Appendix 1

American Samoa

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Summary

American Samoa's bottomfish fishery was relatively bigger between 1982 and 1986 than in recent years (Figure 1). This observation reflects a trend in the loss of skilled and full-time commercial fishermen from the fishery, the gradual depletion of newly discovered banks (e.g., 2% Bank), the shift of preference from bottomfishing to trolling and, recently, the diversion of effort by the highliner bottomfish fishermen towards longlining. The December 1992 hurricane contributed to the low 1992 landings (Figure 1) and the lowest number of trips recorded for the period 1982-1997 (Figure 3). A gradual increase in landings and revenues since 1998 converses the associated decrease in prices for the same period. A 290% increase in bottomfish exported from western Samoa contributed to the low market prices last year and again this year.

During 2001, a total of 18 local boats landed an estimated 47,300 pounds of bottomfish in the territory. Revenues for the domestic commercial fishery this year was estimated around $79,200 with all catch being sold locally. The CPUE for 2001 (15.2 lb/hr) was the highest since 1989 and also not less than 50% of the aggregate CPUE for the first 3 years of this fishery. Effort (hours and trips) has been increasing since 1998 as some of the Alias that normally troll and/or longline perform bottomfishing when trolling and longline prices and catches decline. Overall average prices slightly dropped this year but prices for Lehi and Opakapaka increased mainly due to their demand by relatively new restaurants.

Regarding some of the SFA amendments: ***Commercial*** Bottomfish Landings and Revenues statistics for American Samoa is presented in Figure 2. No bottomfish ***Recreational*** trip was recorded this year. **Recreational** fishing is more associated with the pelagic fisheries and usually never occur in this fishery. There was no ***chartered*** bottomfish trip during this year and no **bottomfish by catch was recorded this year (Table 3).** In the *Preliminary Draft of EFH, Amendment for Bottomfish, WPRFMC Feb.1998***, the approximate MSY estimate for American Samoa** [196 nautical miles 100-fathom isobath] is estimated at 79,000 lbs. per year. Only about 40% was reached this year.

Indicators derived from current data do not dictate immediate management response at this time.

The following selected annual statistics dating back to 1982 provides a brief historical snapshot of American Samoa's bottomfish fishery

Selected Historical Annual Statistics

Year	Total Landings (lb)	CPUE (lb/trip-hr)	Adjusted Revenue	Adjusted Price/Lb.	CPI	Number of Boats
1982	64942	8.5	$191888	$3.09	100.0	27
1983	126327	10.0	$450983	$3.60	100.8	38
1984	94104	10.7	$274245	$2.96	102.7	48
1985	143225	8.1	$230353	$2.25	103.7	47
1986	95978	8.8	$225086	$2.36	107.1	34
1987	31148	11.7	$70143	$2.30	111.8	20
1988	63237	17.3	$142617	$2.36	115.3	27
1989	47482	16.7	$78328	$2.16	120.3	29
1990	14303	9.2	$27040	$2.16	129.6	19
1991	18677	9.1	$37124	$2.10	135.3	20
1992	13316	9.3	$33277	$2.50	140.9	14
1993	17518	7.3	$36487	$2.35	141.1	22
1994	44982	7.7	$91016	$2.20	143.8	19
1995	34414	9.8	$66813	$1.96	147.0	25
1996	38522	14.8	$76605	$2.03	152.5	26
1997	39863	14.7	$89257	$2.33	156.4	24
1998	15862	14.0	$38052	$2.64	158.4	16
1999	19563	12.9	$45371	$2.63	159.9	22
2000	28068	10.2	$55217	$2.13	166.7	17
2001	47285	15.2	$79193	$2.12	168.8	18
Averages	49941	11.3	$116955	$2.41		25.6
Std. Dev.	36793	3.1	$105102	$0.40		9.32

Introduction

Bottomfishing utilizing traditional canoes by the indigenous residents of American Samoa has been a subsistence practice since the Samoans settled into the Tutuila, Man'ua and Aunu'u islands. It was not until the early 1970's that the bottomfish fishery developed into a commercial scheme utilizing motorized boats. A government subsidized program, called 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 Hawaii caused another notable increase in bottomfish landings and revenues. Between 1982 and 1988, the botttomfish fishery comprised as much as 50% (by weight) of the total commercial landings. Beginning in 1988, the nature of American Samoa's fisheries changed dramatically with a shift in importance from bottomfish fishing towards trolling. In the past eight years, the dominant (by weight of fish landed) fishing method has been longlining.

