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Carteret Catch™: Raising Awareness of Local Seafood through Community and Business Partnerships

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This paper describes two applied research projects that are ongoing. Specifically, we provide the background for establishing a seafood brand and consumer education program, known as *Carteret Catch*™ and for creating Community Supported Fisheries (CSFs), a direct marketing arrangement for seafood, first piloted in Carteret County, North Carolina. A social marketing approach was used to facilitate the partnerships and the behavioral changes among fishermen, seafood retailers, restaurant chefs, and the public. These projects have the potential to sustain local fishing communities and the commercial fishing industry and serve as models for other fishing communities in the United States and abroad.

Key words: social marketing, community partnerships, local seafood, Community Supported Fisheries, branding

Fishermen face a range of challenges converging on their industry simultaneously. The interface among the environment, economics, politics, and regulations influences the procurement of wild-caught seafood in ways that are leading to the decline of commercial fishing in this country. Researchers have written about challenges facing fishermen and the decline of various fish stocks in the United States and globally (Myers and Wörm 2003; Pauly et al. 2003; Wörm et al. 2009). Some researchers have attributed fisheries losses to overfishing, while others have attributed the loss to pollution and habitat changes. Over decades, according to Wingard (2000), quotas have gotten smaller, fishing trips have gotten shorter, and the list of allowable gear has decreased as fish stocks become more stressed. The perspective we wish to present is that of fishermen, their families, and neighbors and how the collaborative efforts described in this paper may assist fishing communities, for they too are decreasing in number.

The material in this paper arose out of a multi-year partnership that coalesced in stages to support the fishing communities in Carteret County, North Carolina. This paper outlines the developmental process for establishing alternative educational and promotional strategies for locally-landed seafood. First, we report on a branding program known as *Carteret Catch*™. Second, we report on a direct-marketing initiative to establish the first Community Supported Fisheries (CSF) arrangement in the United States. The goal for these combined initiatives was to increase the demand for local seafood through a social marketing campaign focused on the *Carteret Catch*™ brand. The combined efforts have been successful. By chronicling our methods, we hope that other coastal and lakeshore communities may benefit.

The Impact of Globalization and Regulation on Commercial Fishing

Protecting the environment and fish stocks have been at the center of researchers' and fishermen's efforts in the commercial fishing industry. Wingard (2000) promoted transferable quotas managed by communities rather than

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individuals to sustain commercial fishing. He suggested that social scientists could contribute to the feasibility of this process by identifying basic components and structures of community and how to apply them for more successful community transferable quota systems. In a special issue of *Human Organization*, case studies were featured to illustrate the context and institutional history of anthropological applications in federally managed fisheries (Colburn, Abbott-Jamison, and Clay 2006). Acheson (2006), who has written extensively on the fishing industry over the past three decades, recognized that many important fisheries are in a state of crisis. Comparing lobster to groundfish management in the Gulf of Maine, he questioned how lobstering has had a more successful management system than the groundfish industry. In 2007, Paolisso wrote on the transformation of the Chesapeake Bay blue crab fishery, which is suffering from the importation of Asian crabmeat, overfishing, and pollution. These factors have changed the Chesapeake Bay region, for both Chesapeake watermen trying to make a living and for tourists expecting to taste local Atlantic blue crab.

Garrity-Blake (1994) profiled the town of Beaufort, North Carolina, where some of the research for this paper took place. She described how the town had changed over the past three decades with the loss of the menhaden processing facilities and increased economic development seeking to attract tourists to the historic port town. The commercial fishing vessels and fish houses that once lined the waterfront are nowhere in sight because commercial docks have been converted into marinas for recreational vessels. The waterfront is now a location for gift shops and restaurants catering to visitors and recreational fishermen. Local commercial fishermen, their boats, and way of life have been pushed out of view further east of Beaufort.

Historically, North Carolina commercial fishermen and processors comprised an invisible industry. Until the mid-1990s, they earned a steady living supplying local residents and metropolitan areas of the Eastern Seaboard of the United States with quality seasonal seafood without a well-recognized commercial image to identify their commodities or trade. As globalization began opening domestic markets to less expensive products, price became a deciding sales factor. Facing significant declines in market share and income, fishermen began abandoning their industry. From 1994 through 2008, the number of commercial fishermen in Carteret County declined by 48 percent (McInerny and Bianchi 2009). The number of fishermen harvesting shrimp—America's most popular seafood—declined 61 percent, from 411 to 162 (NCDMF 2009). Moreover, the number of commercial seafood processors and dealers in coastal North Carolina declined 33 percent between 2000 and 2005 despite a concurrent increase in the per capita consumption of seafood nationwide (Garrity-Blake and Nash 2007). Moreover, from 1997 to 2007 there was a 53 percent decrease in the total pounds of species landed in North Carolina, excluding the menhaden purse seine fishery. Similarly, the current value of commercially-harvested fish and shellfish decreased by 25 percent from 1997 to 2007 and the deflated value (declining price over time) decreased by 42 percent over the same 10 years (McInerny and Bianchi 2009). Commercial fishermen contend the cause for the decline is the increased market competition from cheaper, imported seafood products (Andreatta 2007; Andreatta and Parlier 2010; Garrity-Blake and Nash 2007; Paolisso 2007).

