

*Bottomfish and Seamount Groundfish
Fisheries of the Western Pacific Region*

2003 Annual Report



Western Pacific Regional
Fishery Management Council
1164 Bishop Street, Suite 1400
Honolulu, Hawaii 96813

Cover photo: (from <http://wpacfin.nmfs.hawaii.edu>) Bottomfishing from canoes (*paopao*) by the natives of the American Samoa islands was a traditional subsistence practice in the past. It was not until the early 1970s that the bottomfish fishery developed into a commercial venture utilizing motorized boats.

A government-subsidized program, the Dory Project, was initiated in 1972 to develop the offshore fisheries into a commercial venture and resulted in an abrupt increase in the fishing fleet and total landings.

In 1982, a fisheries development project aimed at exporting high-priced deep water snappers to the Hawaii fish auction caused another notable increase in both bottomfish landings and revenue.

Boat-based fishing in Tutuila and Manu'a in 1995 was mostly trolling and bottomfish handlining. The bottomfish fishery of American Samoa is then and now typically commercial overnight jigging on 28-foot aluminum Alias using skipjack as bait. Bottomfish imported mainly from the neighboring independent state of Western Samoa has assisted in satisfying the high demand for fresh fish that cannot be supplied by the small local commercial fleet.



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**Bottomfish and Seamount Groundfish Fisheries
of the Western Pacific Region**

2003 Annual Report

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Bottomfish and Seamount Groundfish Fisheries of the Western Pacific 2003 Annual Report

1.0 Introduction

The 2003 annual report provides a set of descriptors and indicators of the bottomfish fisheries from American Samoa, Guam, Hawaii and the Northern Mariana Islands. The descriptors are designed to document recent trends in landings, effort, participation, revenue and prices. Should management action be recommended, descriptor information will aid in assessing potential impacts of the action on fishery participants. The indicators are quantifiable and measurable tools used to identify signs of stress in the stocks or the fishery. Based on changes over time in indicator levels, the Bottomfish Plan Team (BPT) may identify "yellow light" situations (i.e., where stress is first detected) and recommend that either management action or additional study be undertaken or "red light" situations where immediate management action is needed.

The annual report is organized as follows: The introduction section defines and briefly explains the descriptors and indicators. The next section briefly summarizes time trends in descriptor and indicator levels, through the current year, and recommends any areas of concern for each island area. Reports from each island area are appended. The introduction describes the history and present characteristics of the fishery. Results of the current year's descriptors and indicators are presented in detail, in relation to past temporal trends. Figures are supported with information on source of the data, methods of calculation, and data interpretation. Table 1 summarizes 2003 bottomfish statistics for the region. The appended report from each area includes a summary of the new area specific and region-wide recommendations. Finally, additional appendices contain information on NMFS 2003 administrative and enforcement activities, habitat conditions, protected species interactions, and 2003 BPT membership.

Table 2 lists scientific, common English and local/indigenous names for bottomfish management unit species (BMUS) for each area (American Samoa, Guam/Northern Marianas, and Hawaii).

1.1 Definition of Descriptors

The fishery descriptors are defined as follows:

1.1.1 Landings information

Time series information on aggregate catch for each island area shows recent trends in total bottomfish harvest. For American Samoa and Guam, estimates of both the commercial landings and the total landings (combined commercial, recreational and subsistence) are available. For Hawaii and the Northern Marianas, landings information represents only the commercial harvest.

Table 1. Regional Summary of 2003 Bottomfish Species

	AS	GU	NMI	Hawaii			
				All	MHI	Mau	Hoomalu
BMUS Landings (lb)	26,239	118,206	41,710	494,569	272,569	77,000	145,000
Revenue (\$)	25,012	36,528	118,538	2,176,980	1,460,000	222,530	494,450
No. Of Boats	19	481	58	---	325	5	4
No. Of Trips	291	4,395	374	---	1,517	37	39
CPUE	16.2 lb/trip-hr	4.7 lb/hr	89 lb/trip	---	190 lb/trip	2,070 lb/trip	3,713 lb/trip
SPR	---	---	---	0.31-0.50	note 1	note 2	note 2

Notes:

- 1) Species with Spawning Potential Ratio near or below threshold level of 0.20, indicating localized subarea depletion: MHI onaga (“targeted” SPR = 0.1026); MHI opakapaka (“targeted” SPR = 0.0469); MHI uku (“targeted” SPR = 0.2007)
- 2) Healthy (SPR > 0.20) for all species

Table 2. Bottomfish Management Unit Species (BMUS) Names

(Absence of an indigenous name implies no local name established or area is not within the species' geographic range.)

