

**SUPPORTING STATEMENT  
ECONOMIC SURVEYS OF AMERICAN SAMOA, GUAM, AND THE  
COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS (CNMI) SMALL  
BOAT-BASED FISHERIES  
OMB CONTROL NO. 0648-0635**

**A. JUSTIFICATION**

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

This is a request for extension of this 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 American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI), the National Marine Fisheries Service (NMFS) proposes the collection of fishing expenses data in these three island areas' boat-based reef fish, bottomfish, and pelagics fisheries.

The chief domestic fishery of these three areas is a small boat, 1-2 day fishery. The fishery is important to the local community in terms of a fresh food source and the island culture. The fishery lands approximately 13 pounds of fresh fish per capita in CNMI and 4 pounds of fresh fish per capita in Guam and American Samoa<sup>1</sup> annually. 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 are non-commercial landings (mostly for subsistence use).

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 American Samoa, Guam, and the CNMI. Most of the existing economic information is limited to dockside value data. Fishing expenses data about small boat-based fisheries in these three island areas are limited and outdated (see Miller (2001)<sup>2</sup> and Kasaoka (1989)<sup>3</sup>). Miller (2001) and Kasaoka (1989) collected data only in a particular year with small sample size ( $n \leq 40$ ) and nothing has been done on a routine basis. Because this

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

<sup>2</sup> Miller, Scott A. 2001. *Economic Assessment of the Domestic Fisheries Development Potential of the Commonwealth of the Northern Mariana Islands*. Prepared for NMFS, NOAA, Saltonstall-Kennedy Grand Number: NA 96FD0471.

<sup>3</sup> 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.

dated research is inadequate to support current management actions and meet the requirements put forth by MSA, we are proposing updating our knowledge of fishing expenses in these areas.

The goal of this study is to continue to collect economic information on small boats that operate in American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands, to support economic performance measures and improve fishery management of small boat fisheries in these areas. Establishing an economic data collection program will provide fundamental economic information for the fisheries management of these three areas. The information collected will be used to 1) satisfy regulatory objectives and analytical requirements through the collection of economic data for these fleets, and 2) assist the WPR FMC in selecting policies that meet conservation and management goals and minimize to the extent possible any adverse economic impacts to fishery participants.

In addition to 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 [EPA Executive Order \(EO\) 12866](#) also apply. 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 proposed economic data collection intends to collect fishing expenses data including the actual fishing trip expenses, input usage, and input prices in boat-based reef fish, bottomfish, and pelagic fisheries in American Samoa, Guam, and CNMI. Specifically, the surveys intend to collect information on: gallons of fuel used for the fishing trip, price per gallon of fuel, cost of ice used, cost of bait & chum used, cost of fishing gear lost, and the engine type of the boat. These economic data are collected through an add-on to the boat-based creel survey initiated by

the local fisheries agencies in American Samoa, Guam, and CNMI to collect fisheries dependent data. These agencies partner with the Western Pacific Fisheries Information Network (WPacFIN), a NMFS program for technical support. The boat-based creel survey utilizes a systematic random sampling protocol around the islands and at their major boat ramp/port areas. The local staff conducts in-person boat-based surveys on randomly chosen days (usually eight days) a month. The boat-based creel survey mainly collects fishing effort, catch information, and species composition of the catch for the trip about which the fisherman is interviewed as he returns to the boat ramp/port areas.

The economic add-on provides valuable longitudinal fishing expenses data as opposed to previous one-time data collections. The information sought is used by the NMFS economists and WPRFMC staff to perform economic analysis of fisheries in the three island areas. So far, two annual reports were produced and provided to the Western Pacific Fishery Management Council. The reports included the descriptive statistics and analysis of fishing expenses by gear type for each of the island areas. The descriptive statistics and analysis of fishing expenses showed an increase in the fishing costs due to the increase of fuel prices. Also, the data collected showed that different gears showed significantly different fishing costs. These reports provide valuable information to the council for management purposes, in the case of a future specific policy affecting a particular fishing gear, e.g. banning of scuba spearfishing.

