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How Many Commercial Fishermen?

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Summary

Current estimates of the number of U.S. commercial fishermen are suspect, yet accurate numbers are important for forecasting and planning for the impact of proposed legislation and programs, such as disaster relief and capacity reduction under the Magnuson-Stevens Fishery Conservation and Management Act. Accurate figures can help Congress predict budget implications and allocate limited budget resources for these programs. Part of the problem lies with how "commercial fisherman" is defined and how employment data are collected, and resolution may hinge on finding better ways to identify and count people who work in a very fluid and transient industry.

Improved estimates of the number of U.S. commercial fishermen can improve the ability of federal legislators and regulators to accurately forecast and plan for the impacts of proposed legislation, such as amendments affecting disaster relief and capacity reduction programs under the Magnuson-Stevens Fishery Conservation and Management Act (P.L. 94-265, 16 U.S.C. 1801 *et seq.*). More accurate figures on numbers of commercial fishermen can also assist Congress in predicting budget implications and allocating limited budget resources in appropriating funds for existing programs that provide disaster relief and capitalize capacity reduction for the U.S. fishing industry. Funding for many of these programs ranges from less than $10 million to more than $100 million. Unreliable numbers can lead to excessive funds, money used inefficiently, or insufficient funds to achieve program objectives. The last published estimate of the National Marine Fisheries Service (NMFS, National Oceanic and Atmospheric Administration, Department of Commerce) stated that 273,700 persons were employed as commercial fishermen in 1988.[1] In contrast, the Bureau of Labor Statistics estimated the number of "fishers and fishing vessel operators" was 53,000 in 2000.

[1] *Fisheries of the United States, 1989,* (Washington, DC: National Marine Fisheries Service, May 1990), p. 82. This annual summary has not reported fisherman employment since the 1989 edition, and NMFS has not conducted an annual census of fishermen by vessel and gear type, fishery, port, etc., since 1974.

Who is a Commercial Fisherman?

Basic to the problem of estimating the number of commercial fishermen is the difficulty in agreeing on a definition of what constitutes a commercial fisherman. Any definition of "commercial fisherman" must address whether or not part-time fishermen and crew are included and, if so, what reasonable criteria govern the level of part-time fishing or income that would qualify a person to be recognized as a "commercial fisherman." In the only definition of "commercial fisherman" in federal law, §401(2) of P.L. 95-372[2] broadly defines a "commercial fisherman" as "any citizen of the United States who owns, operates, or derives income from being employed on a commercial fishing vessel."

There is also the gray area of "recreational" fishermen who obtain commercial fishing licenses so that they are not constrained by recreational bag limits or so that they can sell some of their catch to defray recreational fishing trip expenses. Some of these permits are federal but most are state-issued licenses. These permitted vessels may irregularly report only a few pounds of catch.

Estimating the Number of Commercial Fishermen

At least three approaches have been used to estimate the number of U.S. commercial fishermen: 1) Bureau of Labor Statistics (BLS, Department of Labor) data; 2) fishing vessel and license/permit data; and 3) extrapolation from fish processor data. However, each of the estimates has its limitations.

BLS Data. The Bureau of Labor Statistics (BLS) estimated the number of "fishers and fishing vessel operators" was 53,000 in the year 2000.[3] More than 60% of these commercial fishermen were reported to be "self-employed," but "some jobs involved sport fishing activities." Thus, using the BLS estimate, commercial fishermen number fewer than 53,000 individuals.

Most BLS data for employment come from state reports on wage and salary workers. The U.S. Department of Commerce's Bureau of Economic Analysis (BEA) takes information from BLS and combines that with Internal Revenue Service data to make estimates that are entered in the Regional Economic Information System (REIS). One of the BLS sources has been a rather sparse survey of house starts in which BLS requested the occupation of the person building the house.

Limitations. BLS surveys have some limitations in their accounting of fishermen. Some observers suggest that there are likely to be significant numbers of commercial fishing vessel crew members who do not report their income and who "forget" to pay taxes. Often crewmen are seasonal workers, who may not stay more than a few trips on any one vessel and may move from one port to another; vessel owners who send out the 1099-MISC forms to crewmen report a significant proportion returned by the Postal

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[2] Title IV of the Outer Continental Shelf Lands Act Amendments of 1978 establishes the Fishermen's Contingency Fund.

[3] [http://www.bls.gov/oco/ocos177.htm] on August 1, 2002.