Scientific	English Common	American Samoa	Guam/CNMI	Hawaii
<i>Bottomfish:</i>				
<i>Aphareus rutilans</i>	red snapper/silvermouth	palu-gutusiliva	maraap tatoong	lehi
<i>Aprion virescens</i>	gray snapper/jobfish	asoama	tosan	uku
<i>Caranx ignobilis</i>	giant trevally/jack	sapoanae	tarakito	white ulua/pau'u
<i>C. lugubris</i>	black trevally/jack	tafauli	trankiton attilong	black ulua
<i>Epinephelus fasciatus</i>	blacktip grouper	fausi	gadao matai	
<i>E. quernus</i>	sea bass			hapu'upuu
<i>Etelis carbunculus</i>	red snapper	palu-malau	guihan boninas	ehu
<i>E. coruscans</i>	red snapper	palu-loa	onaga	onaga
<i>Lethrinus amboinensis</i>	ambon emperor	filoa-gutumumu	mafuti/lililok	
<i>L. rubrioperculatus</i>	redgill emperor	filoa-pa'o'omumu	mafuti tatdong	
<i>Lutjanus kasmira</i>	blueline snapper	savane	sas/funai	ta'ape
<i>Pristipomoides auricilla</i>	yellowtail snapper	palu-i'usama	guihan boninas	yellowtail kalekale
<i>P. filamentosus</i>	pink snapper	palu-'ena'ena	guihan boninas	opakapaka
<i>P. flavipinnis</i>	yelloweye snapper	palu-sina	guihan boninas	yelloweye opakapaka
<i>P. seiboldi</i>	pink snapper		guihan boninas	kalekale
<i>P. zonatus</i>	snapper	palu-sega	guihan boninas/gindai	gindai
<i>Pseudocaranx dentex</i>	thicklip trevally		terakito	butaguchi/pig ulua
<i>Seriola dumerili</i>	amberjack		guihan tatdong	kahala
<i>Variola louti</i>	lunartail grouper	papa	bueli	
<i>Seamount Groundfish:</i>				
<i>Beryx splendens</i>	alfonsin			kinmedai (Japanese)
<i>Hyperoglyphe japonica</i>	ratfish/butterfish			medai (Jap.)
<i>Pseudopentaceros richardsoni</i>	armorhead			kusakari tsubodai (Jap.)

In Hawaii, changes in species catch composition are provided for the Main Hawaiian Islands (MHI) and the Northwestern Hawaiian Islands (NWHI). Statistical tests for consistency in catch composition over time and between areas are included. Where possible, descriptor information has been presented for each NWHI management zone: Hoomalu and Mau. For 2003, pounds landed by species are presented in tabular form for each area except Hawaii. For Hawaii, NWHI BMUS landings by species are provided for 1986 through 2003.

1.1.2 Effort information

Effort is measured in number of trips for Hawaii and the Northern Marianas, and in both hours fished and trips taken for American Samoa and Guam.

1.1.3 Participation information

Estimates of the number of vessels making bottomfish landings are provided for all areas.

1.1.4 Economic information

Time trends in economic performance are characterized by plots of total ex-vessel revenue, aggregate average price levels, and for Hawaii, price trends over time for major species. In time-series of prices and revenues, it is appropriate to adjust value for the rate of inflation so that values throughout the time period are comparable (based on a consistent purchasing power for the dollar). Both the unadjusted and adjusted aggregate average price and aggregate revenues are plotted to clarify the relative change over time.

1.2 Definition of Indicators

Indicators were developed as tools for identifying signs of stress in the stocks or the fishery which deserve further investigation and/or a management response. Analyses consider how the indicators change over time. Indicators for Hawaii include 95% confidence intervals. To the degree possible, similar variance estimates are expected from the other areas in future annual reports. The indicators are defined as follows:

1.2.1 Aggregate Catch-Per-Unit-Effort

If the current year's aggregate catch-per-unit-effort (CPUE) is less than 50% of the average aggregate CPUE for the first three years of available data, there may be cause for concern. CPUE information is available for all areas; research CPUE is available for SE Hancock Seamount for all years since 1985, except in 1992 and 1994-2003.

1.2.2 Mean Fish Size

If there has been a significant reduction in mean fish size for a species over time, the stock may be stressed by the fishery. Mean size information is provided for nine species in Hawaii. No mean size information was available at this time for American Samoa, Guam or the Northern Marianas.

1.2.3 Percent Immature

If over 50% of the catch for a species is below the size of first maturity, the stock may be stressed by the fishery. Information for this indicator by species is available only from Hawaii.

1.2.4 Spawning Potential Ratio

The spawning potential ratio (SPR) is the ratio of the spawning stock biomass per recruit, at the current level of fishing, to the spawning stock biomass per recruit that would occur in the absence of fishing. According to the overfishing definition contained in the Bottomfish FMP (Amendment 3, 1990), if SPR is less than or equal to 0.20, recruitment overfishing has occurred (i.e., spawners have been reduced to 20%, or less, of their unexploited stock level). Data to calculate SPR were not available from Guam or the Northern Marianas. An estimate of the "worst case" SPR was calculated for American Samoa's bottomfish complex using Dory Project data to estimate the virgin population CPUE and information on percent of immature fish from Hawaii. In Hawaii, SPR was calculated for five major species in the Hoomalu and Mau Zones, of the NWHI, and the MHI; some SPR values changed slightly from previous year's reports due to improvement in the calculations. SPR for armorhead was calculated annually since 1985, except for 1992 and 1994-2003.