The irony is the North Carolina seafood industry contracted at a time when the demand for local seafood has grown stronger as consumers become more conscious of the origins of their food (Sloan 2008). The growing public demand for local seafood has offered opportunities for producers to tap new markets to stabilize and increase their incomes (Sloan 2007). Yet, consumers had to be capable of discerning North Carolina seafood from imports if fishermen and dealers were to gain a market advantage over their foreign counterparts.

To provide a commercial identity for local seafood, citizens in Carteret County, comprised of fishermen and their spouses, educators, civic leaders, restaurant owners and chefs, marine researchers, and business interests launched *Carteret Catch*™ in 2006 with two objectives: (1) to create a stronger awareness of and a demand for local seafood that would enhance fishermen incomes and (2) to inform the public when coastal commodities were seasonally available and where they could be purchased. Educating the consumer about availability, wholesomeness, regulations, and the culture of fishermen was essential in creating a value for local seafood that imported products could not match. In fact, the results of a 2008 survey conducted on behalf of *Carteret Catch*™ indicated 79 percent of respondents said they purchase local seafood because marine stocks are managed; 87 percent purchase local seafood because producers comply with regulations that protect its quality and safety; and 94 percent buy local seafood because doing so supports fishing communities (O'Sullivan and Anderson 2008).

Social Marketing

Changing the way people purchase seafood or operate their seafood businesses requires a behavioral change. We turned to social marketing to facilitate these transformations. The primary goal of social marketing is to create a *long-term* change in behavior rather than influence a short-term purchasing decision (Brown 1997; van Willigen 2002). Information is offered to consumers to raise their awareness of an opportunity or an issue so they can make educated rather than impulse-driven choices. Social marketing was first described by Kotler and Zaltman (1971:10) as "the application of business marketing principles to the problem of marketing social change." Kotler and Zaltman constructed their model of social marketing and applied it to marketing efforts that change behaviors for socially beneficial reasons. Social marketing employs methods and technologies similar to those used by commercial marketers, highlighting the use of the variables named for the "Four Ps." These four variables involve developing the right product, supporting it with the

right promotion, and putting it in the right place at the right price (Kotler and Zaltman 1971). Examples of successful social marketing campaigns include Smokey the Bear fire prevention, the Truth campaign against tobacco use, and the environmental campaign, Keep America Beautiful (Kotler, Roberto, and Lee 2002).

For a program to be called social marketing, it must do three things: (1) use principles from commercial marketing (i.e., formative research); (2) seek as its bottom line to influence voluntary behavior; and (3) have as a primary goal to help the target audience or society as a whole, rather than the organization conducting the program (Brown 1997). Anthropology contributes to social marketing through its methods in understanding the cultural context so that promotional materials are culturally appropriate (van Willigen 2002).

The principles of social marketing were used to develop a promotional campaign for the commercial fishing industry in Carteret County. Prior to *Carteret Catch*™, the industry had no commercial visibility at all. The behaviors we wanted to influence were consumers' intent to purchase local seafood and for local seafood to be readily recognized in the county. To purchase seasonal local seafood, it must be available at local restaurants and retail outlets where seafood is sold. A key and subtle point underlying this behavior change is for consumers to recognize what commodities are local and seasonally available, for in the coastal region some retailers and restaurants offer imported products from Asia and South America. Therefore, our collaborative efforts, which we report below, were to develop social marketing strategies that would (1) assist the public in identifying seafood that is common to the North Carolina coast; (2) increase demand for local products; (3) enhance revenues for fishermen, processors, and retailers; and (4) maintain a lifestyle and heritage that characterizes the central coastal region of North Carolina.

