

California's North Coast Fishing Communities Historical Perspective and Recent Trends

APPENDIX C: METHODOLOGICAL DETAIL

Customization of PacFIN Landings Receipt Data to Characterize Commercial Fisheries

State and PacFIN Landings Receipts

Washington, Oregon and California (W-O-C) require first receivers to submit receipts for all commercial landings made in those states. Information recorded on landings receipts includes (but is not limited to) vessel ID, date and port of landing, landed weight by gear and species/species group, ex-vessel price, and receiver ID. The Pacific States Marine Fisheries Commission manages W-O-C landings receipt data collected since 1981 as part of its PacFIN program.¹ One of PacFIN's responsibilities is to standardize each state's landings receipt data, to make it comparable coastwide. For instance:

- Vessel IDs reported on landings receipts are registration numbers assigned by state fishery agencies to individual vessels. While these numbers uniquely identify a vessel within a state, use of these identifiers for coastwide analysis can lead to double counting of vessels that land fish in multiple states. To address this issue, PacFIN replaces the state registration numbers with a unique identifier consisting of (a) the Coast Guard documentation number for vessels of five net tons or more, or (b) the state marine board number assigned by the state Department of Motor Vehicles for vessels of less than five net tons (which are not subject to Coast Guard documentation).

- PacFIN converts each state's numeric port codes to a common set of alphanumeric PacFIN codes (e.g., CRS = Crescent City, ERK = Eureka, BRG = Fort Bragg).
- PacFIN converts each state's species codes to alphanumeric 'market categories' (e.g., CHNK = Chinook salmon, DCRB = Dungeness crab, SABL = sablefish). Each market category consists of a single species or a group of taxonomically similar species that receive the same ex-vessel price in a given landing. PacFIN also assigns individual market categories to species complexes and management groups, as appropriate, to facilitate fishery management and monitoring.
- PacFIN converts each state's gear codes to a common set of PacFIN gear codes (e.g., MDT = midwater trawl, SEN = seine, CPT = crab pot). These gear codes are further aggregated into gear groups (e.g., TWL = all trawls except shrimp trawls, NET = all net gear except trawl, POT = all pot and trap gear).
- In addition to providing the landed weights reported on the landings receipts, PacFIN converts landed weights to round weight equivalents for species that are typically not landed in the round (e.g., salmon, sablefish).

Customization of PacFIN Landings Receipts

For the regional and port profiles, fishing activity was characterized in terms of effort (vessels and trips), landings, ex-vessel value, prices, and buyers (first receivers), by fishery. Although the profiles pertain to North Coast ports, all W-O-C landings receipts were

analyzed to ensure that information on fishery participation and average per-vessel revenue for vessels landing fish at North Coast ports included their participation in all fisheries in all West Coast states.

In order to provide the detailed fishery-specific information needed for the profiles, 1981–2007 PacFIN landings receipt data for W-O-C were customized as follows:

- A ‘fishery’ was defined as a particular combination of a market category (or categories) and gear group. Thirty-four fisheries were defined in this manner: (1) coastal pelagic species seine, (2) squid seine, (3) salmon troll, (4) salmon net, (5) herring gillnet/dive, (6) swordfish drift gillnet, (7) swordfish longline, (8) swordfish harpoon, (9) albacore troll, (10) tuna seine, (11) tuna longline, (12) shark gillnet, (13) shark hook-and-line, (14) nonwhiting groundfish trawl, (15) whiting trawl, (16) rockfish gillnet, (17) halibut hook-and-line, (18) halibut set net, (19) rockfish/lingcod hook-and-line/pot, (20) sablefish hook-and-line/pot, (21) cucumber net/trawl/dive, (22) urchin dive, (23) crab pot, (24) lobster pot, (25) shrimp/prawn trawl, (26) shrimp/prawn pot, (27) abalone dive, (28) other shellfish dredge/digger, (29) sturgeon gillnet, (30) white seabass/yellowtail gillnet, (31) white croaker gillnet, (32) eulachon net, and (33) hagfish pot, and (34) all else. The 33 specific fisheries identified above were sufficiently comprehensive of W-O-C fishing activity that only modest amounts of activity had to be relegated to the 34th ‘all else’ category. Depending on the year, 1.1%–3.4% of boats, 1.0%–6.0% of trips, 0.2%–1.9% of landings, and 0.5%–1.5% of revenue were assigned to the ‘all else’ category.
- A ‘fishing trip’ was defined as a unique vessel ID-date of landing combination. While it is possible for a vessel to make multiple trips

on a single date, it is not possible to identify instances of multiple trips from PacFIN, as landings receipts include information on the date but not the time of landing. Thus numbers of trips, as defined by vessel ID and date, may underestimate actual trips (although the extent of such underestimation is believed to be slight).

Once defined, each fishing trip was characterized in terms of total landings and revenue, and assigned to a fishery, receiver (or buyer) and port as follows:

- A fishing trip may involve participation in more than one fishery (e.g., setting/retrieving crab pots and groundfish trawling). For purposes of this report, each trip was assigned to the fishery accounting for the plurality of revenue derived from the trip. For 86% of the trips made between 1981 and 2007, 100% of trip revenue was attributable to a single fishery. For an additional 8% of trips, the fishery to which they were assigned accounted for 90%–99% of trip revenue.
- A vessel may deliver fish to multiple receivers after a given trip. For purposes of this report, each trip was assigned to the receiver accounting for the plurality of revenue from the trip. About 4% of trips made during the period 1981–2007 involved deliveries to multiple receivers.
- On occasion, a vessel may deliver fish at multiple ports upon returning from a fishing trip. For purposes of this report, each trip was assigned to the port accounting for the plurality of revenue for the trip. About 1% of trips made between 1981 and 2007 involved deliveries to multiple ports.

