

**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-XXXX**

**A. JUSTIFICATION**

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

The [Magnuson-Stevens Conservation and Management Act](#) (MSA, 16 U.S.C. 1801 *et seq.*) 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) (*used in this supporting statement interchangeably with Saipan, which is the largest island and where the capital of CNMI is located*), 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 Fishing expenses data about small boat-based fisheries in these three island areas are limited and outdated (see Miller (2001)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 a small sample size ( $n \leq 40$ ) and nothing has been done on a routine basis. Because this 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.

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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.

The goal of this study is 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 WPRFMC 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, 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](#) 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. Explain how, by whom, how frequently, and for what purpose the information will be used. 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 and chum used, cost of fishing gear lost, and the engine type of the boat. These economic data will be 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 will provide valuable longitudinal fishing expenses data as opposed to previous one-time data collections. The information sought will be used by the NMFS economists and WPRFMC staff to perform economic analysis of fisheries in the three island areas. Data from this survey can be used directly for descriptive analysis of fishing expenses. Together with the catch and effort data currently collected in the creel survey, the add-on fishing expenses data will allow NMFS economists to analyze the relationship between fishing effort and cost and predict the possible changes of fishing effort due to trip expenditure change.

Additionally, data will be used to estimate 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. Last but not least, 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 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. As explained in the preceding paragraphs, the information gathered has utility. 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](#).

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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.

**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 will be 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 will be 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 will be 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 will 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.

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 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 Pacific Island Fisheries Science Center (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 and literature on this topic are all outdated and based on a one-time survey with small sample size. The most recent study in progress by Justin Hospital (2011)<sup>7</sup> at PFISC is targeting almost the same population (Guam, CNMI, but not American Samoa) but it is 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. In order

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

to minimize the burden to fishermen, our study will start after Hospital's sampling period, which is anticipated to end by September 31, 2011.

All of the above studies are one-time, comprehensive surveys, and they are different from the current proposed 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 will generate economies of scale, as the cost to administrate two separate surveys is much higher than 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 will be 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 refuses 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 will be asked, with an estimated time to complete the questions be between 5 to 10 minutes, 4) as mentioned previously, the study will start after Hospital's sampling period. This will avoid fishermen responding to two surveys containing economic questions during the same time period.

**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 was 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.

**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 Wednesday, February 23, 2011 (76 FR 10006) solicited public comments on the data collection. No comments were received.

The proposed questionnaires on the trip expenditure were developed with the creel survey staff at WPacFIN of PIFSC and the three local agencies that support the creel survey programs. We consulted with the above staff about the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format, and on the data elements to be recorded, disclosed, or reported. They indicated that they lacked detailed fishing expenditure data and that the proposed data collection would fill a void in their knowledge of these fisheries. Also, they noted that a technical report available online would be the best way to showcase the findings of the study.

**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.**

At the time of the survey respondents are will be advised, although it is not stated on the form, 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.**

From the 2006 to 2008 Boat-based Interview of the creel survey in Guam, Saipan, and American Samoa, the number of respondents in each area is estimated based on the average number of unique boats interviewed. The number of responses per participant is derived from the average number of interviews conducted at different trips during different times of the year, based on the boat-based survey. We anticipate 962 boat-based surveys annually and each survey for the economic portion is about 10 minutes. The total burden hours are estimated to be 160. Table 1 below shows the details.

**Table 1. Burden Hours Per Year**

	<b>Guam</b>	<b>Saipan</b>	<b>American Samoa</b>	<b>Total</b>
<b>Number of respondents (boats)*</b>	200	136	30	366
<b>Number of responses per respondent (number of trips per boat)*</b>	3	2	3	-
<b>Total responses</b>	600	272	90	962
<b>Average response time per response (minutes)</b>	10 min.	10 min.	10 min.	
<b>Total Burden (hours)</b>	100	45	15	<b>160</b>

\*(Source: NOAA PIFSC – WPacFIN, unpublished data)

**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 160 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 proposed add-on economic surveys would be a total cost savings of at least \$30,000 annually.

**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.**

We anticipate implementing the economic data collection program in winter 2011. Summary of the collected data will be published on the PIFSC website in a quarterly and annual basis. This data will be available online on January 2013. As described in Question 2, the collected data will also be used for economic analyses and economic impact analysis 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.