During the early 1980's, fisheries data was collected from the bottomfish fishery by interviewing only commercial vessels. In the current Offshore Creel Survey on Tutuila that started on October 1, 1985, commercial, subsistence and recreational domestic fishing boats landing catch in five designated areas were interviewed and their catch recorded. For two weekdays and one weekend/holiday per week, DMWR technicians normally sampled offshore trips between 0500 and 2100 hours. In the past three years, the sampling period was increased to cover boats that come in earlier or after the normal sampling period. Two DMWR samplers based on Tau and Ofu collect fisheries data from the Manu'a islands fleet.

Boat-based fishing in American Samoa used to be mainly trolling and/or bottomfish. In the past six years, record longline landings were recorded with revenues around the one million-dollar mark. Bigger foreign boats are entering the local fisheries but these are rigged for longlining and more of these are expected to enter the territory's longline fishery. Limited entry options have been initiated to check this increase.

The bottomfish fishery of American Samoa was typically commercial overnight bottomfish handlining using skipjack as bait, on 28-30 foot aluminum/plywood Alias. Lower quality bottomfish imported from western Samoa helps satisfy the demand for bottomfish but at the same time result in unattractive prices for local bottomfish fishermen. The adverse effects of three hurricanes that struck American Samoa in 1987, 1990 and 1991 can be seen in some of the trends in the fishery as depicted by the data in this report.

Recent changes in the fishery and improvements in the Offshore Creel Survey necessitates modifications to algorithms used to process the data for this report. Hence the continuous improvements to DMWR's data processing systems by WPacFIN staff.

Recommendations

2000 Recommendation:

In consultation with the Central and local WPacFIN coordinators, the new Offshore Creel Survey supervisor should:

(i) Examine the unsatisfactory performance of the current samplers to ensure the necessary quality and integrity of sampled data.

(ii) Investigate if there are needed biological and stock assessment projects related to this fishery, i.e. the DMWR Oceanic Fishery Proposal.

(iii) Expand the fields in the offshore creel survey form for by-catch data collection as in Guam and train the samplers in a more focused approach for acquisition of by-catch information.

Status of 2000 Recommendations:

Improved performance by DMWR samplers have been observed with samplers asking for by-catch information. Future related projects will be formulated when a Chief Biologist is hired.

2001 Recommendations:

1. DMWR should start preparing a sampling program for the Alias fishing out of Vatia and Aunuu (not included in the normal sampling area) to improve coverage of the fisheries.

Table 1. American Samoa 2001 Estimated Total Bottomfish Landings by Species.

Interpretation: Changes in species composition of the bottomfish complex reported in the past are due to samplers' varying ability and commitment to the identification of the various bottomfish species. Historical and current data and observations however, do not indicate any major changes in the composition of the bottomfish species landed.

Source: DMWR Offshore Creel

Calculation: Catches are normally weighed by species either at landing sites or during the selling of fish to stores and restaurants. Trips missed by the Creel Survey are accounted for in a separate data collections system – the Commercial Invoice System. This analysis, as in the past, is for the Offshore Creel Survey catch only. Analysis of the bottomfish fishery presented in this report is for the whole bottomfish complex and **not just for the BMUS.**

Species	Pounds
Black snapper	42
Blacktail snapper	5
Blue lined gindai	60
Blue lined snapper	6051
Ehu (squirrelfish snap.)	4177
Gindai (flower snap)	226
Gray jobfish	2083
Hawaiian opakapaka	734
Humpback snapper	3714
Lehi (silverjaw)	1164
Onaga (longtail snapper)	4361
Onespot snapper	111
Pristipomoides/Etelis	150
Rufous snapper	7
Stone's snapper	338
Twinspot/red snapper	245
Yellow opakapaka	2435
Yelloweye opakapaka(P.fl.	138
Yellowtail snapper	540
Groupers (misc)	116
Blacktip grouper	101
Flagtail grouper	33
Lunartail grouper	1671
Peacock grouper	27
Smalltooth grouper	4
Tomato grouper	338
Emperors (misc)	10039
Bigeye emperor	117
Longnose emperor	556
Orangespot emperor	240
Redgill emperor	4784
Jacks (misc)	102
Bigeye trevally	1367
Black jack	1212
Total Bottomfish	**47285**

Table 2. American Samoa 2001 Estimated Commercial Landings by Species.