History of the Carteret Catch™ Branding Program and Partnerships

In 2003, a group of community volunteers (including authors Nash and Martin) representing fishermen, seafood processors, chefs, fisheries researchers, educators, and various civic leaders explored ideas and possible projects that would enhance the quality of life for Carteret County residents. With funding from the Rural Community College Initiative, they decided a key opportunity would be to assist fishermen in raising the public's awareness of local seafood and of the commercial fishing trade. A multifaceted goal was set to stimulate demand for local seafood, to make commercial fishing economically viable, and preserve the culture of fishing communities that has thrived along the central North Carolina coast for decades. The idea to promote local seafood through branding was conceived by North Carolina Cooperative Extension specialist John O'Sullivan. As the volunteers decided to help fishermen sell more local seafood, they recognized that county restaurants that offered it were not receiving a market incentive to do so, while others in the area purchased their seafood from major food distributors that offered mostly imported varieties. Believing that a program to promote local seafood would also benefit restaurants, the volunteers surveyed area restaurant owners to understand the quality expectations they had for seafood in general and local products in particular.

The volunteers conducted a survey at the 2005 North Carolina Seafood Festival to gain general insight into the public's perceptions about local seafood. Of the 175 individuals who completed a survey, 84 percent expected seafood purchased at the coast to be locally harvested; 94 percent expected seafood in local restaurants to be locally caught; and 92 percent said they were more likely to purchase seafood that is certified as locally harvested.

With funding from North Carolina Sea Grant, the volunteers hired a business consultant to guide them in developing a commercial identity for local seafood. From among 14 brand name and tag line options, the volunteers chose "*Carteret Catch*™" as a brand name and "Select North Carolina Seafood from the Fishermen of Carteret County" as a tag line. The word "Catch" is meant to project an image of *seafood* to consumers. The world "Select" is meant to convey *only the best, high quality,* or *special*. The phrase "from the Fishermen of Carteret County" tells consumers their seafood has been harvested by a local commercial fisherman. The logo features the silhouette of an actual fishing vessel belonging to a local commercial fisherman who is a *Carteret Catch*™ business partner. The volunteers registered the brand for trademark protection with the Office of the North Carolina Secretary of State, which was granted in September 2006. The volunteers then became the *Carteret Catch*™ Executive Board.

Today *Carteret Catch*™ serves as a brand identity for the seafood landed by fishermen residing in Carteret County. To use the brand, fishermen, restaurant owners, and seafood dealers register and pay an annual membership fee to certify they are selling *Carteret Catch*™ seafood products. These three groups receive a flag and window sticker bearing the logo to promote their membership in the non-profit organization. Seafood dealers are issued ink stamps bearing the *Carteret Catch*™ logo to authenticate invoices showing the seafood served in participating restaurants has been harvested by Carteret County fishermen. This allows a restaurant chef or owner to prove to customers who inquire that they are eating locally-harvested seafood. The ink stamps are only offered to dealers because they are the middlemen between fishermen and restaurants. This is *Carteret Catch*™'s way of offering a measure of traceability to consumers.

Regulations and Partnerships

We want to emphasize that fishermen follow state and federal regulations that sustain the fisheries of the rivers, sounds, and oceans as a food source for people. Fishermen must be licensed to harvest seafood, and they can sell their catch only to dealers who are also properly licensed. Dealers must complete a trip ticket form that shows the type of

catch, the amount, the harvest location, and the gear used to haul the catch. A trip ticket must be completed as soon as a dealer receives a fisherman's harvest and all trip tickets are forwarded monthly by dealers to the Division of Marine Fisheries. The North Carolina Trip Ticket Program is one of the best harvest-tracking programs in the United States. The National Marine Fisheries Service (NMFS), which conducts monitoring activities at the federal level, receives trip ticket information directly from the North Carolina Division of Marine Fisheries. It includes information on fish caught in both state and federal waters (NMFS 2009).

North Carolina fishermen partner with state and federal agencies to establish fishery management plans and harvest quotas for fish and shellfish. The plans and quotas for waters within the three mile limit are established by the state, while those for the waters between three and 200 miles are established by the Mid-Atlantic and South Atlantic Fisheries Management Councils and are ultimately approved by NMFS and then signed by the Secretary of Commerce. Through state and federal programs, fishermen have the opportunity to collaborate with regulatory agencies and university scientists to conduct fisheries and harvest gear research that protect marine species and the coastal environment. These partnerships are yet another way fishermen enhance their role as responsible stewards of valuable marine resources.

Although *Carteret Catch*™ draws attention to the seafood landed by Carteret County fishermen, its objective is not to catch more fish, but to enhance the value of what is caught. Specifically, the purpose of *Carteret Catch*™ is two-fold: (1) to create business partnerships among fishermen, restaurants, and retail outlets to increase local product visibility and (2) to educate consumers about species seasonality, seafood quality and safety, and the culture of fishing communities. For the seafood-eating public, associating the *Carteret Catch*™ logo with local seafood is important to help them direct their spending dollars. Restaurant and retail members see *Carteret Catch*™ as a way to enhance awareness of fresh, local seafood—but also to communicate that not all businesses offer fresh, local seafood.