1.2.5 Economic Indicators

Revenue per trip plots are presented for all areas except the MHI. A more valuable indicator for the commercial fisheries, which may be available in the future, would be net revenue (ex-vessel revenue minus costs per trip). Net revenue is available only from the Hoomalu Zone and Mau Zone in Hawaii.

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2.0 AREA SUMMARIES

2.1 American Samoa

2.1.1 Descriptors

During 2003, a total of 19 local boats landed an estimated 26,239 pounds of bottomfish (about a 37.3% decrease from last years landings). Revenues for the domestic commercial fishery this year was estimated around \$25,000 (a 70% decrease from last year) with all the catch being sold locally. The CPUE for 2003 (16.2 lb/hr) was not less than 50% of the average aggregate CPUE for the first 3 years of available data. In 2003, effort (trips and hours) increased.

2.1.2 Indicators

CPUE (pounds per hour), though relatively stable (at about 10 lb/hr) in the early 1990's, increased in 1996 to 14.8 lb/hr, mainly due to improved sampling. decreased dramatically by about 51% in 2002 to 7.4 lb/hr, but increased in 2003 to 16.2 lb/hr, its highest CPUE since 1989. This level is not less than 50% of the average aggregate CPUE for the first three years of available data (9.7 lb/hr), indicating no cause for concern. Bottomfish revenue per trip (as opposed to total revenue) increased in 2003 (\$253/trip) by about 18.2% over 2002 (\$214/trip).

2.1.3 Recommendations

2003 Recommendations

- 1) DMWR should enhance internal development through training for staff to minimize chances of misidentification.
- 2) Incorporate market data from Market surveys into the database.
- 3) Include Import data from Western Samoa into the database for further enhancement of this report.

2.2 Guam

2.2.1 Descriptors

The fairly large fluctuations over time in bottomfish landings in Guam appear to be due more to entry and exit patterns of fishermen, rather than changes in fish stocks. The number of highliners fishing in the area doubled from 1993 to 1994, increasing the total commercial

BMUS harvest and revenue by nearly 300% during that year. In 2003, an increase in bottomfish landings was due to large increases in landings from the offshore and non-charter sectors. 2003 landings increased by 33.4% from 2002, nearly matching the decrease between 2001 and 2002, and is above the long term average.

The adjusted average price for bottomfish has not shown consistent marketing trends. This is believed to have resulted from the seasonal supply of pelagic fish and difficulties in developing a consistent market for locally caught fish. In addition, imported fish from other islands around the region have contributed to the continued marketing problem for local fishermen. The 2003 inflation-adjusted average bottomfish price of \$3.11 increased very slightly from last year and is 25.4% below the long term average.

2.2.2 Indicators

Total and BMUS bottomfish harvest increased in 2003. Total bottomfish landings increased 33%, with charter decreasing 39% and Non-charter catch increased 53.2. Total BMUS landings increased 56%, with the non-charter and charter components also increasing 75% and 4.6% respectively. Offshore landings made up the overwhelming majority of both the total bottomfish catch and BMUS catch. The CPUE for all bottomfish increased 56.7%, while the non-charter increased 56.2% and charter CPUE decreased 31.6%.

The commercial landings and the adjusted revenue of BMUS species both decreased 36%. The after effects of Supertyphoon Pongsona in the first quarter of 2003 may have negatively impacted commercial sales. The average price for bottomfish remained virtually the same, increasing one cent, while revenue per bottomfishing trip increased 21%.

The CPUE for all bottomfish increased 57%, with the CPUE for shallow and deep bottomfishing increasing 79% and 20% respectively. The CPUE for non-charter boats increased 57% for all bottomfishing, 20% for deep bottomfishing, and 79% for shallow bottomfishing.

Bottomfishing effort did not change significantly in 2003. Total hours and trips decreased 2% and <1% respectively. Charter hours and trips decreased 11% and 14% respectively due to the after effects of Supertyphoon Pongsona in December 2002. Non-charter hours and trips decreased <1% and increased 3% respectively. The number of unique boats in the fishery increased 37% in 2003.

2.2.3 Recommendations

2003 Recommendations

- 1) Completing the baseline biological survey of the red-gill emperor, *Lethrinus rubrioperculatus*, should be completed during 2004. Analyzing the data from the Bank A trips has been contracted out in 2003 and should be completed in 2004.

