

# **SUSTAINING WORKING WATERFRONTS: A MODEL FOR ADAPTING HARBOR INFRASTRUCTURE TO CURRENT AND FUTURE NEEDS OF COMMERCIAL FISHING COMMUNITIES**

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## **Background**

Commercial fisheries nationwide have undergone vast changes in recent years. California is no exception, having implemented many new regulations including: 1) limited entry (restricted access), 2) reduced quotas, 3) gear restrictions, 4) area closures (including marine reserves), and 5) daily and seasonal closures. These regulatory changes have been driven by management agencies, environmental groups and the public. While many of these regulations were generally necessary for the long-term viability of commercial fisheries (e.g., rockfish spp., abalone spp.), some were based in part on misperceptions about commercial fisheries (e.g., spot prawn trawl). Together, these new regulations have resulted in marked reductions in commercial fishing activity, and unanticipated consequences for fishing communities. In particular, local harbors are now struggling to maintain infrastructure required to support the remaining fishing operations. Further, harbor administrators are debating the future need and justification for fishing-related facilities and services given the reduction in commercial fishing activity and the general perception that fishery resources are in poor condition and will not support commercial fishing much longer. These debates have been exacerbated by the increased demand for high-value coastal real estate, often for uses that are not ocean dependent (i.e., residential and tourism-related development).

Questions regarding the future of commercial fisheries and the continued need for fishing-related infrastructure were posed to us by the Ventura Port District, one of four local harbors serving commercial fishing operations of the Santa Barbara Channel region (SBC) in California. Faced with costly renovations to the commercial fishing pier, they were uncertain of the need for the pier given the perceived status of the local commercial fisheries. To assist them and other local harbors, we developed a regional project to describe the local commercial fisheries, associated infrastructure needs, and the challenges facing the fishing communities.

## **A Collaborative Project**

The goal of our collaborative project was to provide information on current and potential future trends of SBC commercial fisheries, and associated infrastructure needs and options to local harbor managers. Our objectives were threefold: 1) to develop profiles of the current commercial fisheries and associated infrastructure needs of the four harbors in the region, 2) to identify factors that may alter those profiles over the next 5 to 10 years and describe how these changes may impact infrastructure needs and 3) to identify potential improvements and alternatives for meeting the current and future infrastructure needs of the various commercial fisheries.

To address these objectives, we:

- Analyzed commercial fishery landings data from the Pacific Fisheries Information Network (PacFIN) database.
- Surveyed resident SBC commercial fishery participants.
- Interviewed individuals knowledgeable about SBC and other West Coast commercial fisheries, harbors and associated infrastructure.
- Conducted a “Future of Commercial Fisheries” workshop with local commercial fishery representatives, fishery scientists, and managers.

Our results were compiled into a technical report with four major topics: 1) SBC commercial fisheries, 2) current infrastructure needs, 3) factors influencing SBC fisheries, and 4) the future of SBC fisheries.

SBC Commercial Fisheries: In this section, we described the geographic area and the local commercial fishing operations and landings for the region and the four local ports. We included information on the current distribution of various fishing operations among the local ports, vessel and crew sizes, and estimates of the time spent fishing within and outside of the region. We also included profiles of commercial landings for the region and at each local port, with annual ex-vessel values and volumes of landings for the top fisheries. These data illustrate historic trends in landings covering a 25-year period (1981 to 2005), as well as the most recent 5-year trends (2001 to 2005) following the downsizing of commercial fisheries.

Current Infrastructure Needs: For this section, we provided information regarding the current fishing-related harbor infrastructure needs identified by local commercial fishermen, beginning with an explanation of the needs common to all fishery participants and those specific to particular types of fishing operations. Brief summary and appendices detailed the identified infrastructure needs, as well as suggestions for general improvements for each local port. We also described model facilities and services at other West Coast harbors that may serve as examples for addressing current local infrastructure needs.

Factors Influencing SBC Fisheries: Here, we discussed some of the factors - environmental, regulatory, and economic – that influence SBC fishery landings. In particular, we described the effect of climatic processes on local fishery resources--these processes are extremely dynamic in this region, which is a transition zone where warm and cold water masses meet. Regulations (e.g., area closures, quotas) and economic (e.g., global markets, operating costs) factors that have had major impacts on local fishing operations were also described. Following these discussions, we illustrated when and how these factors have influenced SBC fishery landings for the top three fisheries of the region.

The Future of SBC Fisheries: We described anticipated changes in local fisheries. We detailed some of the challenges facing the local fishing communities, then highlighted opportunities for addressing those challenges, including the potential for re-opening closed areas and fisheries and for developing new and/or expanded fisheries. We also provided information regarding anticipated changes in management and future infrastructure needs.

## **Outcomes**

The initial question posed to us -- What is the future of commercial fisheries? -- was somewhat daunting. Predicting the future of anything, let alone fisheries, has inherent problems. But, it was clear that there was a critical need for up-to-date information on local commercial fisheries and fishing communities, including factors that may impact future fishing activities. This information is required not only by the harbor managers who posed the question to us initially. It is also needed by resource managers, county and state planners, commissioners, and legislators, environmental non-governmental organizations, and the general public, all of whom influence fisheries management and thereby impact local waterfronts. Moreover, commercial fishing communities require this information to document their needs, and to educate others about local fisheries, their complexities, and how their sustainability hinges on local awareness and support.