Developing and Applying a Social Marketing Approach

When using social marketing as an approach to modify behavior, researchers begin first by understanding the reason there needs to be a behavioral change. In 2006, the *Carteret Catch*™ Executive Board decided to expedite its educational and promotional efforts. The Board continued soliciting memberships and increasing the visibility of the logo, which was accomplished with a website, brochures, and publicity through radio, television, newspapers, and magazines. Program visibility was enhanced through the development of a pilot direct-marketing program and assistance for the fishermen, which will be discussed below. Since 2007, the *Carteret Catch*™ Executive Board has been working closely with area restaurants, encouraging them to use and promote more local seafood.

Building on the *Carteret Catch*™ education program, lead author Andreatta developed a two-year Community Supported Fisheries (CSF) pilot project funded by the North Carolina Fishery Resource Grant Program in 2006 and 2007. The goal for the first year of research was to ascertain if there was an interest in alternative marketing strategies for local seafood in Carteret County. Semi-structured questionnaires were developed with members of the *Carteret Catch*™ Executive Board and industry specialists to provide a more in-depth perspective on the fishing industry. The questionnaires were administered in face-to-face interviews with fishermen, fish house dealers, and consumers to determine the level of interest in selling more local seafood to the public and identifying and suggesting ways in which this could be accomplished.

Consumers were interviewed at public locations such as maritime museums or at boating events. Consumers were defined as residents of or visitors to Carteret County. Data were collected from May through October 2006. A total of 295 consumer surveys were completed. Questions focused on distance traveled to the area, age, family size, length of stay, accommodation style, presence of a kitchen, seafood preferences, interest in cooking seafood, frequency of seafood consumption, and interest in supporting a local fishing industry. Information obtained from the consumer survey allowed us to identify restaurants that might be interested in joining *Carteret Catch*™ and to establish a level of interest among visitors and residents for a prepaid seafood program.

A total of 17 full-time commercial fishermen were interviewed. They were selected according to the recommendations from fishermen, fish house dealers, and restaurant chefs. Data were obtained on species caught, perceptions of the fishing industry, current marketing practices, and openness to direct-marketing practices. Although a small sample, the answers offered a shared vision of the daily challenges each were facing. On several occasions Andreatta and undergraduate assistants were able to accompany fishermen on their trips, providing further insight into the challenges facing small-scale fishermen.

Research Findings from 2006

Only a few highlights of the consumer and fishermen survey results will be reported here, for they can be found in greater detail elsewhere (Andreatta 2007; Andreatta and Parlier 2010). The data indicated that the average visitor traveled 241 miles one way to the area to stay one week. Visitors had been coming to the area on average for 20 years and had a family size of three. Fifty-one percent of day-visitors ate at least one seafood meal at a restaurant. During a week's stay, 33 percent of the visitors said they ate at least one seafood meal at a restaurant, and 30 percent said they ate at least two seafood meals at a restaurant during their stay. A majority of the visitors (86%) had a kitchen where they were staying. Among residents, home was the favorite place to eat seafood.

Consumers' favorite seafood commodities included (in descending order): shrimp, flounder, scallops, oysters, hard-shell crab, tuna, grouper, and soft-shell crabs. Many visitors preferred taking shrimp home for themselves or family and friends. A majority (83%) of consumers said they were willing to pay a premium price to ensure they were receiving local seafood at restaurants. Eighty-four percent said it was important the seafood they were eating in the area be locally harvested. Individuals were asked if they were interested in a seafood delivery program. We described it as a commercial arrangement where they could be guaranteed access to fresh, local seafood. Twenty-three percent responded they were interested in a seafood delivery program. Although low, 23 percent was considered sufficient to begin a pilot delivery program having the potential to grow into something larger.

We specifically asked if people were familiar with *Carteret Catch*™. The majority (80%) did not know anything about it. This was important information because the program had been unveiled in October 2005, yet few knew about it. A follow-up survey in 2007 showed 40 percent of respondents had heard about *Carteret Catch*™ (Andreatta 2008). Thus, increasing the publicity and visibility of the program had raised awareness by 20 percent in just one year.

Our sample of fishermen included individuals who were experienced in harvesting multiple species year-round such as clams, crabs, finfish, and shrimp. It was apparent to some fishermen that a different marketing approach was needed if they were to remain in business. Seven out of the 17 interviewed were already creating new local markets for themselves. It was this group of entrepreneurs that became part of the pilot program for the following year's project. Working with this core group of fishermen and their families helped to identify challenges and opportunities that would enhance behavior adoption for a CSF new marketing arrangement.