- 2) DAWR should establish mean fish size, percent immature, and SBB indicators for both deep and shallow water bottomfish complexes. Fine-tuning of this program should be completed in 2004.
- 3) Additional staff and resources should be sought after in order to do, at the least, opportunistic interviewing of fishermen utilizing Ylig Bay as a boat launching area. Periods of calm weather, especially during the summer months have increased the number of fishermen fishing off the east side of Guam. Spearing, bottomfishing, and trolling activity have been observed by Fisheries staff, methods that regularly catch BMUS species.

2.3 Hawaii

*All 2003 Data for Hawaii (MHI, Mau Zone, and Hoomalu Zone) are incomplete. Interpretations and summaries are based on preliminary data from NMFS-PIFSC. 2003 Data will be finalized in the 2004 Bottomfish and Seamount Groundfish Annual Report.

2.3.1 Descriptors

Main Hawaiian Islands: Only commercial data are available for both the MHI and NWHI fisheries, even though the MHI recreational/subsistence catch is estimated to be about equal that of commercial landings. In 1988, there was a dramatic increase in MHI bottomfish landings due to a bonanza uku (gray snapper) harvest. A steady decline in total landings occurred until 1993, which was the lowest recorded annual value at the time. Landings increased 32% in 1994 and remained high through 1997, although CPUE was at a 12 year low in 1997. Participation and landings have declined over the past two years while CPUE has increased 29% in that same period. Although the data for 2003 is incomplete, preliminary data shows that 2003 landings of 272,569 pounds are the lowest total landings seen in the 18-years of data that were collected between 1986 and the present. The 24.7% decrease in MHI bottomfish landings from 2002 to 2003 may be partially attributed to the 40.6% decline in number of trips taken in the MHI.

Total ex-vessel revenue from the MHI shows a general decline from 1988-1996 and has stabilized since, and even slightly increasing in the past couple of years. 2003 inflation adjusted revenue increased 4.6% from 2002 values, but still remains 37.4% below the long-term average.

NWHI Mau Zone: Mau Zone 2003 landings decreased 28.7% from 2002. Catch per trip increased by 46.2% in this zone. The total number of boats decreased from 6 in 2001 to 5 in 2002 and remained at 5 in 2003.

The Mau zone inflation adjusted revenue decreased in 2003 to \$222,530, down 35% from \$342,360 in 2002. The inflation adjusted price per pound also decreased in 2003 by 8.8%, and was the lowest price per pound since data were collected in 1989.

NWHI Hoomalu Zone: Hoomalu Zone 2003 landings increased 20.8% from 2002. Four boats fished in 2003, the same number of boats as in 2002. Bottomfish landings per trip decreased by 19.9% based on NMFS CPUE.

Inflation adjusted revenue increased slightly in 2003 (+14.1%), even though the inflated price per pound decreased in 2003 by 5.5%.

2.3.2 Indicators

Hawaii Archipelago-wide:

SPR values for the five major BMUS species in 2003 are all above the 20% critical threshold level, which defines recruitment overfishing under the FMP, when viewed on an archipelago-wide basis. Of these species, onaga is still the lowest with a 2003 value of 31%. Implementation of the state's management plan should help improve the condition of onaga in the MHI and continue to increase the archipelago-wide SPR.

SPR values are also presented on a management zone basis (MHI, Mau Zone, Hoomalu Zone) for the purpose of determining locally depleted resources.

MHI: CPUE in 2003 increased from 2002 and returned to 2000 and 2001 levels. Recent CPUE values are approximately one-fourth the early (baseline 1948-50) values, signifying local depletion in the MHI. Most of the more commercially important species in the MHI have had relatively stable mean weights since 1984. Hapuupuu's mean weight dropped sharply in 1993 and has continued to be low. The small number of fish upon which the annual estimates are based may bias the result. However, with so many years in a row recording low mean weights, it is likely that marketed fish size has actually declined for MHI hapuupuu. Such a decline in mean size indicates increased stress on the MHI hapuupuu resource. These values do not exhibit a continuing decline, in fact, the 1997-2003 values are slightly greater than the 1995 lowest value.

For the ninth year 95% confidence intervals were constructed based on "best" and "worst" case bounds of SPR components (CPUE and percent immature). For the eighth year SPR values were calculated using both aggregate CPUE, as in previous years, and targeted CPUE, which gives a more accurate picture for individual species. 2003 aggregate CPUE SPR values for all five major species declined but remained above the 20% critical level, except for onaga: onaga (0.09), opakapaka (0.21), hapuupuu (0.29), ehu (0.26), and uku (0.26). The use of targeted CPUE showed a different picture for the four species where targeted trips are available. Here, ehu SPR is much worse than indicated using aggregate CPUE (SPR = 0.469), whereas SPR values for opakapaka is much higher than previously indicated and uku is lower (SPR = 0.3164 and 0.2007, respectively). Onaga's SPR remains consistent when using targeted or aggregate CPUE and has now been below 0.20 for the past 15 years and ehu has decreased to its lowest SPR in 2003 since 2000 (using targeted CPUE).