Species	Pounds	Price/Lb.	Value
Black snapper	42	$2.00	$83
Blue lined snapper	5783	$2.01	$11623
Ehu (squirrelfish snap.)	3135	$2.60	$8137
Gindai (flower snap)	226	$2.43	$549
Gray jobfish	1729	$2.00	$3465
Hawaiian opakapaka	343	$2.16	$739
Humpback snapper	3491	$2.00	$6982
Lehi (silverjaw)	829	$3.01	$2496
Onaga (longtail snapper)	3141	$1.87	$5876
Onespot snapper	87	$2.62	$227
Twinspot/red snapper	13	$2.00	$26
Yellow opakapaka	1612	$2.89	$4655
Yellowtail snapper	463	$2.50	$1158
Groupers (misc)	87	$2.00	$173
Blacktip grouper	28	$2.67	$75
Lunartail grouper	1459	$2.08	$3034
Peacock grouper	19	$2.00	$37
Tomato grouper	200	$2.11	$422
Emperors (misc)	9984	$2.00	$19994
Bigeye emperor	117	$2.00	$233
Longnose emperor	556	$2.00	$1112
Orangespot emperor	214	$2.00	$428
Redgill emperor	2418	$2.01	$4867
Jacks (misc)	16	$2.75	$43
Bigeye trevally	726	$2.20	$1597
Black jack	633	$1.83	$1161
Total Bottomfish	**37349**	**$2.12**	**$79193**

Interpretation: There appears to be no major changes in the prices of individual species in the past eight years. DMWR keeps track of fish prices for imported fish and those missed by the Offshore Creel Survey through a separate data collection system – the Commercial Invoice System. Data from that data processing system reveals that since 1992, the average price of bottomfish imported from western Samoa were lower than locally caught bottomfish. Locally caught bottomfish are of much superior quality than those imported from western Samoa (and previously from Tonga) because of better handling and affordable ice. Local fishermen, therefore, expect comparatively higher prices for their local bottomfish. Unfortunately, there has been a decrease in prices since 1998 and a 290% increase in miscellaneous fish exported from western Samoa this year.

Source: DMWR Offshore Creel Survey and Commercial Invoice System

Calculation: During creel surveys, the disposition of the catch is recorded, and if sold, the price is obtained whenever possible. The average prices reported in this table are calculated by dividing the total revenue by the weight sold in pounds for each species.