Data Series from U.S. Bureau of the Census

County Business Patterns

The County Business Patterns (CBP) data series provides annual, county-level information on economic activity by businesses

with paid employees.² Activity is described in terms of mid-March employment, first-quarter payroll, annual payroll, and number of establishments. According to the U.S. Census:

- “Payroll numbers include all forms of compensation such as salaries, wages, reported tips, commissions, bonuses, vacation allowances, sick-leave pay, employee contributions to qualified pension plans, and the value of taxable fringe benefits. For corporations, it includes amounts paid to officers and executives; for unincorporated businesses, it does not include profit or other compensation of proprietors or partners. Payroll is reported before deductions for Social Security, income tax, insurance, union dues, etc. . . . First-quarter payroll consists of payroll during the January-to-March quarter.”
- Mid-March employment includes “full- and part-time employees, including salaried officers and executives of corporations who are on the payroll in the pay period including March 12. Included are employees on paid sick leave, holidays, and vacations; not included are proprietors and partners of unincorporated businesses.”
- An establishment is defined as “a single physical location at which business is conducted or services or industrial operations are performed. It is not necessarily identical with a company or enterprise, which may consist of one or more establishments. When two or more activities are carried on at a single location under a single ownership, all activities generally are grouped together as a single establishment. The entire establishment is classified on the basis of its major activity and all data are included in that classification.”

CBP categorizes activity within each county by sector, with sectors based on the North American Industrial Classification System (NAICS). The NAICS classification scheme is hierarchical. For instance, sector 11

(Agriculture, Forestry, Fishing and Hunting) includes subsectors such as 111 (Crop Production), 112 (Animal Production), 113 (Forestry and Logging), 114 (Fishing, Hunting and Trapping) and 115 (Support Activities for Agriculture and Forestry). Each three-digit code is further subdivided into four- and five-digit codes that define each subsector at greater levels of specificity.³

Data are sometimes suppressed in CBP tables, for example, “to avoid releasing data that did not meet publication standards” or “to avoid disclosing data of individual companies.” In the Regional Profile, two-digit NAICS sectors are used to characterize county business activity, as the likelihood of data suppression increases at finer levels of classification.

Nonemployer Statistics

While County Business Patterns focuses on businesses with paid employees, the Nonemployer Statistics data series provides information (i.e., total establishments, total annual receipts) on businesses without paid employees.⁴ As with CBP, this information is available by county and NAICS sector. According to the U.S. Census:

- “A nonemployer business is one that has no paid employees, has annual business receipts of \$1,000 or more (\$1 or more in the construction industries), and is subject to federal income taxes. Most nonemployers are self-employed individuals operating very small unincorporated businesses, which may or may not be the owner’s principal source of income.”
- “. . .for nonemployers we count each distinct business income tax return filed by a nonemployer business as a firm. A nonemployer business may operate from its owner’s home address or from a separate physical location. Most geography codes are derived from the business owner’s mailing address, which may not be the same as the physical location of the business.”

- “The composition of nonemployer receipts may differ from receipts data published for employer establishments. For example, for wholesale agents and brokers without payroll (nonemployers), the receipts item contains commissions received or earnings. In contrast, for wholesale agents and brokers with payroll (employers), the sales and receipts item published in the Economic Census represents the value of the goods involved in the transactions.”

Field Data Collection

We collected field data through interviews, small group meetings, observation and related activities conducted between Fall 2007 and Spring 2009.⁵ All field activities were directed toward understanding the history of local fisheries and the fishing community, current status and trends, infrastructure needed, provided and used. We used an iterative process using archival data analysis to inform fieldwork, and fieldwork to inform further archival data analysis, to build an integrated and historically grounded understanding of the North Coast fishing ports studied.

Altogether, we engaged more than 180 people through interviews and/or group meetings at the four study ports, including 73 fishermen, 24 seafood business owners and staff, 31 fishery-support business operators, 12 harbor managers and staff, and a number of other individuals.

We conducted semi-structured interviews with individual fishermen, fish receivers, processors, fishery-support business operators, harbor managers and staff and other knowledgeable individuals in each port. We sought broad coverage within and across these groups, and used a modified snowball sampling technique to identify potential interviewees. Interviews ranged in length from 30 minutes to two hours, and addressed several topics including: involvement in fisheries, key business/operation characteristics, linkages within and among fisheries, and infrastructure and its use, and key factors and events that have affected local fisheries and the community over time. We conducted small group meetings with groups of fishermen (e.g., trawlers, charter operators, trollers) to collect summary information about characteristics of and use patterns in those fisheries, infrastructure needs and uses, and key factors and events that have affected local fisheries and the community over time.

In addition, we observed fish receiving and processing and support activities to develop a practical sense of the social and economic organization of local fisheries and the fishing community. We analyzed all field data (fieldnotes, documents, and other materials collected) and archival materials (e.g., harbor reports, newspaper articles, fishery bulletins) for content specific to the historic and present-day operations and circumstances of local fisheries and the fishing community.

ENDNOTES

- ¹ <http://pacfin.psmfc.org/>.
- ² <http://www.census.gov/econ/cbp/definitions.htm>.
- ³ See <http://www.census.gov/eos/www/naics/> for a complete description of NAICS codes.
- ⁴ <http://www.census.gov/econ/nonemployer/definitions.htm>.
- ⁵ Additional data were collected during the review process, in which study participants from each community had the opportunity to review the draft profile(s) to which they had contributed.