Defining Community Supported Fisheries

The CSF concept was borrowed directly from the United States farming industry that caters to small-scale farmers, specifically Community Supported Agriculture (CSA), a direct-marketing strategy. United States farmers are facing similar trends as fishermen, with cheaper, imported products and high fuel and labor costs stressing their traditional way of growing and distributing produce. Farmers are also facing a significant decline in numbers. Less than 2 percent of the United States population is involved in some aspect of agriculture. Wives frequently work off-farm to help meet household and farm expenses. As the United States farm population has dwindled for the past few decades, the average age of farmers has increased. In fact, about 40 percent of the farmers in this country are 55 years old or older (Bureau of Labor Statistics 2010). This graying of the farm population has led to concerns about the long-term health of family farms as an American institution (EPA 2010).

Since the early 1980s, enterprising small farmers have been marketing directly to the public and bypassing middlemen to improve their incomes. (Andreatta and Wickliffe 2002; Stephenson 2008). Over time, farmers have honed their distribution skills and have gained a loyal clientele as illustrated by the growth in farmers markets. Over the past four years, the number of farmers' markets has increased by 40 percent from 2006 to 2010 (USDA Agricultural Marketing Services 2010). Other direct marketing options such as U-picks, roadside stands, and CSA arrangements allow for small-scale farmers to create niche markets for their products and connect directly to the public.

Basically a CSA arrangement functions as a buy-in club where consumers or "shareholders" pay in advance directly to the farmer for a portion of the harvest, which in turn serves to cover seasonal start-up production costs. The arrangement provides financial support to the farmer, decreases time devoted to marketing, and enables shareholders to receive local foods in-season (Andreatta 2005; Goland 2002; Henderson and van En 1999). These shareholders see it as part of their social or ecological responsibility to support "their" farmer. The farmers have taken attributes that are detriments to the commodity marketplace (i.e., seasonality, availability, and locality) and positioned them as desirable attributes to consumers. "Buy Local" and "Know Your Farmer" have been key slogans in developing and maintaining this form of niche marketing for farmers and their supporters. Mirroring CSA arrangements, the concept of CSF was created with a similar philosophy in mind. As in the farming experience, direct sales of local seafood are aimed at niche markets.

Designing the First Community Supported Fisheries Arrangement

After the initial farmer and consumer surveys were completed by winter 2006, Andreatta and collaborators worked with community partners and fishermen to conceptualize a CSF arrangement that would enable consumers to buy fresh seafood directly from local fishermen. In the course of late spring 2007, Andreatta met with fishermen and their families, fish house dealers, rental property owners, and managers to identify potential barriers to establishing a CSF (see Andreatta 2008 for further detail). The seven fishermen who agreed to participate in the pilot effort were from the central coastal communities of Atlantic, Beaufort, Bettie, Harkers Island, Marshallberg, and Mill Creek. Each had multi-species fishing licenses as well as dealers' licenses for selling seafood, and all joined *Carteret Catch*™. This core group chose to market shrimp in their first attempt at a CSF arrangement.

Fishermen and their families had good ideas for how a CSF *could* work. Most concerns were with time—time to promote the program and time to deliver the shrimp to customers. A day boat fisherman trawls for shrimp during evening through late morning hours. By the time the shrimp are unloaded from the boat, transported to a fish house for processing or to a shrimp stand for sale, it is lunch time before fishermen are able to rest. Vessel and gear maintenance are performed after a few hours of sleep prior to the next fishing

trip. Given these time constraints, fishermen preferred that the consumer come to them or make arrangements for a pick-up at designated locations.

Because fishermen believed that local residents might already know where to get local seafood, already catch their own fish, or know someone who does, the target audience for their first CSF arrangement was visitors. Fishermen were concerned about the quality of their product. They wanted to ensure that consumers kept the shrimp cold after receiving it. They decided that coolers should be provided along with ice, and these costs were added to the price of the CSF share.

The fishermen also were concerned about receiving appropriate compensation for the size of the shrimp they landed because the value of shrimp is determined by its size.[2] Some of the fishermen harvest in the ocean for the bigger shrimp while other fishermen fish the sounds where the shrimp are typically smaller. Educating the public on the relationship between size and value was important to the fishermen, and they suggested listing their contact numbers on a brochure to allow consumers to communicate with them directly and learn what size shrimp was available and at what price. The fishermen agreed to help each other distribute size and price information to consumers who were looking for specific size shrimp.

After discussions with the fishermen and their families, a brochure was developed describing their collective CSF philosophy that served to advertise their program. It was distributed primarily to sites visitors frequented, such as the county's visitors' centers, the aquarium, museums, restaurants, and coffee shops. Cooperating hotel and property managers also agreed to put brochures in their welcome packages or display them in public places to help get the word out.

