



## Bridging the Market Gap: Working with Fishermen for Sustainable Seafood and Communities

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The issues surrounding sustainable seafood are not limited to the harvested ocean and coastal resources, but include the fishing communities (i.e., the people) that must work in collaboration with scientists, legislators, and other stakeholders to ensure that fisheries in all contexts remain sustainable. Fishing communities have the power to encourage their members to accept alternative, more sustainable market strategies that appeal to today's seafood buyers (e.g., restaurants, grocery stores, and consumers). Therefore, fishing communities' support is paramount for a given sustainability initiative to be successful (McCay and Jentoft 1996).

To help fishing communities adapt to changing markets, understanding these communities is important. Fishing communities vary according to geography, gear/species, and history. Some fishing communities have existed for generations and are family-based, insular, and cooperative. Others, as is the case with many in Los Angeles County, are dispersed, multi-ethnic, and independent. This independence can act as one of multiple barriers to successful adoption of alternative market strategies in the face of ever-increasing regulations and decreasing access.

Many commercial fisheries in California have experienced declines in stock abundance, increased restrictions on harvest, and changes in demand. Commercial fishermen also face reductions in the size of available fishing grounds due to Marine Protected Areas (MPAs), prospective wave farms, and other commercial fishing exclusion zones. For decades, the economic structure of California's commercial fisheries has been based on a commodity model for processing and marketing a relatively high volume of landings but selling at relatively low prices. In this model, fishermen profit by catching as many fish as possible as efficiently as possible. However, this traditional marketing system does not easily allow fishermen to maximize the potential economic value of the state's marine fisheries while achieving sustainable resource use.

Southern California's commercial fisheries should be encouraged to meet changing economic and regulatory conditions with product or market innovations that can enhance the value of fisheries, keep communities stable, and support sustainability. New approaches to existing challenges should use an adaptive learning process and be based on innovative models that preserve the marine

Figure 1. Interviewing Local Terminal Island Fishermen

PHOTO: ANA PITCHON, CSUDH



and health benefits (high in important fatty acids yet low in mercury). However, because the local sardine industry does not produce a restaurant-quality product, the sardines eaten in Los Angeles restaurants primarily come from abroad. If local sardines were harvested in a way that left them intact, this product could be sold at a much higher price. Additionally, if the catch could be delivered fresh daily, local restaurants could put locally caught sardines on the menu. In this way, an operator of a small live bait vessel could actively harvest sardines for direct sale to restaurants, as is the case in San Diego<sup>1</sup>. Direct sale would increase the value of sardines and show that a decrease in catch can potentially be more profitable than the current, traditional model.

The shift to higher-value, higher-quality, and lower-volume product is gaining momentum with seafood buyers. Furthermore, consumers are increasingly interested in eating locally produced foods, as the *locavore* movement gains popularity (Gogoi 2008). Although some grocery stores and fish markets are hesitant due to issues of sustained supply, restaurants are interested in innovation and have a bit more leeway when it comes to change. Some smaller restaurants change their menu daily and are used to working with the seasonality of locally available

resource and Southern California's commercial fishing heritage. An inside look at the supply and demand of seafood in the Los Angeles area will aid in promoting this shift of management because although theories are good, practice proves challenging (Figure 1).

There are three sides to this problem: regulations, fishermen, and the market. For any change to occur, these sides need to cooperate. Fishery regulations need to be designed so that seafood is sustainable, but regulations should also ensure that a significant decrease in catch will not compromise the future of the fishery. Fishermen need to adapt their harvesting and marketing strategies, and restaurant and grocery store owners (i.e., the market) need to work with fishermen to resolve the logistical issues with supply. The sardine fishery is an excellent example of this multi-sided problem. Fishermen harvest sardines using the traditional high-volume, low-value strategy. The Pacific Fishery Management Council's (2010) current season management plan for sardines has set a maximum harvest guideline of 72,039 metric tons. These sardines are caught in large purse seine nets and then rapidly processed, frozen, and shipped abroad for purposes other than direct human consumption (e.g., fish feed and fertilizer). This fishing method leaves locally caught sardines battered and torn, and therefore unsuitable to serve on a plate. Meanwhile, sardines are making a comeback in restaurants. Sardines are increasingly recognized for their flavor, sustainability,

