

SUPPORTING STATEMENT
COST-EARNINGS SURVEYS OF HAWAII AND AMERICAN SAMOA SMALL BOAT-
BASED FISHERIES
OMB CONTROL NO.: 0648-XXXX

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

This request is for a new information collection.

The [Magnuson-Stevens Conservation and Management Act](#) (MSA) mandates that conservation and management measures prevent over-fishing and obtain an optimum yield on a sustained basis and the measures shall be based upon the best scientific information available. The MSA also requires that conservation and management measures take into account the importance of fishery resources to fishing communities in order to: (a) provide for the sustained participation of such communities, and (b) to the extent practicable, minimize adverse economic impacts on such communities. To promote better utilization and management of fishery resources in Hawaii and American Samoa, the National Marine Fisheries Service (NMFS) proposes the collection of cost-earnings data in these two island areas' small boat-based reef fish, bottomfish, and pelagics fisheries.

Small boat (20-40 feet) fisheries in Hawaii and American Samoa are important to the local communities as they provide jobs for fishing participants, food for local families and communities, and preserve cultural practices. A subset of the Hawaii small boat fishery operates primarily offshore using handline gear and bigger vessels (~40 feet). The offshore handline fishery is concentrated at Cross Seamount, located southwest of the Big Island, and targets bigeye and yellowfin tuna. When the unemployment rate on the Big Island was high in the mid-1980s, many part-time fishers increased their participation in the small-boat fishery for income and/or food. As such, the small-boat fishery has the potential to become more important if Hawaii suffers an economic downturn.

In American Samoa, the primary domestic fishery is small-boat, 1-day fisheries. The fishery lands approximately 4 pounds of fresh fish per capita annually.¹ The fishing activities are usually a mix of commercial and non-commercial fishing, with slightly more than half of the fish landed being commercial landings and the rest of the fish landed being non-commercial landings (mostly for subsistence use). One segment of this fishery targets insular fish stocks by spearfishing and bottomfishing, and a different segment of this fishery targets highly migratory pelagic species by longlining and trolling. Coral reef spearfishing is the most common fishing method in the American Samoa small boat fishery. Its economic importance is also increasing due in part to the opening of the Fagatogo Fish Market in August 2011, which enables individual fishers to sell their catch directly to the public. As opposed to other small-boat fisheries in American Samoa that usually are owner-operated, spearfishing sometimes involves several

¹ Fresh fish per capita in American Samoa was based on data in 1994 before the large longline fishery was developed.

spearfishers sharing the trip costs but operating individually to sell catch.

Participation and production in the Hawaii small-boat fishery are sensitive to external factors such as increasing fuel prices and abundance of fish stocks, which directly affect the cost of fishing. In American Samoa, fish landings and the use of fishing methods are highly influenced by fishery management. For example, due to the decline in reef fish population, management measures excluded non-American Samoan fishers from scuba spearfishing in 1997 and subsequently banned all scuba spearfishing in 2001. Snorkel spearfishing is still allowed but with lower catch per unit effort as the time under water is shorter. Availability of economic data for small boat fleets in Hawaii and American Samoa are important for fishery managers to design sound policy.

Fisheries in these areas are managed under Western Pacific Region Fishery Management Council (WPRFMC). The paucity of economic data has been a significant hurdle in evaluation of economic impact and regulatory proposals in Hawaii and American Samoa. Most of the existing economic information is limited to dockside value data. Fishing cost-earnings data about small boat-based fisheries in these two island areas are limited and outdated (see Hospital, Bruce, and Pan (2011)² and Kasaoka (1989)³). Hospital, Bruce, and Pan (2011) conducted a cost-earnings study of the Hawaii small pelagic fishery in 2007 to collect economic and social characteristics of the Hawaii small boat pelagic fishery under OMB Control No. 0648-0369. However, no economic data have ever been collected for Hawaii offshore handline fishery. Kasaoka (1989) collected economic data in American Samoa, Guam, and the CNMI in 1988 with small sample size (n=36 in American Samoa) and nothing has been done on a routine basis. And no economic data have been collected for the spear fishery. Because this dated research and the lack of data for particular subsets of fisheries are inadequate to support current management actions and meet the requirements put forth by MSA, we are proposing updating our knowledge of cost-earnings data in these areas. As subsets of the study, one component will target the Hawaii offshore handline fishery and another component will target the American Samoa spear fishery.