Rental property managers offered to promote the CSF to their guests; however, they did not want to be responsible for delivering or storing seafood. Some managers saw a seafood delivery service as a perk for those staying at their rental properties. One manager proposed that a preorder already be in the refrigerator when a guest arrived. Another manager commented that some families wanted to meet a "real" fisherman, see the boat, or possibly go out on a boat to shrimp and hear fishermen discuss their trade. Several of the core group of fishermen thought this would be a good idea, but obtaining affordable liability insurance seemed to be the limitation for carrying passengers. Nevertheless, property managers and fishermen were thinking creatively in terms of connecting consumers with local seafood and the fishermen.

Five of the seven[3] fish house owners remaining in the area were interviewed in 2006 and informed about the CSF marketing model. In the following year, four were encouraged to be part of the discussions on CSFs, especially should the marketing arrangement expand. The fish houses have the infrastructure (ice machines, docking piers, boat fuel, and coolers) to process, store, and distribute seafood. An ideal arrangement would be to have the fish house operators facilitate deliveries or encourage the public to visit fish houses and buy seafood right off the boats. By making fish houses a destination for residents and visitors, a CSF could sustain working waterfronts and perhaps fishing communities.

Consumer Influence on a CSF

The public plays an important role in assisting local fisheries by where they spend their money, and in this case, what seafood they purchase. Strategically combining the *Carteret Catch*™ program with the CSF effort helped the public locate which roadside stands, fish houses, and restaurants were providing local seafood for consumers who place a premium on buying their food from local producers and retailers.

Consumers would not join a CSF to receive inexpensive seafood, but to support local fishermen who provide quality, fresh seafood, much like they might support small-scale farmers through a CSA. Including recipes, a picture of the fishermen, the boat, the catch, or a note about the past week's fishing experiences personalizes a CSF arrangement, creating a connection between the participant and the fisherman. Farmers provide this personal touch with their CSA arrangements. (For more information on personalizing a CSA, see Henderson and van En 1999.)

As with the CSA, there are many permutations for developing a CSF arrangement enabling the public to increase their access to local seafood. One way, for example, is for consumers to directly pick up their prepaid share at designated locations, such as at a fish house or community center parking lot. Visitors who are making arrangements for a property rental could also prepay for fresh seafood to be at their accommodation upon arrival or departure. Residents could participate in a CSF arrangement that enable them to purchase fresh seafood on a weekly basis from a fishermen or fish house dealer, much like a prepaid member of a traditional CSA arrangement. Alternatively, participating fishermen and the public could connect with one another via the day's fresh catch. Independent fishermen or those joining with fish house dealers or other fishermen could collaborate by creating "buy-in" clubs.

Results from the First CSF Season—2007

From May through October 2007, the core group of fishermen sold the shrimp and other commercial species they harvested. CFS brochures with the *Carteret Catch*™ logo were distributed on a regular basis to more than 50 venues along the coastal shores of Carteret County. After the tourist and shrimp season had past, a debriefing was held in January 2008 with five of the participating fishermen and their spouses to get perspective on how they perceived the pilot CSF project performed during the 2007 season.

The group suggested that targeting residents and visitors equally might be a more suitable approach for attracting CSF shareholders. They identified residents, including those who no longer harvested shrimp or who were accustomed to eating local shrimp, as potentially more reliable customers than visitors who came for a limited time. It was agreed that

short-term visitors should not be omitted altogether, but that the circle should be drawn wider to include local residents.

Overall the participants sold more shrimp because of increased advertising. One of the wives who sold on a daily basis commented that she sold more shrimp in a shorter period of time, which was beneficial to her. The others agreed, noting that though they did not presell their shrimp, they sold it nonetheless. What could not be gleaned from the participants was how much more they made from direct marketing during this pilot project than in previous seasons. The fishermen were pleased that they had a good season and all planned to fish another year.

In addition to visitors' sites, brochures were distributed by the CSF fishermen to their neighbors and their spouses' coworkers who had land-based jobs. During the debriefing, two of the fishermen and their wives reported they had increased their shrimp sales to residents and to those who regularly passed by their roadside stands. In fact, that is where some of the coolers affixed with a *Carteret Catch*™ sticker were used; those traveling without a means to store fresh shrimp were accommodated with ice and a styrene cooler. The other wives who have company jobs were able to sell shrimp as well. Again, the coolers with an affixed *Carteret Catch*™ sticker were put to use in this capacity.