The reports also estimated the net trip revenue, because the trip revenue can be derived given catch data collected by creel survey and pricing information collected by WPacFIN. For the commercial fishery, fishing trips are made as long as the net trip revenue is expected to be positive as the trip will generate additional revenue to cover part of the long run costs like loan payment and boat insurance. The net trip revenue affects fishing effort; 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 also be used to examine any significant short-term economic impact from conservation and management measures.

Although this has not yet been done, the expenditure data collected can be used to develop regional economic models for fisheries in these three areas, such as Input-Output (I-O) models (theoretical framework of I-O model was developed by Wassily Leontief<sup>4</sup>). The economic data collected can be applied to the I-O model so that the fishery sector's economic contribution, linkages, and impacts to the overall economy can be assessed. I-O model analyses can also assess how fishery sector and local economy will be impacted by any conservation and management measures. Results from I-O analyses will not only provide indicators of social-economic benefits of the marine ecosystem, a performance measure in the NMFS Strategic Operating Plans, but also be used to assess how fishermen and the economy will be impacted by and respond to regulations likely to be considered by fishery managers. Two studies about the impacts of Hawaii's longline fishing regulations using the I-O model, by Cai, Leung, Pan, and Pooley (2005)<sup>5,6</sup> are good

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<sup>4</sup> Leontief, Wassily. *Input-Output Economics*. 2<sup>nd</sup> ed. New York: Oxford University Press, 1986.

<sup>5</sup> Cai, J., P.S. Leung, M. Pan, and S. Pooley. 2005. *Economic Linkage Impacts of Hawaii's Longline Fishing Regulations*. Fisheries Research, 74(1-3) 232-242.

<sup>6</sup> Cai, J., P.S. Leung, M. Pan, and S. Pooley. 2005. *Linkage of Fisheries Sectors to Hawaii's Economy and Economic Impacts of Longline Fishing Regulations*. SOEST 05-01, JIMAR Contribution 05-355.

examples of the use of economic data to quantify the impacts of regulations to the fishery sector and the rest of economy.

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 of fishing expenses data are conducted through a voluntary, in-person intercept interview methodology, the same method that is used by the boat-based interview of the creel survey. The data are collected in conjunction with the catch and effort data that are already being collected in the **Boat-based Creel Survey** in the three island areas. The Boat-based Creel Survey includes two studies: 1) a Boat-based Participation Count to collect participation data around the island, and 2) a Boat-based Access Point Survey. The Boat-based Access Point Survey collects two types of data during a randomly selected survey date at the selected port, including a **Boat-based Boat Log** that logs all the boats going out and coming back and a **Boat-based Interview** that intercepts fishermen after their fishing trip about the catch and effort information, the species composition, the percentage of catch that is sold. The data collected are then expanded to estimate total landings by gear type for these three areas respectively. The boat-based interview is voluntary and in-person. Our proposed economic survey is an add-on to the Boat-based Interview Form. Given the long history of the creel survey program, the collection of the trip expenses data is also be voluntary and in-person. The data collection does not involve any use of automated, electronic, mechanical, or other technological techniques or other forms of information technology. The economic data collection is an add-on to the boat-based in-person interviews which focus on collecting information on fish size and species composition for the fishing trip. The data are recorded manually on the paper survey, so it is not possible to submit the data electronically unless it is inputted into the computer. As the fishing expenses data is for that particular fishing trip, it is better to obtain the fishing expenses at the same time with the boat-based in-person interview. Interviewers will not use laptops or other computers to directly enter the answers being provided because the interview location is usually near the water.

We do plan to make copies of the OMB approved survey instrument available online on Pacific Island Fisheries Science Center (PIFSC)'s website for outreach and information purposes. The data collected will not be available to the public over the internet given its confidential nature.

However, a report summarizing the salient, aggregated results will be available online once the data collection and analysis is completed.