Table 3. American Samoa 2001 Bottomfish Bycatch

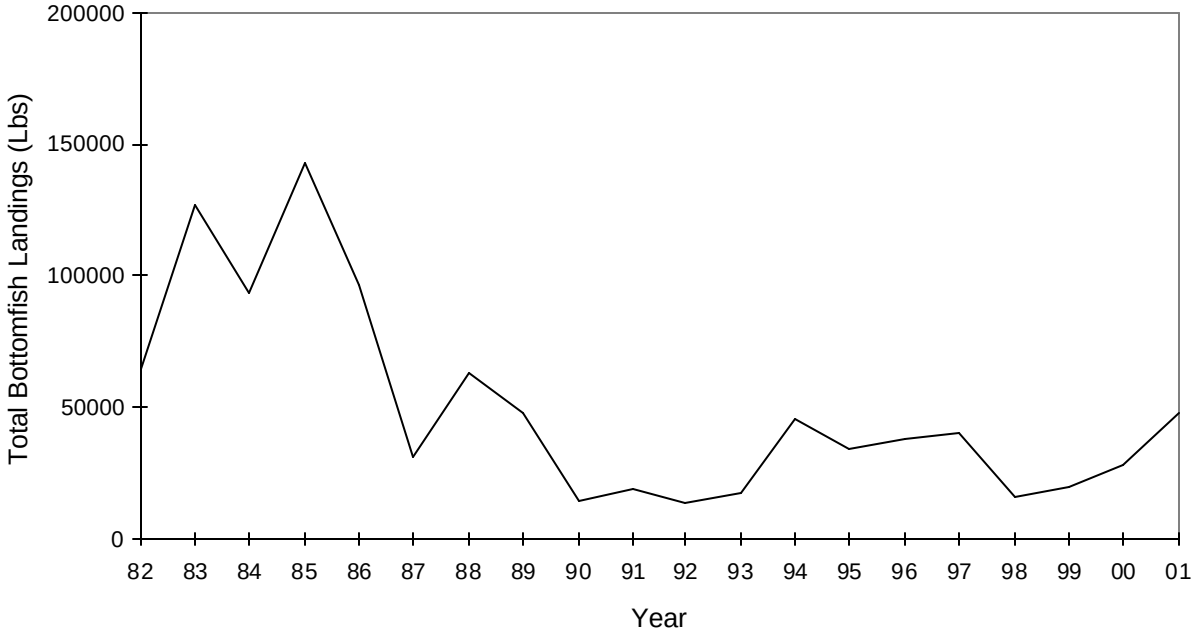
	Bycatch						Interviews		
Species	Alive	Dead Inj	Unk	Total	Catch	%BC	With BC	All	%BC
No Bycatch							0	449	0.00
All Species (Comparison)					6056	0.00			

Interpretation: No bycatch was recorded in the past two years

Source: DMWR Offshore Creel Survey

Calculation: The Bottomfish Bycatch table is obtained from creel survey interviews. The Bycatch numbers are obtained by counting fish in the interviews for purely bottomfishing trips with a disposition of bycatch. The catch for all species included for comparison is obtained by counting all species of fish caught by purely bottomfishing interviews and the number of interviews is a count of purely bottomfishing interviews

Figure 1. American Samoa Total Bottomfish Landings



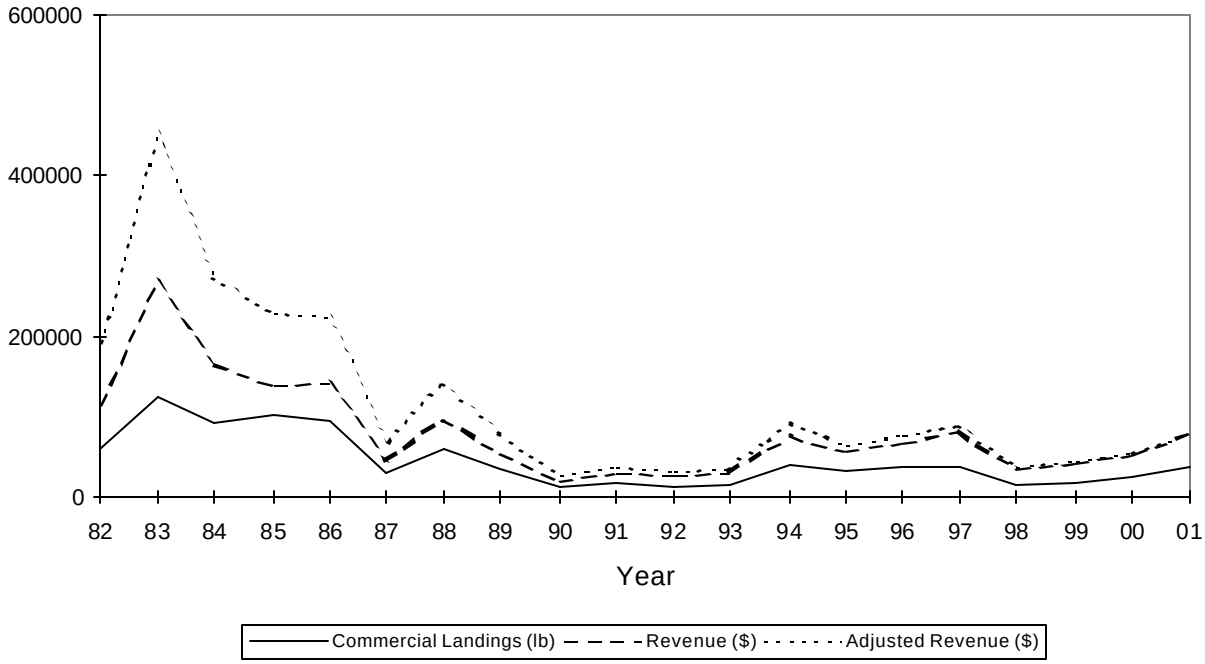
Interpretation: The substantial decline in landings in 1987 and 1990 were partially due to vessel losses caused by two hurricanes. Boat repairs were delayed as fisherman repaired or rebuilt their houses. In terms of total landings, the bottomfish fishery is much smaller in recent years than it was any time between 1982 and 1986, a period when there was a relatively large fleet and fishermen were attracted to the profitable bottomfish export program that exported deep-water snappers to Hawaii. The increase in 1994 was due primarily to improved sampling on Tutuila and increased efforts by the Tutuila highliners. Furthermore, the Manua landings more than tripled due to social/cultural events during the year. The 1998 decline mirror the 33% decrease in the number of boats participating. In the past two years some longline/troll fishermen have been bottomfishing when longline/troll catches and prices declined contributing to the 68% increase this year.