NWHI Mau Zone: The NMFS CPUE data are only available for the NWHI fishery as a whole since 1984 and by zone since 1986. The NWHI (combined Mau and Hoomalu Zones) NMFS CPUE steadily decreased from 1987 to 1992, rose in 1993, and then declined from 1994-96. CPUE rose in 1997 to the 1993-94 level, but dropped slightly in 1998. CPUE in the Mau Zone increased in 2002 to 438 lb/day and continued that trend in 2003 by increasing 16% to 508 lb/day, the highest CPUE since 1990. Mean weights of fish in the Mau Zone continue to exhibit year to year fluctuations, but are generally at much higher values than MHI mean weights. The percent of immature fish in the 2002 Mau Zone catch was dramatically below 50% for all species evaluated.

SPR values in the Mau Zone have been decreasing since 1990 (mirroring the pattern in the HDAR CPUE), experienced a surprising rise in 1994, returned to lower levels in 1995, followed by a continued four year increase through 1999. All values are presently above well above the critical level of 0.20 for 2003 and all have increased to over 50% for all species evaluated. SPR values are higher in the NWHI than the MHI because most of the catch is mature fish.

NWHI Hoomalu Zone: The Hoomalu Zone NMFS CPUE has been on a downward trend from since data collection began in 1988. 2003 CPUE increased to 490 lb/day an 18.9% increase from 2002. Pounds per trip decreased by 3.7% in 2003 from 2002. Mean weights of fish in the Hoomalu Zone continued to exhibit year to year fluctuations, but are still at much higher values than MHI mean weights. The percent of immature fish in the 2003 catch was just under 50% for all species evaluated.

The 2003 SPR values in the Hoomalu Zone decreased for all species except onaga which experienced an increase of 18.8%. The 2003 SPR levels range from 46% to 63%.

Seamount Groundfish (Armorhead): No fishing has been allowed on the armorhead stocks of the SE Hancock Seamount since the moratorium began in August, 1986. The 1993 CPUE, calculated from research longline catches, was more than double that of the last assessment (in 1991) and nearly as high as the highest CPUE recorded since surveying began in 1985. No research cruise occurred since 1993, and future research assessment cruises are unlikely.

No SPR values were available in 2003 as no research was undertaken. In 1993, SPR within the EEZ (SE Hancock Seamount) was above 0.02, the highest since 1986, but still far below (10% of) the threshold level for recruitment overfishing of 0.20. About 99% of the known armorhead seamount habitat occurs outside the U.S. EEZ, an area which had 0.06 SPR in 1993. During February and March 1997, an oceanic and larval armorhead survey over the seamounts outside the U.S. EEZ was conducted onboard the R/V Kaiyo Maru by the National Research Institute of Far Seas Fisheries Laboratory in Shimizu, Japan. Armorhead larvae were collected from surface waters around all seamounts except for Koko Seamount.

2.3.3 Recommendations

2003 Recommendations

- 1) Support research using traditional hydro acoustic technology to assess bottomfish stock biomass.

2.4 Northern Mariana Islands

2.4.1 Descriptors

Data are available only on the commercial fishery. Landings of bottomfish continued to decrease in 2003 (10.8% fewer pounds in 2003 than in 2002) from the highest total landings in 2001 (71,256 lbs), to slightly higher than the 21-year mean. This fishery continues to show a high turnover with changes in the high liners participating in the fishery, and an increased number of local fishermen focusing on reef fishes in preference to bottomfishes. In 2003, the number of vessels fishing increased to 58 following 53 in 2002 and 75 in 2001. The number of trips in 2003 was equal to the numbers of trips taken in 2002 (just above the long term average with 374 trips), and is still down 55.2% from the highest number of trips recorded in 2001 (834).

The inflation adjusted price slightly decreased in 2003 (-1.7% from 2002) and 9.3% lower than the 21-year mean. The total 2003 ex-vessel revenue decreased to \$118,538 (down 12.3% from 2002), and 4.2% below the 21-year mean.

2.4.2 Indicators

The average bottomfish catch per trip decreased from 101 lb/trip in 2002 to 89 lb/trip in 2003. Although the average catch per trip is not a very good measure of CPUE, because it is subject to significant biases (e.g., changes in trip length and relative amounts of bottom fishing compared to trolling or reef fishing); it is the only measure readily obtained from the commercial landings system. However, the smaller vessels commonly make mixed trips and the relative proportions of bottomfishes to pelagic and reef fishes seem to be changing. The number of fishermen (used as a proxy for the number of boats) making commercial sales of any bottomfish species has varied widely over the last 20 years. This year there were a few more fishermen selling bottomfish than last (58 vs. 53), but the number remains near the 21-year mean. Most of these fishermen are using small vessels and when catching bottomfish, are more likely to target the shallow-water species.

