--------------|-------------|-------------|-------------------------|
|   | Extremely<br>Unlikely (1) | Unlikely (2) | Neutral (3) | Likely (4)  | Extremely Likely<br>(5) |
| Attend a culinary event at a local marine farm with farmers and chefs present (4) | 0                         | 0            | 0           | 0           | 0                       |
| Listen to a<br>chef talk<br>about farmed<br>seafood (5)                           | •                         | •            | •           | •           | •                       |
| Bring home<br>fresh seafood<br>from a marine<br>farm (6)                          | 0                         | 0            | 0           | 0           | 0                       |
| Bring home canned or frozen seafood products from a marine farm (7)               | O                         | 0            | 0           | O           | 0                       |
| Eat farmed<br>seafood at a<br>seafood<br>festival (8)                             | 0                         | 0            | •           | 0           | •                       |
| Use a travel<br>guide find<br>local farmed<br>seafood (10)                        | •                         | •            | •           | •           | •                       |
| Use a smartphone app to find local farmed seafood (11)                            | 0                         | •            | •           | •           | •                       |
| Attend a cooking class on local farmed  | O                         | O            | O           | O           | O                       |

| seafood (14)  |   |   |   |   |   |
|---|---|---|---|---|---|
| Go to a<br>restaurant<br>where you<br>can learn the<br>story behind<br>farmed<br>seafood (15) | O | • | • | • | • |

Please indicate your views on marine farmed seafood (commercially grown in the United States) when compared to wild-caught seafood (harvested from marine waters in the United States).

Marine farmed seafood is than wild-caught seafood.

| what the farmed scarood is than who-eaught scarood. |                          |              |             |           |                       |
|---|--------------------------|--------------|-------------|-----------|-----------------------|
|   | Strongly<br>Disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly Agree<br>(5) |
| better tasting (1)                                  | •                        | •            | •           | 0         | O                     |
| healthier (2)                                       | •                        | •            | •           | <b>O</b>  | O                     |
| cleaner (3)   | •                        | •            | •           | O         | O                     |
| safer (4)   | •                        | •            | •           | O         | O                     |
| fresher (5)   | •                        | •            | •           | O         | O                     |
| better in quality (6)                               | •                        | •            | •           | •         | •                     |
| more<br>environmentally<br>sustainable (7)          | •                        | •            | •           | 0         | •                     |
| more available for purchase (8)                     | •                        | •            | •           | •         | •                     |
| a better value<br>for the money<br>(9)              | •                        | •            | •           | 0         | •                     |

YOUR UNDERSTANDING ABOUT MARINE FARMINGThe following questions ask you about marine farming. Marine farming refers to cultivation or growing of marine organisms for food in saltwater (raising the product from egg to adult). This occurs in coastal waters and/or in tanks or pools filled with saltwater. Marine farming is a form of aquaculture that is also called "mariculture".

| O            | Yes (1)   |
|--------------|---|
| O            | No (2)  |
| Dia          | d you know that marine farming was occurring in the coastal waters near where you live? |
|              | Yes (1)   |
| $\mathbf{O}$ | No (2)  |

Did you hear the term "mariculture" before participating in this survey?

Please rate your knowledge (relative to the average person) about marine farmed seafood in or near the coastal region where you live.

|   | Not at all Knowledgeable (1) | Slightly<br>Knowledgeable<br>(2) | Somewhat<br>Knowledgeable<br>(3) | Very<br>Knowledgeable<br>(4) | Extremely<br>Knowledgeable<br>(5) |
|---|------------------------------|----------------------------------|----------------------------------|------------------------------|-----------------------------------|
| Where marine<br>farmed areas<br>are located in<br>the water (1)               | •                            | •                                | •                                | •                            | •                                 |
| Growing techniques used by marine farmers (2)                                 | •                            | •                                | •                                | •                            | •                                 |
| Environmental sustainability of marine farms (3)                              | •                            | •                                | •                                | •                            | •                                 |
| Economic impacts of the marine famring industry (4)                           | •                            | •                                | •                                | •                            | •                                 |
| Marine farming regulations and permitting (5)                                 | •                            | •                                | •                                | •                            | •                                 |
| Quality of<br>marine farmed<br>and wild-<br>caught<br>seafood (6)             | •                            | •                                | •                                | •                            | •                                 |
| Safety of<br>seafood<br>produced by<br>marine<br>farming (7)                  | •                            | •                                | •                                | •                            | •                                 |
| Nutritional<br>benefits of<br>seafood<br>produced by<br>marine<br>farming (8) | •                            | 0                                | 0                                | •                            | 0                                 |

| When marine<br>farmed<br>seafood is<br>available for<br>purchase (9) | • | • | • | • | 0 |
|--|---|---|---|---|---|
| History of local marine farming (10)                                 | • | • | • | • | • |

Please indicate your level of agreement about marine farms in or near the coastal region where you live. Marine farming...