#### **4. Describe efforts to identify duplication.**

We contacted the local agencies that support the Boat-based Creel Survey programs in American Samoa, Guam, and CNMI 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. The Boat-based Creel Survey programs are organized by the local agencies in partnership with the WPacFIN, which is housed within the PIFSC. The participating agencies include: American Samoa Department of Marine and Wildlife Resources (DMWR), Guam Department of Agriculture's Division of Aquatic and Wildlife Resources (DAWR), and CNMI government Department of Lands and Natural Resources' Division of Fish & Wildlife (DFW).

A literature review was conducted to find studies that collect boat-based fishing expenses data in the three island areas. Information collected by Miller (2001) and Kasaoka (1989) is outdated, and based on one-time surveys with small sample sizes. The most recent study by Justin Hospital (2011)<sup>7</sup> at PIFSC was targeting almost the same population (Guam, CNMI, but not American Samoa) but it was a one-time study aiming to update the baseline socioeconomic information of small boat fisheries in the Mariana Archipelago and to explore the basic behavioral characteristics of these fisheries.

The above studies are one-time, comprehensive surveys, and they are different from the current study that is: 1) a continuous, long-term data collection project, 2) focused only on a few major trip expense items, and 3) concurrent with the data collected from the creel survey. This generates economies of scale, as the cost to administrate two separate surveys is much higher than the making the proposed survey separate (see response in Question 14 for cost). This also allows the linkage of trip expenses data with trip efforts and trip revenues data collected in the creel survey and therefore enhances the use of information and economic analyses as mentioned in Question 2.

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

Fishermen censuses suggest that most commercial fishing operations are owner or family operated small businesses. Steps to minimize the burden to these small businesses include: 1) following the same sampling method as the Boat-based Interview portion of the creel survey, interviews are conducted only on the randomly selected sample dates when fishermen finish their fishing trip, 2) the participation in the survey is completely voluntary. Interviewers are trained to request permission to do a survey. If a fisherman refuse to do the survey or if the interviewers sense a fisherman does not want to provide data, the interviewers will terminate the interview immediately and thank the fisherman for his/her time, 3) only five major trip expense items and one question about engine type are asked, with the actual time to complete the questions be between 5 to 10 minutes..

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<sup>7</sup> Hospital, Justin 2011. Cost Earnings Study of Mariana Archipelago Small Boat Fleet, OMB Control No. 0648-0369.

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

If this information were not collected (or collected less frequently), then 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. If the collection were conducted less frequently, the economic analysis would become less reliable.

**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 April 27, 2014 (79FR 21735) solicited public comment. No comments were received.

We consulted with the three creel survey data managers, one in each of the island areas, to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, on the data elements to be recorded and on the accuracy of the burden estimates. All managers gave very positive responses to the current on-going program. Because no public report on the data has been produced, no comments about the disclosure or reporting format were sought.

For Guam, the creel data manager Thomas Flores was contacted by email and he replied on March 26, 2014. For American Samoa, we interviewed the creel data manager Nonu Tuisamoa in the PIFSC office on April 18 2014. For CNMI, the creel data manager Sean Macduff was contacted by email and he replied on May 19, 2014. The table below records the managers' specific responses.

