

Distribution and Use of Seafood in the Context of Community: A Case Study of the Main Hawaiian Islands

- Executive Summary -

Abstract

The distribution of pelagic fish between point of capture and point of consumption is generally understood in only rudimentary terms, and primarily for commercial fisheries only. Yet the economic, social, cultural, and political implications of commercial and non-commercial distribution and use of seafood products are at the heart of fisheries management. This summary describes the principal results of a pilot study designed to examine typical processes of seafood harvest, distribution, and consumption in a Pacific Island setting, and explanation of the ways in which these processes vary within and across groups of fishery participants, their families, and their communities. The analysis provides insight into the complex motivations, decisions, and social and economic processes associated with the capture, sale, reciprocal sharing, giving, and consumption of pelagic seafood in the Central and Western Pacific, and in other island and coastal settings around the world.

Introduction

The project described here was intended to describe two examples of distinct market and non-market supplies of and demand for pelagic seafood products. The research examined localized behaviors and experiences of two geographically specified samples of fishermen and consumers. The discussion is framed in terms of the need to expand the economic concepts of supply and demand to include non-market values associated with pelagic seafood.

Supply and demand calculations involve a variety of human dimensions that are of direct relevance to any fisheries-management strategy designed to enable sustainable local use of marine resources. These functions can be considered not only in classical economic terms but also in social psychological terms wherein the values and choices of suppliers and prospective consumers assume significance in the outcome of market transactions and the status of specific fisheries. Because groups of people organize themselves in ways that facilitate efficient catch and distribution of seafood for the benefit of suppliers and consumers, supply and demand can also be considered in sociological terms. Finally, supply and demand can be envisioned in cultural terms wherein the capture, distribution, and consumption of fish and other seafood products are considered critical aspects of local or traditional ways of life.

This project involved detailed description and analysis of the commercial and non-commercial transfer or “flow” of pelagic seafood in the Hawaiian Islands. The study enhances understanding of the supply and demand sides of the marine fisheries equation through analysis of distinct processes of harvest, distribution, and consumption of pelagic fish within and across specific

fishing fleets on the island of O‘ahu. The results are useful for fishery managers and others interested in the sources, quantities, distribution channels, end uses, and cultural values of pelagic seafood in communities throughout the populated Hawaiian Islands and in other island settings around the Western Pacific.

Research Methods

The PFRP Seafood-Distribution Project involved extensive archival research, in-depth interviewing, and participant observation among small-boat commercial, recreational, and consumption-oriented captains operating from two popular small-boat harbors on O‘ahu: Wai‘anae, on the Leeward Coast, and Hale‘iwa, on the North Shore. Central to the project methodology was systematic identification of networks of captains known to cooperate or interact extensively at sea. Field staff worked to develop close rapport with such fishermen and to further identify the most highly respected captains in the study area. Knowledge of pelagic fishing and pelagic resources were the principal criteria for identifying the research participants.

The purpose of the project was not statistical representation of seafood distribution across all fishing operations in the study harbors. It was rather to generate a thorough understanding of the social and cultural context of fishing from these small harbors and typical patterns of seafood distribution within, across, and beyond the communities of interest. The project involved focused research emphases on: a) typical patterns of distribution of fish sold in local markets, consumed directly by the fishermen and his family, and/or shared and consumed within and across the various ‘*ohana* (extended families) involved in the study, b) the underlying logic and socio-cultural context within which seafood-distribution decisions are typically made, and c) the implications of identified patterns of seafood distribution for resource managers and others seeking to define and better understand island “fishing communities” and supply of and demand for pelagic fish in the Hawaiian Islands.

Key Findings

Here we report select findings from the project. The principal finding is the clear and overarching importance attributed to fishermen and to locally-caught pelagic seafood in these small community settings. The local social and cultural significance of pursuing, catching, distributing, and consuming marlin (*a‘u*), dolphin fish (*mahimahi*), wahoo (*ono*), and especially tuna (*‘ahi*) cannot be overstated. These species are consumed directly and extensively by the fishing family. They are also widely shared, used as trade items, sold at market, and consumed at various community celebrations. Notably, individual decisions about how pelagic fish are to be distributed vary extensively based on local social, economic, and cultural context.

From a methodological perspective, the social-network sampling process was very effective in identifying highly knowledgeable and seasoned fishermen. This was particularly true of persons who fish on a commercial and part-time commercial basis. That is, there was strong local agreement about the identities of the most knowledgeable, experienced, and productive fishermen. This outcome was validated through observational work in the communities and

through discussions with long-time observers of local fishing activities such as harbormasters and elderly but still attentive fishermen. The sampled networks thus include high-status individuals with strong local reputations as productive fishermen.

While one objective of the network-based sampling process was to identify distinct networks of cooperating commercial, recreational, and consumption-oriented fishermen, it is significant that these distinctions were often somewhat blurred in reality. That is, most persons identified as central actors in the cooperation networks tended to be involved in a mix of commercial, recreational, and consumption-oriented fishing activities. For analytical purposes some such fishermen were “forced” into one or another of the defined study categories, selecting the category that best reflected the majority of the fishing efforts of that individual, so as to enable basic comparison of general operational tendencies.

Fishermen involved in full-time commercial and charter fishing activities naturally tend to sell the vast majority of fish landed during each successful trip. Some degree of sharing and personal consumption was noted among such fishermen, but the operational focus obviously was clearly on selling fish for profit and/or to pay for fishing-related expenses. As indicated in this study, such persons also tend to be at the center of at-sea networks of all cooperating fishermen and the most highly respected individuals in terms of relative degree of knowledge about fishing and pelagic resources.