Our characterizations of the local commercial fisheries and infrastructure needs (both current and future) have resulted in the following outcomes:

- Increased support for maintaining local working waterfronts
- Improved agency assistance to the fishing community in addressing fishing-related facility and service needs
- Increased demand for educational materials regarding local fisheries
- Improved understanding of the status of local commercial fisheries
- Heightened awareness of the complexities of the local fisheries
- Enhanced knowledge of the challenges facing local fishing communities

Specifically, we have educated harbor managers and others about the dynamics of the local commercial fisheries and the continued infrastructure needs of the local fleets. Many were unaware of the complexities of fisheries, the fishery regulations already in place, and the fact that many local fisheries were still considered to be healthy. This, in turn, has increased support for maintaining working waterfronts in the region. Direct measures of this support include requests for grant funds to improve fishing-related infrastructure and staff support for addressing infrastructure needs identified in our study. Harbor managers and coastal planners are also using the information to understand the likely future needs of the fishing community, including the need for infrastructure that facilitates fishermen's direct marketing efforts.

Our findings have also illustrated the importance of diversification and adaptability not only for fisheries, but also for working waterfronts. Harbors that support diverse fisheries are better able to endure variability and change in fishing activities as they are not solely dependent on a single fishery to maintain the infrastructure. Decisions to support only a couple of the top fisheries (an option that came up during our discussions) will undoubtedly be problematic over the long term, particularly for areas such as the Santa Barbara Channel where fisheries typically come and go as oceanographic conditions change. Further, harbors that can adapt to changes in infrastructure needs will be better situated to support local fishing operations, thereby increasing the efficiency of the harbor. For example, use of temporary structures (e.g., floating docks) that can be installed during times of peak fishing activity, or during fishing seasons that require additional dock space for offloading, gear staging or net repair, may meet the needs of both the fishing community and harbor administrators. Adaptive strategies are being discussed in terms of fisheries management,

but few people have suggested such measures for fishery-associated infrastructure.

Overall, our results indicate that commercial fisheries of the SBC will remain viable, at least over the next 5 to 10 years, provided there is adequate infrastructure (including waterfront access) and public support. We are continuing to build local collaborations to explore ways to provide access and appropriate infrastructure that ensures the viability of local fisheries and the availability of high quality, sustainable local seafood for the region's communities. In addition we are working toward addressing the disconnect between local communities and their fisheries, especially as this disconnect affects decisions regarding waterfront uses.

Dissemination of our project results in short, easy to read bulletins will likely improve the community's knowledge of local fisheries. This will increase their ability to base decisions on accurate up-to-date information -- something that was missing until we conducted this study. Harbor managers are supportive of developing educational materials and displays that promote the fishing heritage of the region. There have also been increased discussions about further developing local fishermen's markets and fishing-related activities at the annual harbor festivals to improve the visibility of local fisheries.

In addition to local outcomes, several groups outside the region have expressed an interest in using our study as a model for conducting similar studies in their areas. Many harbors are currently unable to make informed decisions regarding fishing-related infrastructure, as they do not have accurate information on the current capacity of local fishing operations or the current and future needs of the local fishing community. Through our study, we are promoting collaborative efforts among fishery representatives, local ports and community members that address current and future infrastructure needs for sustaining fisheries and fishing communities.

### **A "Model" Project**

As evident from our project outcomes and this conference, many are talking about waterfront access and working waterfronts. Clearly, both directly impact – and are affected by - commercial fishing activities. Thus, commercial fisheries and fishery participants should be included in discussions of waterfront issues. Fortunately, because one of the local harbors asked some important questions, we have had the opportunity to provide a framework for collecting and analyzing data useful for such discussions. Our survey tool and the key questions discussed at our "Future of Commercial Fisheries" workshop are included in our technical report. We encourage others to modify the survey and questions to fit their needs. As with any study, now that the study has been completed we have identified areas for improvement (e.g., using a shorter survey) and we are available to discuss these with interested parties.

Overall, there are three essential components for conducting a similar study:

- Include research of not only infrastructure needs, but also issues regarding fishery resources and fishing communities.
- Conduct the research in a collaborative manner, meaningfully engaging fishery participants and fishery-support providers.
- Share the results with all.

Notably, this research should focus not only on current and future infrastructure needs, but it should also include profiles of fishery resources and fishing communities of the region and the current and potential future factors influencing fishing activities. Without an understanding of the dynamics of fisheries and fishing operations, it will be difficult to develop waterfront strategies that are adaptive to the variable and changing nature of fisheries. In addition, the research should be conducted collaboratively, integrating the knowledge and needs of local fishing communities, harbors, resource managers and scientists. Without such collaboration, the data will likely be misinterpreted and provide only a partial view of the situation. Lastly, it is important to share the information with others, not just harbor managers. Many other groups, including the general public, are influencing decisions regarding fisheries management that have, as we have seen, unanticipated impacts on harbors. Educating others will enhance the understanding of how changes in fisheries management impact communities on a local level.

We are encouraged by the local and statewide demand for our project results. Many are interested in better understanding fisheries and supporting the fishing heritage of the state. The importance of waterfront access and working waterfronts for the fishing community can be illustrated by providing up-to-date information on local fisheries and harbor-associated infrastructure needs. We hope that others interested in maintaining working waterfronts will find our study useful and will adapt it to help address waterfront issues in their area.

To obtain a copy of our report “*Commercial Fisheries of the Santa Barbara Channel and Associated Infrastructure Needs*” please contact Steve Gabrysh, California Sea Grant, [sgabrysh@ucsd.edu](mailto:sgabrysh@ucsd.edu). Copies are available for \$20 plus tax and shipping.

### **Acknowledgments**

Our project required close collaboration with many people who contributed information and ideas throughout the effort, particularly fishing community members, harbor managers, resource managers and scientists. Project funding was provided by the Ventura Port District, NOAA Fisheries, Santa Barbara Harbor, and the California Sea Grant Extension Program.