	<b>Thomas Flores (Guam)</b>	<b>Nonu Tuisamoa (American Samoa)</b>	<b>Sean Macduff (CNMI)</b>
Q1. Do you think the economic data in the survey are readily available?	Yes. The fishermen here are more aware of the questions, so I think they are better able to give us more accurate data when it comes to trip expenditures, especially the cost of gear lost.	Yes, the fishermen understand the questions.	Yes. I feel that most fishermen readily tell us if they plan to sell their catch. They also tell us how much fuel and ice they spent/bought. The price they sell is also available, but some hesitation (not much) is observed.
Q2. For the frequency of collection, do you think it is adequate?	I think so. I think this is really a question more for your needs.	I think so, we interviewed fishermen about 4 times a week.	We follow survey guidelines described by WPacFIN. It was deemed adequate by them. I feel the coverage for the offshore survey (start and end) could be looked at again. We start at 10 am and finish at midnight. I feel we could start a little earlier (maybe 8am).
Q3. Do you think the fishermen had clear instructions to answer the survey?	Yes. I've talked to staff about this, too.	Yes, the interviewers had clear instructions.	The fishermen answer to verbal questions asked by the surveyor. If anything is unclear, it could be due to the way surveyors are asking the questions or by their approach.
Q4. The estimated interviewing time per respondent is 10 minutes. Do you think	The interview time is actually less. I think it's adequate. The information that they	Usually it is less than 10 minutes, it is about 5 minutes.	For economic data, 10 minutes is plenty time. In reality, 5 minutes should be



it is reasonable? If not, what do you think is the actual interviewing time per respondent?	may need to think about more to give us accurate information is "how much fuel did you use for this trip" and "what was the cost of gear that you lost for this fishing trip." But I think the time is appropriate.		enough if the questions are asked properly.
Q5. What do you think on the recordkeeping of the surveys?	All our forms are kept in my office folder until the Science Center staff here in charge of scanning requests for them, then she scans them and files them in her office. When you get the scanned sheets to look at the numbers, as long as the data is not shared with any people other than yourselves, it's okay.	I think they are good. We verify the data, keypunch into the database and it is secured.	We have hard copies, scans of our hard copies, and electronic form of our data. I had no troubles looking for old data sheets. I think record keeping is ok.
Q6. What do you think on the data elements to be recorded?	I think it's okay. The questions are only asking for trip expenditure information, so it's not too complex of a task to get the data needed.	I think there are enough data for trip cost estimation.	For economic data, the fishermen spend on gas, ice and bait/lures. They also maintain their vessels and gear, but that might be too much to ask. I think the elements on the form are good.

**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.**

Survey 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. 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, 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 PIFCS’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.**

We estimate the annual number of respondents, number of responses per respondent, and total responses in each area, based on the average responses of economic surveys in Guam (2012-2013), CNMI (2011-2013), and American Samoa (2011-2013). The number of respondents in each area is estimated based on the average number of unique boats interviewed in economic surveys in each island areas. The number of responses per participant is derived from the average number of interviews conducted at different trips during different times of the year. We anticipate 480 economic surveys annually and each survey is about 10 minutes. The total burden hours are estimated to be 80. Table 1 below shows the details.

**Table 1. Burden Hours Per Year**

	<b>Guam</b>	<b>CNMI</b>	<b>American Samoa</b>	<b>Total</b>
<b>Number of respondents (boats)</b>	110	55	15	180
<b>Number of responses per respondent (number of trips per boat)</b>	2	2	10	-
<b>Total responses</b>	220	110	150	480
<b>Average response time per response (minutes)</b>	10 min.	10 min.	10 min.	
<b>Total Burden (hours)</b>	37	18	25	<b>80</b>

**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 #12 above).**

Other than 80 burden hours listed in Question 12, the survey does not impose any burden (costs) to the respondents resulting from the data collection. This voluntary, in-person survey will be conducted at times and places that are convenient to fishermen.

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

The cost for each location is estimated at \$8,000 a year, and therefore \$24,000 for three areas in total. Some of the costs are to support NMFS supervision, data processing, quality control, data entry, and some is to support local creel survey staff. If we were to start a new economic survey program without adding on the economic data collection to the creel survey, it would cost at least \$10,000 more per year per area because of the new hire of part-time personnel and administrative cost. The add-on economic surveys would be a cost savings of at least \$30,000 annually.

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

Burden was reduced based on recent respondent numbers.

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

Summary of the collected data will be published on the PIFSC website, in an annual basis. As described in question 2, the collected data are used for economic analyses and two annual reports were submitted to the Western Pacific Fishery Council. Additionally, economic impact analyses will be conducted and 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.