Fishermen in general look to certain commercially-oriented operators for advice and inspiration. Significantly, such persons are also a consistent source of fish for various *‘ohana* and community functions. This situation speaks to the importance of highly experienced and highly productive fishermen in local communities around the state, the social status that can be attained by being a knowledgeable and seasoned fisherman in the islands, and the universal importance of sharing at least some portion of the catch within localized community settings.

Some notable differences in the characteristics of local fishing fleets and patterns of seafood distribution were detected between Hale‘iwa and Wai‘anae. The social network of cooperating fishermen based in Hale‘iwa was made up of twenty-eight persons: seven of whom were characterized as consumption/recreation-oriented; fourteen of whom were part-time commercial operators; four of whom were full-time commercial fishermen; and three of whom were charter operators.

Hale‘iwa-based charter fishermen reported selling 93 percent of pelagic fish landed during trips taken the previous year and consuming and/or sharing 7 percent. The full-time commercial fishing contingent reported selling 86 percent of all pelagic fish, sharing 9 percent, and eating 5 percent. The part-time commercial group reported selling 67 percent, sharing 27 percent, and eating 6 percent. Finally, the consumption/recreation-oriented group reported selling no fish, sharing 56 percent, and eating 44 percent. Of note, Hale‘iwa-based fishermen who distributed fish to others typically did so across a relatively extensive geographic range that included numerous locations on the opposite side of O‘ahu.

The overall situation was quite different among the Wai‘anae-based network of cooperating fishermen. In sum, there was relatively less overall sale of pelagic fish among the Wai‘anae sample, a significantly higher overall percentage of sharing, and a more restricted geographic range of distribution.

The Wai‘anae network was made up of twenty-four core fishermen: thirteen of whom were characterized as consumption/recreation-oriented; five of whom were part-time commercial operators; five of whom were full-time commercial fishermen; and one of whom was a charter operator. The sole charter operator had adopted the policy of giving fish to his clients and most of the pelagic fish he retained were shared with his *‘ohana*. Full-time commercial operators at Wai‘anae reported selling some 69 percent of pelagic fish landed the previous year, sharing 18 percent, and consuming 13 percent. Local part-time commercial fishermen reported selling 38 percent, sharing 46 percent, and eating 16 percent. The consumption/recreation-oriented group reported selling no fish, sharing 67 percent, and eating 33 percent.

Differences between the two networks of fishermen relate to two principal factors, summarized here. First, Hale‘iwa has become an important tourist destination with many opportunities for fishermen to sell their products to local restaurateurs. Numerous Hale‘iwa—based fishermen also transport their fish to the public auction in Honolulu. In contrast, local opportunities for sale are less common in Wai‘anae and fishermen in the Wai‘anae network report carrying their fish to the auction block relatively infrequently.

Second, while economic conditions are challenging in both communities, and fishermen in both networks meet this challenge in part through reciprocal exchange of seafood and fishing-related labor, this mode of adaptation is particularly common in and around Wai‘anae.

This finding relates to differences in community context. Many Native Hawaiians live in the Wai‘anae area and there is a well-developed capacity among this group to maintain traditional ways of life amidst the social and economic pressures of modern capitalism. Although people from around O‘ahu trailer their boats to fish along the Leeward Coast, locally-based Wai‘anae fishermen are often part of a distinct local culture and informal economy. This is true to a lesser extent in Hale‘iwa, where there is greater admixture of economic activities and cultural tendencies.

Differences aside, there are important similarities in the socio-cultural context associated with fishing and the distribution of pelagic seafood in both study locations. For example, a strong local norm of giving respect to avid and experienced fishermen is common in both communities and locally-caught seafood is very typically sought in both locations for use at baby *lu‘au*, graduations, weddings, funerals, and state and national holidays. In fact a great deal of the social activity observed in each of the communities was and is in many ways rooted in the act of fishing, in activities that support local fishermen and fishing fleets, and in the everyday and celebratory consumption of pelagic seafood.

Summary Conclusions

This report makes clear that the supply of pelagic seafood is mediated through real persons and complex societies and the end product is often highly valued in localized market and non-market settings. This has significant implications for managers who seek to understand and accommodate the needs of those who avidly pursue, distribute, and consume pelagic seafood in such settings, and who seek to address the social complexity that drives the need for fishery management in the first place.

On the broadly-conceived demand side, fish and other marine resources are distributed and used in a variety of culturally meaningful ways that do not lend themselves to expression solely in terms of the market economy. Sale of seafood is important for select participants, but such persons also tend to play important leadership roles among fishermen who are involved in fishing activities and channels of distribution that emphasize traditional and customary values rather than profit.

Modes of distribution and uses of seafood in the study communities and larger island region can vary extensively, typically involving some combination of following: a) direct consumption in the *'ohana* setting; b) distribution and/or consumption in association with community celebrations or rituals; c) reciprocal sharing; d) barter or customary trade; e) selling, where the proceeds of the sale are often put back into the fishing operation, and f) purely altruistic gifting of seafood products.

The reality of the supply and demand equation in this island setting has been demonstrated to be highly complex and one that cannot be adequately expressed through a simple bivariate supply and demand relationship. While encompassing relationship measures such as supply and demand can help us conceptualize broadly distributed human behavior, they can also diminish our understanding of the ways in which human behavior varies in localized settings.

In this case, the experiences and behaviors in question relate to activities and products that are particularly meaningful to local residents of O'ahu and other islands in the Hawaiian chain. Ideally, future discussions about management of pelagic resources in the Western Pacific will focus strongly on the local and regional details of human maritime experience rather than on the highly condensed and overly generalized versions that now wield such influence on public opinion and in marine-policy settings around the world.

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