Service stamped "moved, left no forwarding address," "no such person at this address," etc. There are others who may just be missed, due to how BLS surveys workers, characterizes occupations, and defines "commercial fisherman." Two additional reasons may also result in an undercount: 1) fishing vessel skippers and crew members are generally self-employed and therefore often do not show up in wage and salary summaries in state labor reports; and 2) many commercial fishermen do not identify themselves as fishing vessel crew members when reporting to the IRS because, for many, crewing is a second job.

An Alaskan economics consulting firm, Northern Economics, has sought to demonstrate the problem with BLS data in Alaska, based on 1997 data [http://www.northerneconomics.com/html/topics.html]. The Alaska Department of Labor reported 1,617 wage and salary jobs in "fishing, forestry, and agriculture" in 2000. That information was forwarded to the BEA where it was augmented with IRS data in the REIS. The REIS data report 15,036 full and part-time persons employed in fishing. However, the State of Alaska's Commercial Fishing Entry Commission reports that 23,721 Alaskans either were active commercial permit holders or purchased crew member licenses in 2000, with an additional 13,360 non-resident commercial fishing license holders, for a total of 37,081 employed persons. While this is an upper-bound estimate, it is more than double the estimates in the BEA or in Alaska Department of Labor data. Such disparity raises many questions about the accuracy and reliability of data being collected.

Another illustration of the reported undercount nationally is that the number of fishing vessels reporting fish and shellfish landings in 2000 exceeded the number of fishermen reported by BLS. Dr. Kathi Kitner of the South Atlantic Fishery Management Council, who has been looking at the extent of the 2000 Census undercount of fishermen in South Carolina, conducted a special survey for the Bureau of the Census to describe its counting problems. She concluded that commercial fishermen were not easily counted by standard census methods because the vessels from which these individuals fished and where many of them lived were not enumerated.[4]

Fishing Vessel and License/Permit Data. NMFS reported that there were more than 70,388 vessels engaged in commercial fishing in 1999, and about 66% of these were "boats" (*i.e.*, under 5 net registered tons).[5] Since larger vessels employ several crew, there are likely at least 100,000 commercial fishermen, based on vessel/boat data.

NMFS managers, who use fishing vessel logbook data, fishing practices, and other sources, estimate that there are 150,000 to160,000 active commercial fishermen who would describe themselves as commercial fishermen, plus another 60,000 part-time commercial fishermen who work at other occupations.[6] This latter group would include,

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[4] Kathi R. Kitner, *Ethnographic Social Network Tracing Among South Atlantic Commercial Fishermen*, Census 2000 Ethnographic Evaluation Report 5 (Charleston, SC: South Atlantic Fishery Management Council), July 2001, 30 p.

[5] *Fisheries of the United States, 2000*, Washington, DC: National Marine Fisheries Service, August 2001, p. 94.

[6] This estimate is based on the number of active commercial vessels (from state and federal (continued...)

for example, the Marine Corps personnel at Cherry Point/Havelock, NC, who fish commercially for crabs to supplement their service pay, and Alaskan teachers who fish for salmon during the summer. Even so, some Northeast Region NMFS staff have said that they think this estimate may be conservative, based on recent surveys they have conducted.

Limitations. Estimates based on vessel and/or license/permit numbers are approximate and likely low estimates because certain states (*e.g.*, Texas, Maryland, Virginia) do not share data with NMFS on craft and landings. In addition, there is little information on the number of undocumented commercial fishing vessels, but it is likely quite large in some states (*e.g.*, Virginia, Maryland, New York, North Carolina, Florida, Maine, Louisiana).[7] Another issue is "double" registration where a boat is registered in two states, *e.g.*, North Carolina and Georgia, to avoid paying out-of-state fishing license fees. Another problem, *e.g.*, in Louisiana, is the use of small craft on an occasional basis for shrimping to supplement income. Data collected in New England include all vessels which have landed fish/shellfish in a New England port. As a result, a Gulf of Mexico vessel which happens to land fish/shellfish once in New England appears in NMFS's list of "active" New England vessels. In summary, estimating even commercial fishing vessel numbers isn't simple, because many of these vessels move around the coast, switching gear and species harvested in an effort to improve income.

In response to concerns about vessel/boat data, NMFS has revised its summary information. In the early 1990s, some were surprised to discover that, after the passing of only a few years, there had been a one-third decline in the number of commercial fishing vessels/boats reported in NMFS's *Fisheries of the United States*. NMFS managers

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[6] (...continued)
permits), estimated crew from the type of vessel and fishery, and seasonality of fishery. Many of these commercial fishermen, like small farmers, supplement their income with other jobs, but they view themselves as fishermen first. There is potential for overestimating here, as vessels stack licenses or one crew may service two or three vessels, but attempts have been made to take that into account. Personal communication from Peter Fricke, National Marine Fisheries Service, August 7, 2002.