Revenues from bottomfish decreased in 2003 (12% less than in 2002). This is a result of the combined effect of lower pounds landed and a lower price per pound for almost all bottomfish species. Almost all fishes caught in the CNMI are considered food fishes, including many that show a high incidence of ciguatera locally, including lyretail grouper (*Variola louti*) and red snapper (*Lutjanus bohar*).

2.4.3 Recommendations

2003 Recommendations

- 1) To request NMFS and the Council continue to assist the CNMI by contracting a specialist to map commercial fishing banks, particularly around Farallon de Medinilla, Marpi Reef, and the banks closest to Saipan, Tinian, and Rota.
- 2) To request NMFS and the Council continue to assist the CNMI by supporting the MARAMP cruises to the northern islands of the CNMI.

2.5 Region-Wide Recommendations 2003

- 1) Conduct sensitivity analysis on the effects of MPAs on fishery based estimates of fishing mortality and CPUE for potential impacts in relation to overfishing/overfished thresholds.
- 2) PIFSC use the Stock Assessment (SAIP) funding to establish an ongoing program to collect bottomfish size frequency information in each island area; age at maturity; in support of addressing the Bottomfish Stock Assessment Workshop recommendations.
- 3) A group be created to establish action plans and associated budgets to implement the stock assessment workshop recommendations.
- 4) Council should encourage continued mapping of bottomfish habitat throughout the region in efforts to refine EFH.

3.0 PLAN ADMINISTRATION

3.1 Management Actions and Decisions

Bottomfish issues in 2003 dealt primarily with the management of stocks in Guam. At the 117th Council meeting, the Council recommended to prohibit vessels larger than 50 feet from targeting BMUS within 50 miles of Guam's shores and require federal permitting and reporting for vessels 50 feet and larger. At the 118th meeting, the Council recommended the amendment to the FMP for management of the Guam bottomfish stocks be submitted to NMFS for approval. At this meeting, CNMI began the process of managing their stocks also. At the end of 2003, the Guam Bottomfish Amendment had already been transmitted to NMFS awaiting comments and approval.

The Council also dealt with the NWHI Mau Zone bottomfish Community Development Program (CDP). At its 117th and 118th meetings, the Council recommended a weighted point system for the Mau Zone CDP and that a framework adjustment to the FMP be submitted to NMFS. At the end of 2003, the framework adjustment was still with NMFS for comments/approval.

3.2 NMFS 2003 Administrative Activities

In 2003, NMFS approved the definitions of overfishing, bycatch, and fishing communities under Amendment 6 to the Bottomfish and Seamount Groundfish Fishery Management Plan (68 FR 46112, August 5, 2003).

3.2.1 Use-it or Lose it Requirement for Permit Renewal (Calendar Yr 2003)

Mau Zone limited entry permits expire on December 31 each year. NMFS will renew a permit for the following year if the permit holder's vessel made a minimum of 5 separate landings, each of which consisted of at least 500 pounds of bottomfish management unit species, from the Mau Zone during the previous permit year. Failure to meet the required landing requirement may result in the permit being lost (not renewed). All 2003 Mau Zone limited entry permits were renewed in 2004.

3.2.2 Northwestern Hawaiian Islands (NWHI) Bottomfish Fisheries

During calendar year 2003, PIRO issued a total of 9 permits for the NWHI bottomfish fishery. Five vessels fished in the Mau zone and four vessels fished in the Hoomalu zone. Four vessels were registered for the Ho'omaluu Zone fishery; 5 vessels were registered with Mau Zone Permits.

Ho'omaluu Zone vessels

1. F/V Fortuna
2. F/V Laysan
3. F/V Kealailani
4. F/V Ka Imi Kai

Mau Zone Vessels

1. Iwa Lani
2. Constance Andrea
3. Kai Pali
4. Jamie Elizabeth
5. Wahine Kapaloa.

3.3 Protected Species Interactions

Pacific Islands Regional Observer Program-Bottomfish Report

The Hawaii-based bottomfish fishery has been monitored under a mandatory observer program since October 2003. Beginning October 2003, branch personnel have conducted daily shoreside dock rounds in Honolulu to determine which fishing vessels are in port. These dock rounds are used to obtain an estimate of fishing effort on a real-time basis by assuming that a vessel is fishing when it is absent from the harbor. This report is used to ensure prompt dissemination of Hawaii Bottomfish Observer Data and may be revised. The following table summarizes percent observer coverage for vessel departures, vessels arriving with observers, and protected species interactions for vessels arriving with observers during the fourth quarter of 2003.