Year	Landings(lb)
1982	64942
1983	126327
1984	94104
1985	143225
1986	95978
1987	31148
1988	63237
1989	47482
1990	14303
1991	18677
1992	13316
1993	17518
1994	44982
1995	34414
1996	38522
1997	39863
1998	15862
1999	19563
2000	28068
2001	47285
Average	49941
Std. Dev.	36793

Source: DMWR Offshore Creel Survey Database

Calculation: Bottomfish landings for 1982-84 were calculated by adjusting the sampled Tutuila data by the calculated annual percent coverage of the fleet, and then adding the similarly adjusted Manu'a landings. The landings from 1986 to Present were calculated by expanding the Offsfore Creel Survey Data for Tutuila for the species listed in Table 1. The sampled Manu'a landings were adjusted by adjusting for the monthly perecent coverage of the fleet and added to the Tutuila data. Since the Offshore Creel Survey started in October 1, 1985, The first nine month of the 1985 landings were calculated as it was in 1982-84 and the last three months of the 1985 landings were calculated as it is now.

Figure 2. American Samoa Estimated Commercial Bottomfish Landings



Interpretation: Commercial landings mirror the total fishery's low catches in recent years compared to the robust 1982-1986 period. Relative to total landings, commercial landings decreased even more substantially in 1989, because the percent of the catch sold by bottomfish fishermen dropped from an average of about 97% in 1982-88 to 78% in 1989. The peak in 1983 portrays the high prices of deep-water snappers exported to Hawaii, while the trough in 1987 can be attributed to effects of the 1987 hurricane. The December 1991 hurricane contributed largely to the decreased landings and subsequently a decrease in revenues in 1992. Unfavorable weather continued through May 1992 hindering commercial bottomfish trips. Increased efforts in 1994 produced a notable increase in revenues and no major changes in commercial landings have been recorded since then. The observed increase in bottomfish