As a result, fishermen and their families established a larger customer base for local seafood within their communities. Fishermen increased their seafood sales by promoting the CSF effort to their neighbors and other residents with whom they had frequent contact. In this respect, our pilot CSF did create a community-based market for local seafood as we had hoped. Notwithstanding the weak economy, demand for seafood in Carteret County was much stronger at the retail counter than in past years. People still wanted to eat local seafood, and it was now less expensive to cook at home than to eat at a restaurant.

Any number of reasons can be identified for why presale orders never materialized. First, a number of obstacles illustrate the challenges the fishermen faced in establishing a CSF. For example, the concept of a CSA is not widespread outside farmers' markets in North Carolina, and there were no CSA farmers in the area. Not knowing how to locate a fisherman and establish a commercial relationship, many visitors patronize seafood retail stores for ease and convenience. Because of the high demand for and the restricted availability of certain commercial species, some retailers are unable to source all of their seafood from local fishermen. Some visitors are unaware of the seasonality of local species, as evidenced by those selecting salmon and halibut (species not native to coastal North Carolina) when eating seafood at local restaurants. In addition, we did not actively use the Internet to promote the pilot CSF beyond having a website describing what it is.

Secondly, the summer of 2007 was the first year for publically introducing the CSF concept in North Carolina, and the program was piloted with only seven fishermen. More time for promotion and educational outreach were likely needed to raise the visibility and grow the CSF effort. *Carteret Catch*™ has benefited from more than four years of publicity and education, and it is conceivable that with more time, a CSF could work as part of a direct-marketing strategy for small-scale commercial fishing families in Carteret County.

Building Brand Equity for Local Seafood

Strengthening the relationship between fishermen and consumers will require several long-term activities. The social marketing approach in this project involved educating the public about the seasonal availability of local species, the quality attributes of fresh seafood, the heritage of fishermen, and the impact buying local has on coastal fishing communities. Since *Carteret Catch*™ was launched in 2006, the initiative has been profiled in over 50 periodicals or television documentaries. In addition, the North Carolina Sea Grant College Program developed in partnership with the North Carolina Aquarium's the "Local Catch: North Carolina Seafood Availability" program, which was the first local seafood education effort modeled on *Carteret Catch*™ to span the entire North Carolina coast. *Carteret Catch*™ has partnered with the North Carolina Seafood Festival for the past four years to sponsor an award-winning venue called "Cooking with the Chefs: A North Carolina Seafood Experience." Educational literature on seafood seasonality and quality is offered, and chefs from the northern to the southern coastal regions are invited to conduct hourly cooking demonstrations with local seafood over a two day period. During the presentations, chefs highlight themes of seasonality, discerning seafood quality, safe in-home handling practices, and how buying local seafood assists local fishing communities.

Similar Programs Developed in Other Regions

New branding programs have been created for other coastal fishermen groups. The *Carteret Catch*™ program inspired "Queensland Catch," a local seafood branding effort based in Australia and "Port Clyde Fresh Catch" in Port Clyde, Maine. Since May 2009, three branding programs were established in North Carolina modeled on *Carteret Catch*™: "Brunswick Catch," "Ocracoke Fresh," and "Outer Banks Catch."

In early Fall 2007, Andreatta was contacted by a group of fishermen and university fisheries specialists in Port Clyde, Maine for information on starting a CSF in their area. The outcome of this teleconference led to a fisherman's wife (Kim Libby) in Port Clyde to establish the first CSF in New England, called "Port Clyde Fresh Catch." Their pilot CSF started in the fall of 2007 by delivering 100 pounds of presold shrimp every two weeks to employees at the Island Institute, a non-profit group organized to support Maine's fishermen. Joined on a panel with others experienced in direct marketing, Andreatta and Libby spoke at Maine's annual Fisheries Forum in 2008 to encourage others to try CSFs. Since its conception, the Port Clyde Fresh Catch CSF has been profiled

in *The New York Times*, *The Wall Street Journal*, and local papers. Their pilot proved so successful that the fishermen now deliver fresh Maine caught shrimp and groundfish to several different locations throughout their local community and have established a cooperative processing facility to de-head shrimp and fillet fish.

From the publicity *Carteret Catch*™ and CFSs have earned and the incredible visibility the Port Clyde CSF has garnered, branding programs and CSFs are expanding nationally and internationally. A Google™ search conducted in December 2010 lists seven CSFs in Maine, four in New Hampshire, five in Massachusetts, two in North Carolina, one in California, one in Oregon, two in Alaska, one in Nova Scotia, and one in Vancouver, British Columbia. The Northwest Atlantic Marine Alliance established an interactive website, "Community Supported Fisheries: Helping Fishermen Fish Smarter, Not Harder" where fishermen with CSF arrangements list their website for the public to locate a CSF nearest them. On-line advertising that reaches a broader audience and convenient delivery times and sites have enabled these latest CSFs to prosper quickly. They demonstrate consumers' willingness to pay above-retail-market prices for a seasonal supply of local seafood, thus, illustrating that CSF arrangements can enhance fishermen's incomes.