| you live. Marin  | Strongly     | Disagree (2) | Neither Agree    | Agree (4) | Strongly Agree |
|--|--------------|--------------|------------------|-----------|----------------|
| enhances the   | Disagree (1) |              | nor Disagree (3) |           | (5)            |
| marine environment.  | •            | •            | •                | •         | •              |
| benefits<br>marine<br>wildlife. (2)                                  | 0            | •            | •                | •         | •              |
| increases<br>availability of<br>sustainable<br>local seafood.<br>(3) | •            | •            | •                | •         | •              |
| makes the scenery interesting. (4)                                   | •            | •            | •                | •         | •              |
| attracts<br>tourists to the<br>area. (5)                             | 0            | 0            | •                | •         | •              |
| helps<br>improve local<br>water quality.<br>(6)                      | •            | •            | •                | •         | •              |
| restricts<br>adjacent land<br>uses. (7)                              | •            | 0            | •                | 0         | •              |
| helps the local economy. (8)   | •            | 0            | 0                | 0         | 0              |
| helps<br>preserve the<br>rural culture.<br>(10)                      | •            | •            | •                | •         | •              |
| enhances<br>recreational<br>fishing. (12)                            | 0            | 0            | •                | •         | •              |
| increases my<br>personal<br>attachment to                            | 0            | 0            | •                | •         | •              |

| the area. (13)   |   |   |   |   |   |
|--|---|---|---|---|---|
| causes me to<br>use other<br>areas for my<br>recreation.<br>(14) | • | • | • | • | • |
| conflicts with marine boating. (16)                              | • | • | • | • | • |
| creates local jobs. (17)   | • | • | • | • | O |
| helps<br>preserve the<br>fishing<br>culture. (18)                | • | • | • | • | • |

How do marine farming operations in or near your coastal region affect your opinions about the area in relation to the factors mentioned?

|  | Very Negative<br>(1) | Negative (2) | Neutral (3) | Positive (4) | Very Positive (5) |
|--|----------------------|--------------|-------------|--------------|-------------------|
| Your perception of the area (1)                                    | •                    | •            | •           | •            | •                 |
| Its impact on the scenery (2)                                      | •                    | •            | •           | •            | 0                 |
| The natural environment (3)  | •                    | •            | •           | 0            | <b>O</b>          |
| Your key<br>recreational<br>activities (4)                         | •                    | •            | •           | •            | •                 |
| Your interest<br>in continuing<br>to live in the<br>area (5)       | •                    | •            | •           | •            | •                 |
| Your support<br>of the local<br>seafood<br>industry (6)            | •                    | •            | •           | •            | •                 |
| Your overall<br>support of<br>marine<br>farming in the<br>area (7) | •                    | •            | •           | •            | •                 |

What is the likelihood that you would engage in the following marine farming related opportunities, if available in or near your coastal region?

| opportunities, if available in or near your coastal region?             |                           |              |             |            |                         |  |
|---|---------------------------|--------------|-------------|------------|-------------------------|--|
|   | Extremely<br>Unlikely (1) | Unlikely (2) | Neutral (3) | Likely (4) | Extremely Likely<br>(5) |  |
| Tour a marine farm (1)  | •                         | •            | •           | •          | •                       |  |
| Follow a "trail" focused on marine farming (2)                          | •                         | •            | •           | •          | •                       |  |
| Listen to a<br>tour provider<br>talk about<br>marine<br>farming (3)     | •                         | •            | •           | •          | •                       |  |
| Order farmed seafood to be mailed to another person as a gift (9)       | •                         | •            | •           | •          | •                       |  |
| Talk to a marine farmer (12)  | 0                         | •            | •           | •          | •                       |  |
| Visit a processing plant for farmed seafood (13)                        | •                         | •            | •           | •          | 0                       |  |
| Use a map with marine farm areas so I can avoid them while boating (16) | •                         | •            | •           | •          | •                       |  |

Please indicate how often you provided the following types of personal advice to visitors in or near the coastal region where you live. I provided personal advice to visitors about...

|   | Never (1) | Almost Never<br>(2) | Sometimes (3) | Often (4) | Very Often (5) |
|---|-----------|---------------------|---------------|-----------|----------------|
| tourism activities that highlight the local fishing culture. (3)  | 0         | 0                   | 0             | 0         | 0              |
| which fishermen sell local seafood directly to consumers.  (4)    | •         | •                   | •             | •         | •              |
| which<br>restaurants<br>serve local<br>seafood. (5)               | •         | •                   | •             | •         | •              |
| who sells<br>seafood<br>produced by<br>local marine<br>farms. (6) | •         | •                   | •             | •         | •              |
| where to see<br>local seafood<br>harvested or<br>processed. (7)   | •         | •                   | •             | •         | •              |