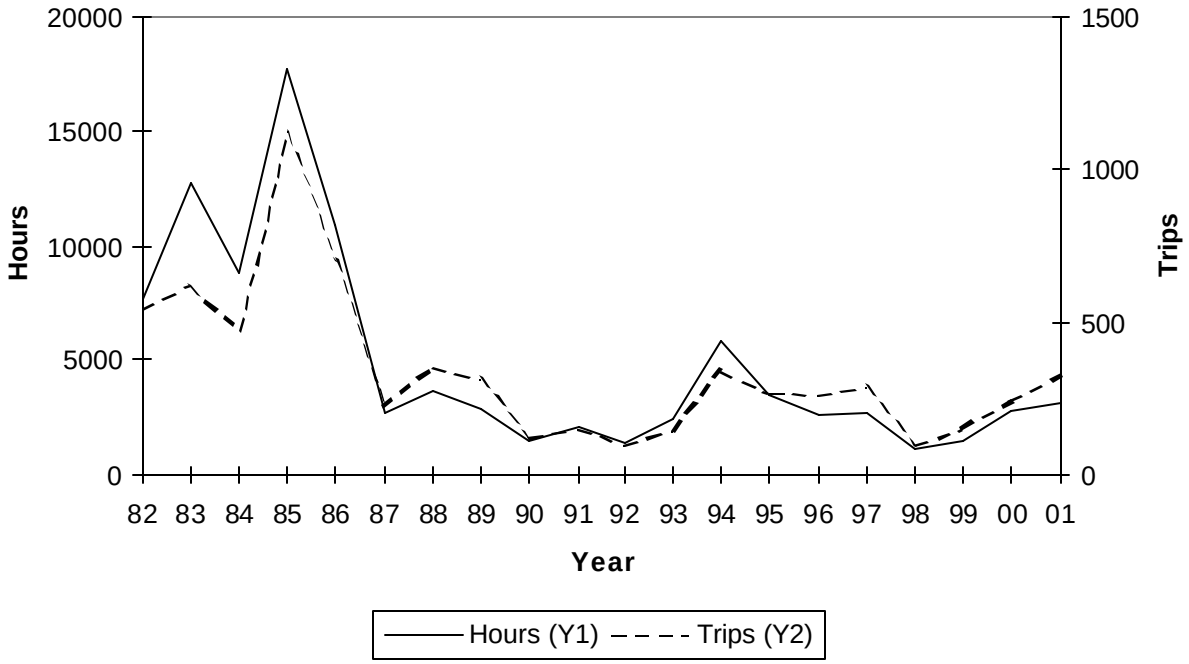
Year	Commercial Landings (lb)	Revenues	CPI	Adjusted Revenue
1982	62016	$113678	1.688	$191888
1983	125167	$269083	1.676	$450983
1984	92841	$166917	1.643	$274245
1985	102670	$141495	1.628	$230353
1986	95231	$142821	1.576	$225086
1987	30655	$46452	1.510	$70143
1988	60489	$97416	1.464	$142617
1989	36165	$55789	1.404	$78328
1990	12535	$20752	1.303	$27040
1991	17748	$29747	1.248	$37124
1992	13264	$27777	1.198	$33277
1993	15591	$30482	1.197	$36487
1994	41429	$77527	1.174	$91016
1995	33956	$58148	1.149	$66813
1996	37911	$69201	1.107	$76605
1997	38339	$82645	1.080	$89257
1998	14400	$35696	1.066	$38052
1999	17247	$42965	1.056	$45371
2000	26016	$54509	1.013	$55217
2001	37349	$79193	1.000	$79193
Average	45551	$82115		$116955
Std. Dev.	32707	$59119		$105102

participation is reflected in the continuous increase in landings (and consequently increases in revenues) since 1998.

Source: DMWR Offshore Creel Survey Database

Calculation: A relatively complex set of algorithms are used to estimate the commercial landings from estimates of total landings created by the creel survey data expansion system. In short the percent sold by species and by fishing method is calculated annually and multiplied by the estimated total landings by that method for that year. For 1982-85 sampling was conducted on the commercial fleet only (which included nearly all of the fishing boats), whereas since the 1985 creel sampling has covered all boats (commercial and recreational). Analysis of creel data for 1986-87 indicates that over 98% of the landed bottomfish was being sold. Therefore is it believed to be valid to compare commercial data for years prior to 1986 to creel survey totals for years since 1986.