Vessel Departures - 4th Quarter (October 1, 2003 - December 31, 2003)	
Departures -----	15
Departures with observers -----	5
Observer coverage 4th quarter -----	33.3%

Vessels Arriving with Observers - 4th Quarter	
Departures with observers in 4th quarter -----	5
Observers departing in 3rd quarter arriving 4th quarter -----	0
Observers departing in 4th quarter arriving 1st quarter 2004 -----	1
Total vessels arriving with observers - 4th quarter -----	4

Protected Species Interactions - 4th Quarter	
Vessels arriving with observers - 4th quarter -----	4
Trips with turtle interactions -----	0
Trips without turtle interactions -----	4
Trips with marine mammal interactions -----	0
Trips without marine mammal interactions -----	4
Trips with seabird interactions -----	0
Trips without seabird interactions -----	4
Total Sea Turtle Interactions -----	0
Total Marine Mammal Interactions -----	0
Total Seabird Interactions -----	0

Note: The percent of observer coverage is based on vessel departures.
Protected species interactions are based on vessel arrivals. For the purpose of this report, an animal that becomes hooked or entangled is an interaction.

4.0 2003 ENFORCEMENT ACTIVITIES

4.1 NOAA Fisheries Office for Law Enforcement Pacific Islands Enforcement Division

Throughout this reporting period, random dockside compliance checks of Hawaii-based longliners were conducted. Minor technical violations were noted and addressed. In addition, several prominent investigations involving potential violations of the Western Pacific Pelagic Regulations addressing the harvesting of swordfish were initiated. During the third quarter of 2003, there were four prominent enforcement actions resulting from violations of the MSFCMA which have resulted in financial penalties totaling **\$143,817.81**. Actionable conduct ranged from possession and use of float lines less than 20 meters in length, the direct targeting of swordfish, and various logbook and reporting infractions, to violation of the Shark Finning Prohibition Act.

Public education, deterrence, and intervention remain our primary focus with regards to averting marine mammal harassment within Hawaii. Moreover, coordination continues with volunteer organizations and local law enforcement agencies, in order to provide a timely response to marine mammal incidents. Joint patrols were conducted with personnel from the Hawaii Department of Conservation and Resources Enforcement on the Big Islands of Hawaii in order to assess and deter potential harassment of spinner dolphins. Enforcement personnel worked in partnership with researchers from the Pacific Islands Fisheries Science Center to resolve the status of land-locked sea turtles on private property. The turtles were listed as threatened or endangered. Strategies including returning the sea turtles to the open ocean.

The Pacific Islands Enforcement Division continues to provide enforcement support to the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve through the commitment of a special agent, full-time, to address the unique enforcement challenges of the reserve. The resident special agent in American Samoa attended the Coral Reef Advisory Group (CRAG) meeting and provided an enforcement assessment for the area.

To improve coral reef conservation in the Northwestern Hawaiian Islands, the VMS control center was modified to accept depth data that is transmitted automatically from VMS units. The project is ongoing, and the next phase will establish the transmission of depth data from vessel to shore side control center.

During the third quarter, there were two prominent enforcement actions resulting from violations of the Endangered Species Act, affecting sea turtles in Hawaii. Financial penalties totaling **\$9,600.00** have resulted. Violations ranged from failing to carry line clippers and dip nets, to illegal takes with prohibited fishing gear.

Public education, outreach, and enforcement efforts in conjunction with the Hawaiian Islands Humpback Whale National Marine Sanctuary continued during 2003. Consistent with previous years, public education, deterrence, and intervention strategies were maintained throughout the 2002/2003 whale watching season. The NOAA Fisheries Office for Law Enforcement participated in pre-season enforcement workshops during November and December of 2002. In addition, the NOAA Office for Law Enforcement responded to over 60 complaints involving potential violations of the humpback whale approach regulations by kayak enthusiasts, recreational water craft, swimmers, and aircraft from January through April of 2003.

The Pacific Islands Enforcement Division continues to provide technical and investigative support to the Forum Fisheries Agency and its member countries. To be specific, the resident special agent has conducted enforcement training and workshops for Forum member

The Vessel Monitoring System (VMW) continued to be an integral part of the Pacific Islands/Southwest Law Enforcement's Monitoring, Control, and Surveillance (MCS) program. The VMS continued to be an effective tool for monitoring compliance with closed area and seasonal restrictions in the region, and cooperation from the fishing community continued to remain at high levels.

The size of the VMS program is relatively stable. OLE continued to monitor the entire permitted Hawaii longline fleet. In addition, most former Hawaii-based vessels that conducted fishing operations in California and American Samoa still have the VMS units on board. To be specific, personnel from the Pacific Islands Enforcement Division traveled to Vigo, Spain to inspect the court-ordered VMS installation on two US vessels that will soon enter the CCAMLR toothfish fishery.

Throughout this reporting period, we have continued to coordinate efforts and to assist NOAA OLE Headquarters in the development of a national oversight strategy for the VMS Program, based upon regional emphasis. The United States Navy in conjunction with the Pacific Missile Range Facility at Barking Sands, Kauai, relied on the NOAA OLE Hawaii Field Office to assist with the identification of fishing vessels in exclusion zone areas prior to missile test launches.

In retrospect, the Hawaii VMS Program has clearly demonstrated that a fishing vessel monitoring system can be an effective use of technology to improve monitoring, control and surveillance of regulated fisheries. VMS, in conjunction with air and surface patrols, promotes and supports regional strategies for conservation and management of highly migratory species in the Central and Western Pacific.