| In the last two years, did you take a trip, for pleasure, to another coastal community that was outside your county but in your state?  • Yes (1)  |
|--|
| O No (2)   |
| If No is Selected, Then Skip to End of Block If Yes Is Selected, Then Skip to For this recent trip, did you  |
| travel   |
| For this recent trip, did you travel with your romantic partner (e.g., husband/wife, boyfriend, girlfriend, etc.)?  • Yes (1)  • No (2)  |
| Who planned this recent trip to another coastal community?  O Myself (1)   |
| O My partner (2)   |
| O My partner and me (3)  |
| O Other (4)  |
| Did you use a smartphone to search for travel information for your most recent trip to another coastal community?  O Yes (1) O No, but I have a smartphone (2)   |
| O No, I don't have a smartphone (3)  |
| If No, but I have a smartphone is Selected, Then Skip To What destinations (i.e., cities, townIf No, I don't have a smartphone Is Selected, Then Skip To What destinations (i.e., cities, townIf Yes Is Selected, Then Skip To If you used a smartphone for travel i |
|  |

| and | nat type of travel information did you search for on a smartphone BEFORE your recent trip to other coastal community? (Please check all that apply)                                    |
|-----|--|
|     | Destinations (1)   |
|     | Attractions (2)  |
|     | Restaurants (3)  |
|     | Activities (4)   |
|     | Hotels (5)   |
|     | Deals/Coupons (6)  |
|     | Flights (7)  |
|     | Where to buy local seafood (8)   |
|     | Where to eat local seafood (9)   |
|     | Other (Please specify) (10)  |
|     | hat type of travel information did you search for on a smartphone DURING your recent trip to other coastal community? (Please check all that apply)  Destinations (1)  Attractions (2) |
|     | Restaurants (3)  |
|     | Activities (4)   |
|     | Hotels (5)   |
|     | Deals/Coupons (6)  |
|     |  |
|     | Flights (7)  |
|     | Where to buy local seafood (8)   |
|     | Where to eat local seafood (9)   |
|     | Other (Please specify) (10)  |

In the blanks below, please list all of the destinations (i.e., cities, towns, or communities) that you visited, in order of visitation, during your most recent pleasure trip to a coastal community within your state. Then in the columns to the right, please indicate if that location was...(check all that apply) A) your primary destination (if there was one). B) a place you stayed

| ovvoumi oht | C) a stan that | von planned before | a anima on the trin   |
|-------------|----------------|--------------------|-----------------------|
| overnight.  | C) a stop that | you pianned beioi  | re going on the trip. |

|          | A) It was my primary destination. (1) | B) I stayed overnight. (2) | C) I planned this stop<br>before going on the trip.<br>(3) |
|----------|---------------------------------------|----------------------------|--|
| 1. (1)   |                                       |                            |  |
| 2. (2)   |                                       |                            |  |
| 3. (3)   |                                       |                            |  |
| 4. (4)   |                                       |                            |  |
| 5. (5)   |                                       |                            |  |
| 6. (6)   |                                       |                            |  |
| 7. (7)   |                                       |                            |  |
| 8. (8)   |                                       |                            |  |
| 9. (9)   |                                       |                            |  |
| 10. (10) |                                       |                            |  |

| Yo | ur gender? |
|----|------------|
| O  | Male (1)   |

O Female (2)

What is your age?

What is the highest level of education you have completed so far?

- O Less than 12th grade, no diploma (1)
- O High school graduate (2)
- O Some college, no degree (3)
- O Associate degree (4)
- O Bachelor's degree (5)
- O Graduate or professional degree (6)

| Wł           | nat is your employment status?            |
|--------------|---|
| $\mathbf{O}$ | - · ·                                     |
| $\mathbf{O}$ | Employed Part Time (2)                    |
| $\mathbf{O}$ | Student (3)                               |
| $\mathbf{O}$ | Homemaker (4)                             |
| $\mathbf{O}$ | Unemployed (5)                            |
| 0            | Retired (6)                               |
| O            | Other (Please specify) (7)                |
| Wł           | nat is your current marital status?       |
| Ö            | •   |
| 0            | Now Married (2)                           |
|              | Married but separated (3)                 |
|              | Widowed (4)                               |
|              | Divorced (5)                              |
|              |   |
| Wł           | nat is your approximate household income? |
| 0            | Less than \$10,000 (1)                    |
| O            | \$10,000 - \$14,999 (2)                   |
| $\mathbf{O}$ | \$15,000 - \$24,999 (3)                   |
| O            | \$25,000 - \$34,999 (4)                   |
| $\mathbf{O}$ | \$35,000 - \$49,999 (5)                   |
| $\mathbf{O}$ | \$50,000 - \$74,999 (6)                   |
| $\mathbf{O}$ | \$75,000 - \$99,999 (7)                   |
| $\mathbf{O}$ | \$100,000 - \$199,999 (8)                 |
| $\mathbf{O}$ | \$200,000 or more (9)                     |

| Wł           | nich type of device did you use to take this survey? |
|--------------|--|
| $\mathbf{O}$ | Smartphone (1)                                       |
| $\mathbf{C}$ | Tablet (2)   |
| O            | Computer (3)   |

Please use this box for any additional comments you want to provide.

Thank you for participating in this coastal community survey. We value your responses and appreciate the time you took to complete the survey. You are now eligible to enter a lottery for a \$100 gift card. There are 2 of these gift cards available via the lottery. If you would like to participate, please enter your email address below so that we may contact you if you are selected to receive one of the gift cards. Your email address will be kept confidential, won't be shared, and will be deleted upon completion of the study.