Figure 3. American Samoa Estimated Bottomfish Hours and Trips



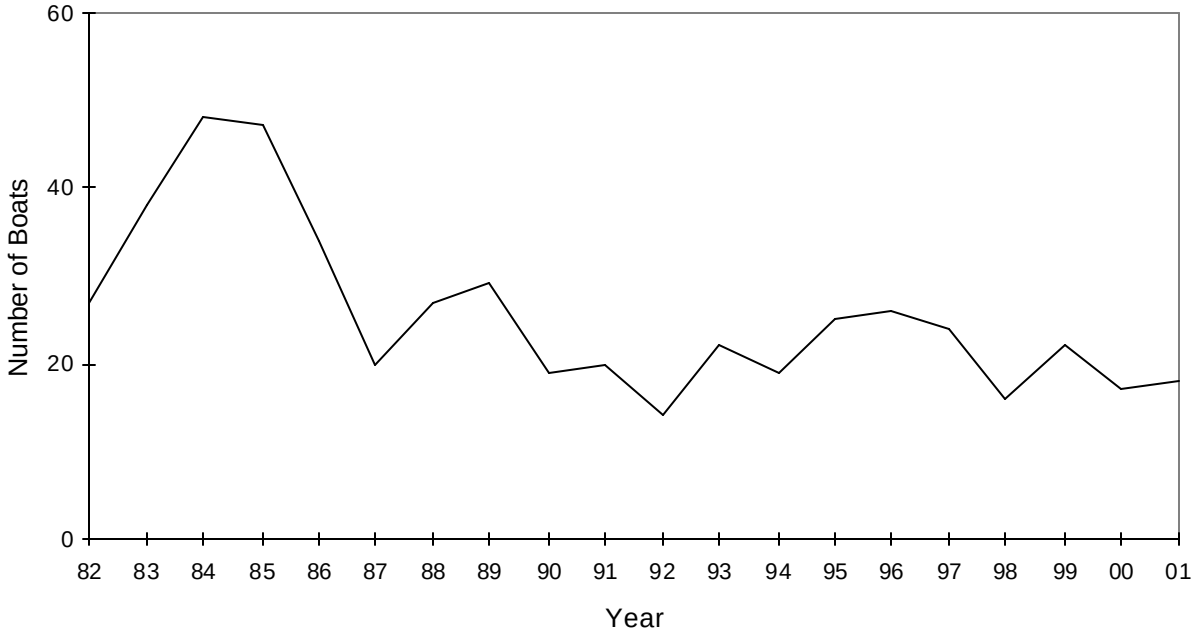
Interpretation: The sharp decline in the bottomfish landings since 1986, noted in Fig.1 is mirrored in this figure by a sharp decline in the level of effort expended in that fishery. Rather than indicating a problem with the resource , this decline depicts an actual trend of commercial boat owners and fishermen seeking other more lucrative and stable lines of work. The 1994-1996 estimated efforts were greater than those for the 1990-93 period due to the highliners increased efforts, with some boat owners employing teams (usually 2-3 fishermen) in continuous shifts during good weather. In 1997 and 1998 the number of boats participating in this fishery dropped significantly (see Figure 4) resulting in the notable declines in the number of trips and hours fished that period. The 1999 increase in effort can be attributed to some Alias that normally longline and troll, doing occasional bottomfishing. A couple of Alias engaged in similar activities this year with the bottomfishing Alias fishing shorter (18%decrease in hrs/trip) trips.

Year	Hours	Trips
1982	7671	548
1983	12695	621
1984	8796	468
1985	17682	1116
1986	10963	698
1987	2654	222
1988	3660	354
1989	2844	313
1990	1548	122
1991	2042	145
1992	1426	101
1993	2393	141
1994	5857	341
1995	3497	270
1996	2608	265
1997	2712	290
1998	1132	100
1999	1519	145
2000	2755	242
2001	3104	331
Average	4878	342
Std. Dev.	4351	243

Source: DMWR Offshore Creel Survey Database

Calculation: The annual estimated hours spent bottomfishing is calculated by dividing the annual total bottomfish catch by the average CPUE (pounds per hour) from trips doing only bottomfish fishing. The annual estimated number of trips is calculated by dividing the estimated annual hours by the average length of a bottomfish fishing trip. The average length of a bottomfish fishing trip (not shown) is calculated by using only trips which exclusively bottomfished and for which the trip length was recorded. The total hours fished from those trips is then divided by the number of trips. Recorded hours are trip hours.