The objectives of this study are to update baseline cost-earnings economic information for the small boat fleets of Hawaii and American Samoa and to explore the economic and cultural value of these fisheries and provide important information for fishery management in general. In addition, the study will establish a first-time baseline economic data on Hawaii offshore handline fishing and American Samoa spearfishing. The information collected will be used to 1) satisfy regulatory objectives and analytical requirements through the collection of economic data for these fleets,

2) assist the WPRFMC in selecting policies that meet conservation and management goals and minimize to the extent possible any adverse economic impacts to fishery participants. NMFS funds a nation-wide data collection project named “the Commercial Fisheries Economic Assessment Index (CFEAI)” to collect necessary economic data.

² Hospital, Justin, Skaidra Scholey Bruce, and Minling Pan. 2011. *Economic and Social Characteristics of the Hawaii Small Boat Pelagic Fishery*. Pacific Islands Fisheries Science Center. Administrative Report H-11-01.

³ Kasaoka, Laurel D. 1989. *Summary of Small Boat Economic Surveys from American Samoa, Guam, and the Northern Mariana Islands*. Western Pacific Regional Fishery Management Council. Administrative Report H-89-4C.

The need and the authorization to collect these economic data are found in the MSA (16 U.S.C. 1801 et seq.), the Regulatory Flexibility Act (RFA, 5 U.S.C. 601 et seq.), the National Environmental Policy Act (NEPA, 42 U.S.C. 4372 et seq.), and Executive Order (EO) 12866. The MSA notes that collection of reliable data is essential to the effective conservation, management, and scientific understanding of the fishery resources of the United States. The nation's fisheries should be "conserved and maintained so as to provide optimum yields on a continuing basis". Furthermore, eight of the ten National Standards under the MSA, which provide guidance to the regional fishery management councils, have implications for economic analyses. For example, under section 303 (a) (9) of the MSA, a fishery management plan must include a Fishery Impact Statement (FIS), which assesses, specifies, and describes the likely effects of the conservation and management measures on participants in the fisheries being managed, fishing communities dependent on these fisheries, and participants in fisheries in adjacent areas. Under the RFA, the Small Business Administration needs a determination of whether a proposed rule has a significant impact on a substantial number of small entities that are to be directly regulated. For RFA purposes, one of the criteria to determine significant economic impact involves an assessment of the change in short-term accounting profits for small entities. The NEPA requires a determination of whether Federal actions significantly affect the human environment. This requires a number of economic analyses including the impact on entities that are directly regulated and those that are indirectly affected. Lastly, EO 12866 mandates an economic analysis of the benefits and costs to society of each regulatory alternative considered by the fishery management councils, and a determination of whether the rule is significant.

2. 1 Explain how, by whom, how frequently, and for what purpose the information will be used. 1 If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, then explain how the collection complies with all applicable Information Quality Guidelines.

The information collected will provide valuable cost-earnings data and related information on social conditions for several small boat fisheries, including: Hawaii small-boat fishery, Hawaii offshore handline fishery, American Samoa small-boat fishery, and American Samoa spear fishery. The information will partially fill the data gap set forth in the Commercial Fisheries Economic Assessment Index (CFEAI) by NMFS Science & Technology. CFEAI is comprised of several elements: operating cost data is collected and net trip revenues be estimated at least every three years; and fixed cost data be collected and profitability be estimated at least every five years. Another element is revenue to be collected every year and this information is already collected by other NMFS programs. The surveys seek to collect fishing-related expenditures such as operating costs and fixed costs as primary data. Then, net trip revenue and profit can be estimated by revenue minus costs. Net revenue is a key factor for commercial fishers to determine stay or leave the fishing industry; therefore, it is a very important indicator of the dynamic of the fishing effort in short run and fishing industry development in long run. It can be used to examine any significant short-term economic impact from conservation and management measures. In addition, the cost-earnings data will allow NMFS economists to analyze the relationship between fishing effort and cost and predict the possible changes of fishing effort due to external changes like fuel cost changes and fishery management actions.