Figure 2. Torrance Farmers Market: Fresh Seafood Stand

PHOTO: ALEXS SALAZAR, CSUDH



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Figure 3. Fishing Industry Memorial, San Pedro

PHOTO: MARKO GARMONO, CSUDH



ingredients (Figure 2). It is also in a restaurant's best interest to set trends, such as a new food item or a new source for that item. Some chefs are already catering to the *locavore* trend and are eager to be the first down at the docks (an unusual and often surprising activity in Los Angeles) to purchase sea urchin and sardines. One local chef even wanted to put pictures of the fishermen on his website with descriptions of the seafood's origin.

Many fishermen in the Los Angeles area want to engage in direct marketing, and many restaurant owners and grocery stores are eager to participate in "boat-to-table" dining. However, the need for a high level of cooperation from very independent fishermen is proving to be one of the largest barriers to rapid acceptance and implementation of any new marketing strategies.

An introduction between some San Pedro-based fishermen and two local Los Angeles chefs at new, trendy, small restaurants had the great potential of coupling interested producers and consumers. Both sides were excited about the prospects of selling

and buying locally and directly. The restaurants wanted to support local producers and obtain the freshest food available. Interestingly, the fishermen were as interested in the prospect of direct selling for economic reasons as they were in selling locally from a more philosophical standpoint (Figure 3). To them, there was a stronger sense of pride in having their catch consumed locally than having it sold, processed, and distributed halfway around the world. However, the potential partnership snagged on such issues as licensing, transport, and supply, which would most appropriately be resolved within the fishing community.

Under the traditional system, fishermen sell their catch to a wholesaler who is licensed with a certified scale, has a distribution system, and balances out fluctuations in landings by purchasing from a large number of fishermen. To sell directly to a restaurant, grocery store, or consumer, a fisherman needs to account for each factor. Obtaining a license and a certified scale is a matter of time and money. However, providing a steady and continuous supply is a challenge for many fishermen for many reasons outside their control, such as boat maintenance, foul weather, and regulatory seasons. Transporting the catch is another hurdle because a refrigerated truck is necessary to get the catch from the docks to other parts of Los Angeles, and this is cost prohibitive for most fishermen. Finally, the time spent selling and delivering their catch is time that fishermen could be fishing, so finding the right balance is another hurdle. Some fishermen have begun tackling these issues by considering a cooperative, in which they would join together and operate for mutual benefit.

Cooperatives are assembling in other parts of California and the United States in various forms, such as the San Diego Fishermen's Working Group and North Carolina's Walking Fish ([www.walking-fish.org](http://www.walking-fish.org)). The Fishermen's Working Group functions as a marketing association targeting the local consumer. Walking Fish, on the other hand, is a community-supported fishery that connects local, pre-paying members to a share of a local fishermen's seasonal catch, much like community-supported agriculture does. Forming these cooperatives is not simple and depends on space, start-up funds, perceived or actual demand, and, most importantly, cooperation. This last variable has been known to be an insurmountable hurdle to success or to even starting the process. Although fishermen in a region may agree that a new strategy for economic sustainability is positive and feasible, they struggle to organize around the idea. To understand why, one must consider the established characteristics of the fishermen and their specific

fishing community. To form a local cooperative, Los Angeles fishermen need to overcome their tendency toward independence to cooperate (Jentoft and Davis 1993; Thomas, Johnson, and Riordan 1995).