[7] Undocumented vessels are those less than 5 net registered tons (nrt), and thus need not have Coast Guard documentation. This undocumented fleet is registered by the states under their motor-boat regulations. Unless a fishing permit is tied directly to a boat registration number or the state has a special registration category for commercial boats, there is difficulty in identifying those state-registered vessels which engage in commercial fishing. Since boat documentation by states is normally done by their Department of Motor Vehicles (DMV), rather than their fisheries division, the issue of identifying which boats are used in commercial fishing is often seen by DMV as a non-issue. Where a vessel under 5 nrt has Coast Guard documentation, its use is easily identified. Because of the passenger-vessel rules, the charter and party-boat fleet is documented by the Coast Guard. NMFS, Coast Guard, and the states undertook a major review of errors in reporting due to registration issues about seven years ago, and the data are more complete now. Under the Atlantic Coastal Cooperative Statistics Program, the states, the Atlantic States Marine Fisheries Commission, and NMFS have been trying to coordinate and harmonize data on vessels, fishing permits, and landings, but problems remain. For example, it is difficult to measure striped bass fishing effort on Chesapeake Bay because Maryland landing records are kept by water-body (*e.g.*, the Patuxent River) rather than by place or port of landing or by vessel, whose registration would tie it to an individual and place. Personal communication from Peter Fricke, National Marine Fisheries Service, September 18, 2002.

reported that the reasons for these changes were: 1) NMFS had been unhappy with the quality of statistics received from certain states and dropped data from those states, and 2) NMFS had made a concerted effort to eliminate double, triple, *etc*. counting associated with vessels appearing in the records of multiple states.

Fish Processor Data. Another way of estimating the number of commercial fishermen is to use the ratio between fish processors and fishermen as being approximately 1:2+.[8] Since BLS reported some 86,000 fish processors and packers in 2000 working in 4,700 plants, this would indicate more than 172,000 commercial fishermen. The data on processors and packers is fairly accurate because payroll data and physical head counts are available.

Limitations. Technological changes as well as changes in the volume of import/export trade can alter the ratio between commercial fishermen and the number of processors required to handle the catch. Because of these variables, this estimate is likely to be of marginal accuracy.

Options for Addressing Concerns

NMFS has received some funding to design and conduct a pilot-study for a census/demographic survey of commercial fishermen, after which funds will be sought for a national program. The NMFS approach may be modeled after the "rural life/farm community" census of the U.S. Department of Agriculture (now done by the USDA, rather than the Bureau of the Census) from which rural farm, community, employment on and off farms, and income data are derived by USDA's Economic Research Service, for use by all USDA agencies.

Northern Economics, an Alaskan economics consulting firm involved in this area for several years, has proposed revising the way that fishing employment data is collected. The firm suggests amending the Magnuson-Stevens Fishery Conservation and Management Act to require that NMFS collect commercial fishing employment data and provide funding for such an effort.[9]

This issue of how to better count commercial fishermen also raises a set of often difficult problems related to whether or not to count fishing vessel crew members as employees. However, that approach would not address the problems of having no set

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[8] The process worker:fishermen ratio is derived from data NMFS and the Bureau of Fisheries/Bureau of Commercial fisheries have collected and reported over the years. Between 1920 and 1940, this ratio was 1:1.3; in 1950, it was 1:1.6; in 1960, it was 1:1.4; in 1970, it was 1:1.6; in 1980, it was 1:1.9; in 1985, it was 1:2.1; and in 1988, it was 1:3. Use of a current ratio of 1:2+ processors/dealers/wholesale employees to fishermen is based on community profiles that NMFS has developed, knowledge of changes in fish processing, and changes in fishing practices, such as the marketing switch from frozen to fresh halibut following the implementation of individual fishing quota programs in Alaska, the closure of U.S. tuna processing plants but the retention of many tuna vessels in the U.S. fleet, and the move to at-sea, block-freezing of fish for export and later processing by overseas buyers. Personal communication from Peter Fricke, National Marine Fisheries Service, August 7, 2002.

[9] See [http:// www.northerneconomics.com/html/topics.html].

wages, no set time period for wages, being covered under the Jones Act for injuries and medical problems, and (as an employee) being covered by Workmen's Compensation, with employers paying unemployment on them.[10] The eventual solution to this issue appears to hinge on finding the answer to how one might better identify and count transient and seasonal workers.

[10] In some states (Maine, for example), fishing vessel crew cannot collect unemployment.