In this project, a similar survey form (questionnaires) will be used to collect costs and earnings information on the small boat-based fisheries in Hawaii and American Samoa, respectively. The proposed questionnaires have seven sections: 1) fishing experiences, 2) market participation, 3) vessel characteristics, 4) fishing trip cost, 5) annual fishing expenditures, 6) basic demographics, and 7) opinions about fisheries management.

The first section inquires about the fisher's fishing experience in the past 12 months, including number of boat and non-boat trips, gear usage, travel distance to fish, number of people on board, pounds of fish caught, and the use of Fish Aggregating Devices. This information is essential to understand fisher's distribution of fishing effort and trip characteristics over the year.

The second section asks about fisher's market participation and social aspects of fishing. Questions related to market participation include market outlet and fishing income. Questions related to social aspects of fishing mainly include catch disposition between markets and other uses (such as self-consumption). This section will provide valuable data to satisfy the MSA requirements as the MSA requires fishery management council to take into account fishes' historical and present participation, dependence on fishery, and the culture value relevant to the fishery and any affected fishing communities when developing management plan.

The third section inquires the captain about the vessel characteristics like the vessel's length, horsepower, year built, and year purchased. It also asks the vessel value that includes purchase price and market value. This information can be used to estimate the economic depreciation, a significant portion of fixed costs.

Section Four asks the fishing trip costs for the most common and the second most common gear type and the trip cost distribution. This will provide the variable costs during the operation of vessel which include boat fuel, truck fuel, oil, ice, bait, food and beverage, daily maintenance and repair, and other. The information collected in this section will be used to estimate the operating costs and net trip revenues.

Section Five asks the annual fishing expenditures, i.e. the fixed costs incurred regardless of the number of trips taken in a year like insurance, loan payment, mooring fees, gear replacement/repair, boat repair, maintenance, and improvement, fees, financial services, etc. The information collected in this section will be used to estimate the fixed cost and profitability in annual basis.

Section Six inquires about the fisher's demographic characteristics. These include information about the fisher's age, zip code (Hawaii) or village live in (American Samoa), ethnicity, education level, and household income. These data will provide information on social and cultural characteristics of people participating in the fishing communities.

The last section gives an opportunity for fishers to voice their opinions about the management of fisheries. The results will be grouped into categories and shared with fishery management council. The survey forms for Hawaii and American Samoa small boat fisheries and other mailing materials including cover letters and postcard (Hawaii only) can be found in Appendix A.

The two survey forms for the Hawaii and American Samoa are very similar but the methods to

implement the surveys are different in the two fisheries. In Hawaii, the economic data will be collected through mail methodology using the Commercial Marine License (CML) database from the State of Hawaii. Fishers who catch fish for commercial purpose are required to apply a CML from the State of Hawaii. This list will provide a population of commercial fishers in the State of Hawaii. This cost-earnings survey will not target recreational fishers to avoid duplication of efforts, as a National Recreational Fishing Expenditure Survey that targeted recreational fishers was done in 2011, under OMB Control No. 0648-0052. The mail methodology will consist of four-wave mailings, including (a) an advance letter notifying respondents a week before the mail survey, (b) first mailing of survey booklet with cover letter and return envelope, (c) a reminder postcard of the mail survey, (d) second mailing of survey booklet with cover letter to non-respondents. For Hawaii, an online survey option will be provided to the respondents. Website and login information will be sent together with the survey booklet.

In American Samoa, the economic data will be collected through in-person interview because no existing mailing address is available for most of the active fishers and many fishers cannot speak English. The survey form will be translated into Samoan and a local speaking interviewer will be hired to conduct the in-person interviews, and a Pacific Island Fisheries Science Center (PIFSC) staff will be on site with the interviewer for training and quality control.

It is anticipated that the information collected will be disseminated to the public or used to support publicly disseminated information. NOAA, National Marine Fisheries Service will retain control over the information and safeguard it from improper access, modification, and destruction, consistent with NOAA standards for confidentiality, privacy, and electronic information. See response to Question 10 of this Supporting Statement for more information on confidentiality and privacy. The information collection is designed to yield data that meet all applicable information quality guidelines. Prior to dissemination, the information will be subjected to quality control measures and a pre-dissemination review pursuant to [Section 515 of Public Law 106-554](#).