Clearly there is a growing movement to support local seafood producers. Inquiries about the CSF concept continue to be received by Andreatta from fishermen and non-fishermen in other areas of North Carolina as well as from California, New York, Georgia, and Portugal; Nash was invited to Ireland to deliver a workshop on developing a brand identity for Irish seafood. In just three years, 30 CSFs had been established across the country and in Canada. These new partnerships may keep more fishermen and fishing communities engaged in the seafood business.

Although the Carteret County CSF did not become a prepaying program as originally conceived, some fishermen established a buying club. With direction from Carteret Catch, students at the Duke University Marine Laboratory in Beaufort piloted a seafood delivery program in 2009 to deliver seafood from Carteret County to their main campus in Durham, located approximately three and half hours inland. The program is called Walking Fish (www.walking-fish.org). To make the buy-in club work, a *Carteret Catch*™ retailer processes and packages the shares, which he delivers weekly to the Duke campus. The group organized around the idea of selling a membership of prepurchased sales of local seafood and amassed 400 members and a waiting list. While not a true CSF in that participants are not purchasing their seafood directly from a fisherman's family (it has since become a cooperative), Walking Fish achieved another goal—making seafood available to consumers who would not have to travel to the coast for it.

Conclusions

Commercial fishing has been an integral part of the Carteret County, North Carolina economy for generations; however, the growth in tourism and recreational fishing, stricter environmental regulation, and the number of new residents settling along the central North Carolina coast have altered the county's traditional economic base. Fishermen have suffered the most financial strain from an influx of lower-cost, imported seafood, which continue to impact the long-term viability of traditional fishing communities and their rich cultural heritage. This paper has emphasized a collaborative social marketing venture designed to alter this trajectory.

Applied anthropology played a critical role in developing a social marketing approach for small-scale fishermen and a coastal community. Use of participant observation and an inclusive approach to community participants (fishermen, restaurant owners, local marine specialists, and other community members) provided an understanding of the cultural context in which CSF arrangements could be implemented, and a brand identity could be more readily recognized.

The social marketing approach adopted in Carteret County had several objectives. First, by educating both the fishermen (and their families) and consumers of the importance of the brand identity and CSF, a desired behavioral change would take place—the demand for seasonal local seafood would rise. Secondly, it was hoped that more local seafood would find its way into local restaurants because of increased consumer demand. Collaborating with the remaining fish house owners, seafood retailers, restaurant owners, and chefs was paramount for this to succeed. Collectively, these direct marketing strategies were designed with the long-term goal of preserving coastal heritage by maintaining the local fishing industry. Should the CSF direct marketing approach coupled with a brand identity prove to be successful, fishermen could realize more revenue for the seafood they harvest. Moreover, it is hoped not only the remaining fishermen stay in business, but the industry attracts and assists the next generation of fishermen.

An important lesson learned from this research is local fishermen harvest products the public values, but fishermen must assume a market focused approach to selling seafood if they are to become competitive with their foreign counterparts. The public plays a role in supporting local fishing communities if they want local seafood available in local markets and restaurants. They must demand it with their dollars.

Time will tell if these strategies assist commercial fishing and traditional fishing communities. What is certain is that international commerce is only growing more competitive. Commercial fishermen and dealers must collaborate with one another to share the risks, burdens, and rewards of procuring and distributing local seafood now that imports comprise over 85 percent of the seafood consumed in the United States (Battcock 2009).

Finally, fishermen must embrace the kind of public-private partnerships that fostered the development of *Carteret Catch*™ and Community Supported Fisheries. North Carolina has a number of nonprofit organizations and state agencies that support rural economic development and offer business training and guidance to local food producers. Fearing

"interference" in their way of life, many fishermen tend to be cautious of governmental assistance, but public-private partnerships are the best hope for local seafood industries to remain viable in a competitive global economy.

Notes

[1]Founding members of Carteret Catch included: Gretchen Bath Martin, Barry Nash, Mitch Mangum, Richard Meisner, Jennifer Ulz, Pam Morris, Libby Eaton, and Beverly Gaskill.

[2]In 2006 and 2007, fishermen received anywhere from $1.75 for 41-50s (medium size with heads on) to $4.00 for 16-20s (extra jumbo with heads on), whereas the fish houses generally paid a third from what the fishermen received in direct sales to the public.

[3]Since interviewing the fish house owners, another one has closed, leaving six open along the water front for fishermen to land their catch.

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