The fact that fishermen are notoriously independent is widely acknowledged and discussed in academic literature. In *Anthropology of Fishing* (1981), James Acheson discusses the general themes addressed in maritime anthropology, such as the socio-cultural characteristics of fishing communities and of the people themselves, including what constitutes a sense of community and how that community functions. He discusses cultural characteristics that place this group of people in a complex population, culturally and socially defined by their work. Smith (1977), Johannes (1981), McGoodwin (1989), Pollnac (1988), and Pollnac and Poggie (1991) support this characterization, adding that variables such as work environment, resource availability, relative isolation, characteristics of independence, hazards, and lack of control all contribute to the unique structure of fishing communities, the people who comprise them, and the multiple social, cultural, economic, environmental, and institutional problems they face (Figure 4).

As resource use changes, due to regulatory measures or environmental change, so do the corresponding, informal social institutions that will emerge to regulate resource use. For example, if fishermen relocate to alternate fishing grounds, this could change social networks and challenge pre-existing internal enforcement structures. This could be another barrier, as the status quo is established and institutionalized in its own right. Fishermen have networks, alliances, and hierarchies; and the threat of disruption can be enough to block change, even though change may lead to increased stability and resilience. Group characteristics also play an important role in shaping the effectiveness of a cooperative or new management strategy. Group size, for instance, can be critical to successful cooperation. When local fishermen were approached about the potential of forming a cooperative, the overwhelming response was that it was essential to keep the cooperative small. The literature supports this idea. Olson (1965) argued that smaller group size best facilitates the collective action required for successfully governing a resource. Ostrom, Gardner, and Walker (1994a) agree, stating that relatively homogenous and small groups tend to be the most robust.

A community sustains human interactions in the social and environmental contexts and relies on cooperation to function (Argyle 1991; Axelrod 1984). For people within a community to cooperate, individuals must perceive

Figure 4. San Pedro Fishing Vessel

PHOTO: MARKO GARMONO, CSUDH



Figure 5. Small-Scale Commercial Fishing Vessels, Terminal Island

PHOTO: ANA PITCHON, CSUDH



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their existence as part of the integrated whole and act in ways that are not driven solely by egocentric values (Jentoft, McCay, and Wilson 1998). Some fishermen in Los Angeles have, at times, cooperated and acted as a united group. Furthermore, most fishermen in Los Angeles continue to fish in spite of declining catch and income. They continue mainly because they do not want to do anything else, although they could. Fishing is a way of life with its own culture, and many fishermen simply cannot fathom an alternative. Thus, there is hope for Los Angeles fishermen to cooperate in a way that will allow them to develop harvesting and marketing strategies, which will enhance the fishermen's economic and social well-being and allow them to continue fishing as the availability of the resource fluctuates and regulations change.

Fishermen in Southern California are not unique among fishermen worldwide regarding changes in resource availability, access restrictions, and the need for revising strategies and corresponding institutions in light of these changes. Fishermen recognize the need to adapt, but the challenge lies in actually making adjustments before imminent collapse forces the issue. Ideally, fishermen will voluntarily adjust their harvesting and marketing strategies because current sentiments and the market support these more immediate, less painful changes. A variety of groups, from fine dining establishments to farmers markets to elementary schools, are beginning to follow the *locavore* trend (Gogoi 2008). Buying and selling in a local market benefits the community, the environment, and the local economy. Supplying the *locavore* movement would be advantageous for small-scale fishermen (Figure 5) in Los Angeles County and may provide the best incentive for improving the sustainability of California commercial fisheries. Finally, keeping communications open and ongoing will be key to working through logistical hurdles and achieving cooperation. Fishermen in San Pedro are currently renewing their efforts toward cooperation by continuing to discuss a cooperative. They are also on the lookout for less formal opportunities to coordinate, such as making joint capital purchases and procuring and sharing commercial scales. Despite the difficulties, there is hope for fishermen, seafood, and communities to become more sustainable, while maintaining their quality of life and economic and social resilience.

<sup>1</sup> San Diego's Everingham Bros. Bait Co. sells to the local Sea Rocket Bistro.

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