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

The proposed data collection does not involve use of any of the above information technology techniques, other than the online option for the Hawaii survey. The data will be conducted through a voluntary, mail and in-person intercept interview methodologies.

We do plan to make copies of the OMB approved survey instrument available online for outreach and information purpose. The data collected will not be available to the public over the internet given its confidential nature. However, a report summarizing the aggregated and main results will be available online once the data collection and analysis is completed.

4. Describe efforts to identify duplication.

We contacted the local agencies: Hawaii Division of Aquatic Resources and American Samoa

Department of Marine and Wildlife Resources (DMWR) to inquire about their upcoming data collection efforts; none of them planned data collection initiatives dealing with fishing expenses of boat-based fisheries in the upcoming years.

A literature review was conducted to find studies that collect boat-based cost-earnings data in the two island areas and literature on this topic are all outdated and based on a one-time survey with small sample size (see response in Question 1 for past studies). Although PIFSC implemented a survey to collect fishing trip cost data in American Samoa in August 2009, it is restricted to a few basic fishing cost items such as fuel cost, cost of bait and chum, and cost of fishing gear lost. Therefore, we are proposing updating our knowledge of economic conditions of small boat fisheries in these areas.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

Small boat fishing in Hawaii and American include owner or family operated small businesses. In Hawaii, the survey will be conducted through mail methodology and the participation of the survey is completely voluntary. If a fisher does not want to participate, he/she can simply disregard the survey. In American Samoa, the participation in the survey is also completely voluntary. Interviews will be conducted at times and places that are convenient to fishers. This will minimize any potential disruption to fishers' fishing practices. Interviewer is trained to request permission to do a survey. If a fisher refuses to do the survey or if the interviewer senses a fisher does not want to provide data, the interviewer will terminate the interview immediately and thank the fisher for his/her time. In addition, PIFSC will work with local agency in American Samoa to translate the survey into Samoan and local staff will be hired to conduct interviews in Samoan, to minimize the language barrier and burden on non-English speaking fishers.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

Without the data collected through the surveys, the legal requirements put forth by the MSA, NEPA, RFA, and EO 12866 would not be adequately satisfied. These mandates require regional fishery management councils to establish conservation and management measures which take into account the importance of fishery resources to fishing communities in order to provide sustained fishing community participation and to minimize, to the extent possible, adverse economic impacts on such communities. Particularly, RFA requires a determination of any proposed rule that has a significant economic impact to small businesses. Furthermore, these requirements also mandate that regional fishery management councils establish conservation and management measures using the best available information.

The absence of detailed economic information would prevent the identification of communities that are engaged and dependent on fishing and the estimation of adverse economic impacts on these communities. Management proposals would continue to be debated without sound information. Another consequence of not having the appropriate economic data could be court challenges on the grounds of inadequate analysis. Last, the collection of detailed economic data

will allow fishery managers to make timely and better-informed decisions by having the best scientific information available.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

None.

8. Provide information on the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

A Federal Register Notice published on Monday, November 25, 2013 (78 FR 70202) solicited public comments on the data collection. No comments were received.

Collection of fishery cost-earnings data was listed as one of the top priorities under WPRFMC Five-year Research Priorities:

http://www.nmfs.noaa.gov/sfa/reg_svcs/Councils/ccc_2012m/TAB%206/WPFMC_Research_Priorities.pdf. It is necessary to update the cost-earnings status for the Hawaii small boat fishery since the last study was conducted in 2007.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

No payments or gifts will be provided to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

As stated on the forms, respondents are being advised that any information provided will be considered private and will be treated as confidential as required by section 402(b) of the Magnuson-Stevens Act and [NOAA Administrative Order 216-100](#), Protection of Confidential Fisheries Statistics. All individual surveys will be held by only a limited number of researchers at PIFSC who will enter or work with the data. After the data are entered in an electronic format, only these researchers will have password-protected access to the data. After data from the surveys have been entered into an electronic format, the hard copies will be kept in a locked cabinet. Fisher's name, vessel identification, and address will be used only for mailing and survey administration purposes. It is the Agency's policy not to release confidential data, other than in aggregate form, as the NMFS protects the confidentiality of those submitting data. Whenever data are requested by other users, the Agency will ensure that information identifying the pecuniary business activity of a particular individual is not identified. Only group averages or group totals will be presented in any reports, publications, or oral presentations of the study's results.