4.2 United States Coast Guard Fisheries Law Enforcement

The following is a summary of U. S. Coast Guard fisheries law enforcement activity in the western and central Pacific Region and covers the period from October 1, 2002, to September 30, 2003.

During the first three months of fiscal year 2003, the majority of our efforts continued to be focused on maritime homeland security. We were unable to conduct planned C-130 deployments to Guam and American Samoa due to unscheduled maintenance requirements, super typhoon Pongsona relief efforts, and a number of emergent, long-range search and rescue missions. Although initially limited by the availability of resources, as the year progressed we conducted aerial patrols of the exclusive economic zone (EEZs) surrounding the Main Hawaiian Islands, Kingman Reef, Palmyra Atoll, Jarvis Island, Howland Island, Baker Island, Guam, and the Northern Mariana Islands. We had twelve suspected foreign fishing vessel encroachments during the course of the year, but were unable to respond due to non-availability of resources.

Our surface assets patrolled in the vicinity of the Main Hawaiian Islands, conducting boardings and monitoring the activity of the domestic longline fleet. No significant violations were noted, though one domestic longliner was found to be in possession of eight shark fins, without corresponding carcasses in violation of the Shark Finning Prohibition Act.

We capitalized on patrol support available from out of area assets to the greatest extent possible. During this period, we tasked one of the Coast Guard's polar icebreakers transiting to and from Antarctica to patrol the Howland/Baker EEZ along her route. In May, we were able to get 20 additional surface patrol days from the high-endurance cutter HAMILTON. HAMILTON

deployed from the mainland and was initially assigned to the Fourteenth Coast Guard District to support the homeland security mission. HAMILTON conducted boardings of the domestic longline fleet southwest of the Main Hawaiian Islands during this period. The most prevalent violations reported were vessels failing to carry a High Seas Fishing Act Compliance Permit and failure to properly mark their floats. All cases were turned over to NOAA Fisheries Enforcement for action. HAMILTON also patrolled the Johnston Island and Kingman Reef/Palmyra Atoll EEZ's.

During the month of June, one of the mobile shoreside patrols from Marianas Section observed two foreign fishing vessels offloading shark fins in Apra Harbor, Guam. Upon investigation, the first vessel was determined to be in compliance with sufficient carcasses onboard to support the amount of fins they had. The second vessel was found to have 3,457 pounds of shark fins onboard with an insufficient amount of carcasses. The patrol also found a beaked whale onboard this vessel. Both cases were turned over to NOAA Fisheries Enforcement for further action. Guam-based cutters continued to board foreign fishing vessels inbound to Apra Harbor.

The Coast Guard conducted dedicated surface and aerial patrols of the Hawaiian Island Humpback Whale National Marine Sanctuary in concert with National Marine Fisheries Enforcement Officers from December through the end of May, with no significant violations noted during the season.

During the period from June through August we saw an unprecedented amount of illegal large-scale, high seas driftnet activity well to the north and west of the Northwestern Hawaiian Islands. Although in previous years, vessels were targeting salmon, this year all vessels found to be illegally engaged in driftnetting were targeting squid, with a resultant bycatch of tuna, shark, and marlin.

Responding to reports of illegal activity, the Coast Guard sortied the cutter RUSH in June to proceed and investigate, en route the cutter's scheduled patrol in the Bering Sea. RUSH intercepted and boarded a vessel from the People's Republic of China (PRC) engaged in illegal driftnet operations. Acting on behalf of the PRC government, RUSH rendered the vessel's fishing gear inoperable and ordered the vessel back to port in China for further action by the PRC government.

Later in July, the Coast Guard responded to additional sightings of foreign vessels illegally engaged in high seas driftnet activity. I credit some of these sightings to US fishermen working in the North Pacific, who reported the activity as it occurred to the Coast Guard. The Coast Guard responded by directing the cutter JARVIS to proceed and investigate. During their patrol, JARVIS' crew prosecuted a total of five foreign fishing vessels illegally engaged in driftnetting. JARVIS also provided information to the PRC government regarding two additional vessels suspected of driftnetting. While engaged in prosecuting two additional vessels engaged in illegal driftnet operations, JARVIS' embarked helicopter sighted a third vessel, this one Russian, outfitted for driftnetting. Although unable to pursue this vessel due to the cases in progress, information on this vessel was passed to the Russian Federal Border Service, who dispatched a

patrol vessel to investigate. Additionally, during JARVIS' patrol, JARVIS freed a sperm whale that was entangled in driftnets and convinced one of the vessels being prosecuted for driftnetting to haul in approximately 30 nautical miles of driftnet that had been left behind to ghost fish. I am pleased to report that there was a significant amount of cooperation between the United States and the countries of Canada, Russia, Japan, and China to help remove vessels participating in this most environmentally destructive fishery.