

Monterey Bay National Marine Sanctuary

Commercial Fisheries- Economic Summary

Economic Impact of the Commercial Fisheries on Local County Economies from Catch in the Monterey Bay National Marine Sanctuary, 2010, 2011 and 2012



Map: Tony Reyer

Map of MBNMS, California Department of Fish and Wildlife blocks and counties in the study area.



Photo: Becky Stamski / MBNMS

Boats rigged for Salmon fishing in the Moss Landing harbor.

Introduction

This report estimated the economic impact of commercial fishing within the Monterey Bay National Marine Sanctuary (MBNMS) according to the California Ocean Fish Harvester Economic Model (COFEH). Estimates of harvest revenue (what the fishermen receive when they land their catch at various California ports) were converted to estimates of total output, value added, income and employment (measured in number of full and part-time jobs) using the multipliers in the COFEH Model for each county. Results are presented for years 2010, 2011, 2012 and the three-year average.

Results

Results are estimated for seven counties. Analysis covered 2010, 2011, 2012 and a three-year average. This was done due to volatile fluctuation in some influential fisheries from year to year.

Harvest revenue, output, value added and total income showed variability over the study period. From 2010 to 2011, all four decreased slightly. From 2011 to 2012, all four increased above 2010 levels. Employment has steadily increased from 650 in 2010 to 1,016 in 2012.

According to the three-year average, commercial fishing in the MBNMS earned almost \$26 million in harvest revenue, which generated \$42 million in total output, almost \$29 million in value added, just under \$26 million in total income and 843 full-time and part-time jobs.

The majority of this economic impact was concentrated in Monterey and San Mateo counties. For the three-year average, Monterey County accounted for over 50% of harvest revenue and output and 53% of value added and income. San Mateo County accounted for 36% of harvest revenue and output and 35% of value added and income. Monterey accounted for 51% of employment while San Mateo accounted for 23% of employment.

Definitions of Key Terms (adapted from Hackett et al 2009)

Harvest Revenue: What fishermen receive when they land their catch at various CA ports.

Output: Total industry production, equal to shipments plus net additions to inventory.

Value Added: The value added during production to all purchased intermediate goods and services. This is equal to employee compensation plus proprietor's income plus other property income plus indirect business taxes.

Total Income: Sum of employee compensation, proprietor's income, corporate income, rental income, interest and corporate transfer payments.

Employment: Full- and part-time jobs.

Summary Table of Results, 2010, 2011, 2012 and 3-year Average (2013 \$)

	2010	2011	2012	3-year Average
Harvest Revenue	\$24,299,169	\$23,945,000	\$29,644,153	\$25,962,774
Output	\$39,294,298	\$38,775,034	\$48,015,078	\$42,028,137
Value Added	\$27,699,361	\$25,942,799	\$32,257,331	\$28,633,164
Total Income	\$25,1974,638	\$23,364,018	\$29,270,043	\$25,942,900
Employment	650	864	1,016	843

Local County Dependence on Commercial Fish Catch in the MBNMS

Dependence on commercial fish catch in the MBNMS was calculated as the percent of total income by place of residence and by place of work from commercial fishing. In addition, dependence was calculated as the percent of total employment in the study area from commercial fishing. Due to data limitations this analysis could only be completed for year 2010 and 2011.

In 2010, the commercial fisheries directly (and indirectly through the multiplier process) accounted for 0.007% of total income by place of work, 0.01% of the total income by place of residence and 0.02% of all jobs. In 2011, the commercial fisheries accounted for 0.007% of total income by place of work and 0.009% of total income by place of residence and 0.03% of jobs in the seven-county study area.

The percent of income by place of



Photo: Josh Penderson

Market squid, the number one species in the MBNMS in 2012.

residence from commercial fishing in the MBNMS ranged from a high of 0.1% in Monterey County in 2010 to a low of 0.000002% in Ventura County in 2010. As a percent of total income by place of work, commercial fishing ranged from a high of 0.14% in Monterey County in 2010 to a low of 0.000004% in Ventura County in 2011. Employment accounted for from commercial fishing in the MBNMS ranged from a high of .02% in Sonoma County in 2010 to a low of 0% in Contra Costa in 2010.

Methods

For commercial fishing data, the California Department of Fish and Wildlife (CDFW) California Fishing Information System (CFIS) landings receipts database was used for years 2000 through 2012 (CDFW-CFIS 2013). The CDFW-CFIS contains daily landings by CDFW 10-minute by 10-minute blocks where the catch was made and by port and county where landed. Pounds and value of catch (revenue received by the fishermen) are also



Photo: Kip Evans

There are four major harbors along the shores of the MBNMS.

reported by species, gear used, and condition of catch when landed (e.g. live, dressed heads off, etc.).

For the economic model, the California Ocean Fish Harvester Economic (COEFH) Model (Hackett et al 2009) was used. This model is based on a survey of the commercial fishing industry to obtain cost-and-earnings by 20 "Operational Categories" or OCs. The OCs are key to the economic impact analyses. OCs are combinations of species, gear type, catch condition, and vessel length. Each OC has its own cost function and multipliers derived from the IMPLAN Input-Output Model.

More Information

The full report can be accessed online at:

http://sanctuaries.noaa.gov/science/conservation/pdfs/mbnms_fishing_report.pdf

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