We will follow PIFSCS's data confidentiality policy of data aggregation: Any fishery-wide aggregations of data shall include information from three or more individual vessels. Effort information, including just the presence of fishing, can be just as sensitive as the actual catch itself. All data analysis programs should include a procedure for calculating the number of vessels within the aggregate. Wherever possible, aggregations should be large enough to include more, rather than fewer, vessels.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

No sensitive questions will be asked.

12. Provide an estimate in hours of the burden of the collection of information.

The population of small boat fishers in Hawaii is about 1850, based on the number of CML holders in 2012 provided by the Hawaii Division of Aquatic Resources. A similar cost-earnings survey for the main Hawaiian Islands bottomfish fishery using CML database and mail methodology (Hospital and Beavers (2012)⁴) was conducted in 2010. It achieved a response rate of 51%. Given the similar survey instruments, sample composition, and survey methodology between the proposed new survey and the main Hawaiian Islands bottomfish cost-earnings survey, we assume a 50% response rate and the number of respondents is estimated to be 925. With the estimated time to complete a survey being 30 minutes, the burden hours for the Hawaii small boat surveys are estimated to be 463 hours.

Based on number of unique boats interviewed by the boat-based creel survey in American Samoa between 2009 and 2013, the population of American Samoa small boats is about 39. With an expected response rate of 95% for intercept interview, the number of respondents equals 37. In addition, for the sub-segment of spear fishers who share boat and costs in a fishing trip, there are 9 fishing boats for spearfishing and 6 fishers per boat, with the assumed response rate of 95%, 51 spear fishers will be interviewed. The total number of respondents in American Samoa equals 88 (37+51). With the estimated time to complete a survey be 30 minutes, the burden hours for the American Samoa small boat surveys are estimated to be 44 hours.

The total burden hours are estimated to be 507. Table 1 below shows the details.

⁴ Hospital, Justin and Courtney Beavers. 2012. *Economic and Social Characteristics of Bottomfish Fishing in the Main Hawaiian Islands*. Pacific Islands Fisheries Science Center. Administrative Report H-12-01.

Table 1. Burden Hours

	Hawaii	American Samoa***	Total
Total number of boats (population)	1850*	39	
Expected response rate	50%**	95%	
Target number of surveys	925	37	962
Target spearfishing sub-segment in American Samoa (population)		54 (9x6)	
Number of spearfishing boats		9	
Average number of fishers per boat		6	
Expected response rate		95%	
Target number of surveys for sub-segment		51	51
Target number of surveys (fishers)	925	88	1013
Average response time per response (minutes)	30	30	30
Total Burden (hours)	463	44	507

*1850 CML holders in 2012, Hawaii Division of Aquatic Resources.

**Past response rates for mail methodology of economic surveys.

***Creel data from 2009-2013, NOAA PIFSC - the Western Pacific Fisheries Information Network (WPacFIN).

13. Provide an estimate of the total annual recordkeeping/reporting cost burden to the respondents resulting from the collection (excluding the value of the burden hours in Question 12 above).

Other than 507 burden hours listed in question 12, the survey does not impose any burden (costs) to the respondents resulting from the data collection.

14. Provide estimates of annualized cost to the Federal government.

The total cost of this data collection project is estimated to be \$32,700, which covers (a) the compensation for labor used to develop the survey and training interviewer, (b) travel cost associated with survey development and implementation, (c) labor cost for implementing the survey, (d) mailing materials printing (advance postcards, reminder postcards, cover letters, return envelopes and survey instruments), (e) mailing costs, (f) data processing, quality control, data entry and supervision, and (g) report writing.

15. Explain the reasons for any program changes or adjustments.

This is a new program for the collection of new economic data.

16. For collections whose results will be published, outline the plans for tabulation and publication.

The collection of data is expected to be implemented in spring and summer 2014. We expect to complete the analysis of the data by spring 2015. The results will be published as a PIFSC report and this will be available on PIFSC website.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

The expiration date will be displayed on the survey form.

18. Explain each exception to the certification statement.

There are no exceptions to the certification statement.