Figure 4. American Samoa Annual Estimated Number of Boats Landing Bottomfish



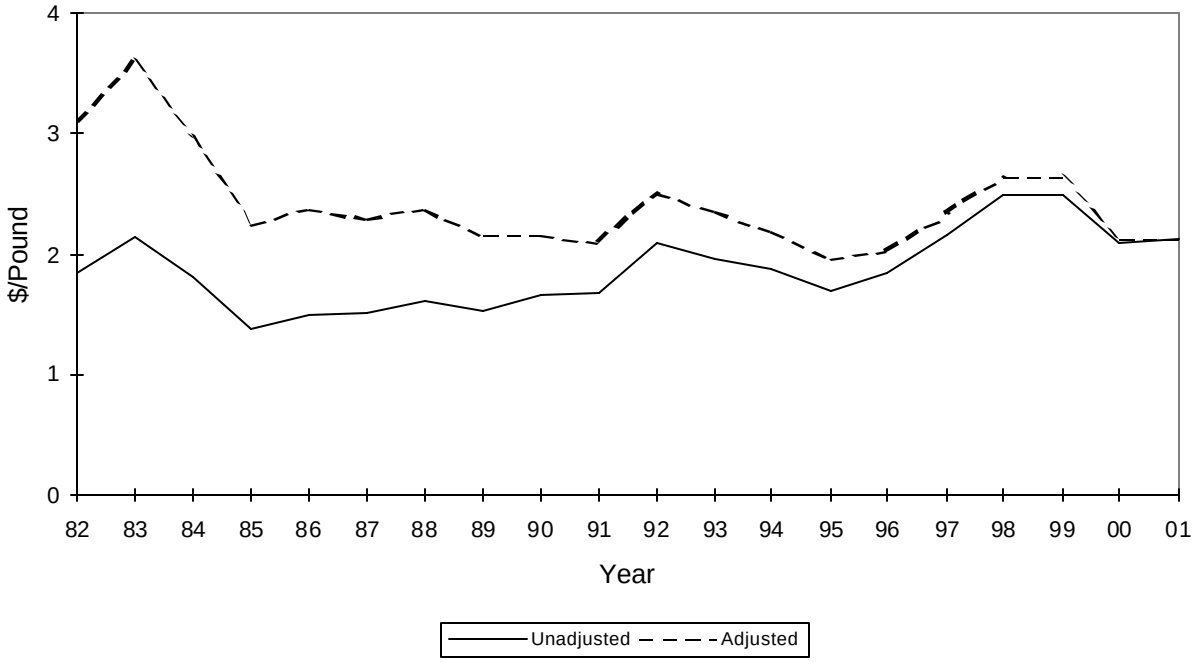
Interpretation: The decline in the fishery since 1985-86 is reflected by a decline in the number of boats participating in it. The 1987 hurricane caused the loss of the whole Manu'a fleet, plus some of the Tutuila fleet. Several Boats that contributed to the 1989 bottomfish annual landings did not land any bottomfish in 1990, due to much needed boat repairs and their participation in non-bottomfish chartered trips. About 90% of the domestic fishing fleet was affected by the December 1991 hurricane, hence the slight decline in 1992. The increase in 1993 is due mainly to the re-entry to this fishery of a few boats after repairs, trips by two 14-foot vessels that didn't bottomfish in 1992, and the entry of one new Alia into the sampling area. A few new Alias were bought from western Samoa and entered the fishery in 1995-1996. The continued increase in the number of bottomfish Alias electing to longline, attracted by the relatively higher revenues obtained mainly from albacore sold to the canneries, is reflected in the significant drop in the number of boats bottomfishing in 1998. A few more Alias contributed to the landings in 1999 with no noticeable changes since then.

Source: DMWR Offshore Creel Survey database

Calculation: The annual estimate of the number of boats in the bottomfish fishery is obtained from the data base by counting the unique boats sampled during the year which landed any bottomfish species regardless of fishing method.

Year	Boats
1982	27
1983	38
1984	48
1985	47
1986	34
1987	20
1988	27
1989	29
1990	19
1991	20
1992	14
1993	22
1994	19
1995	25
1996	26
1997	24
1998	16
1999	22
2000	17
2001	18
Average	26
Std. Dev.	9

Figure 5. American Samoa Average Price of Bottomfish



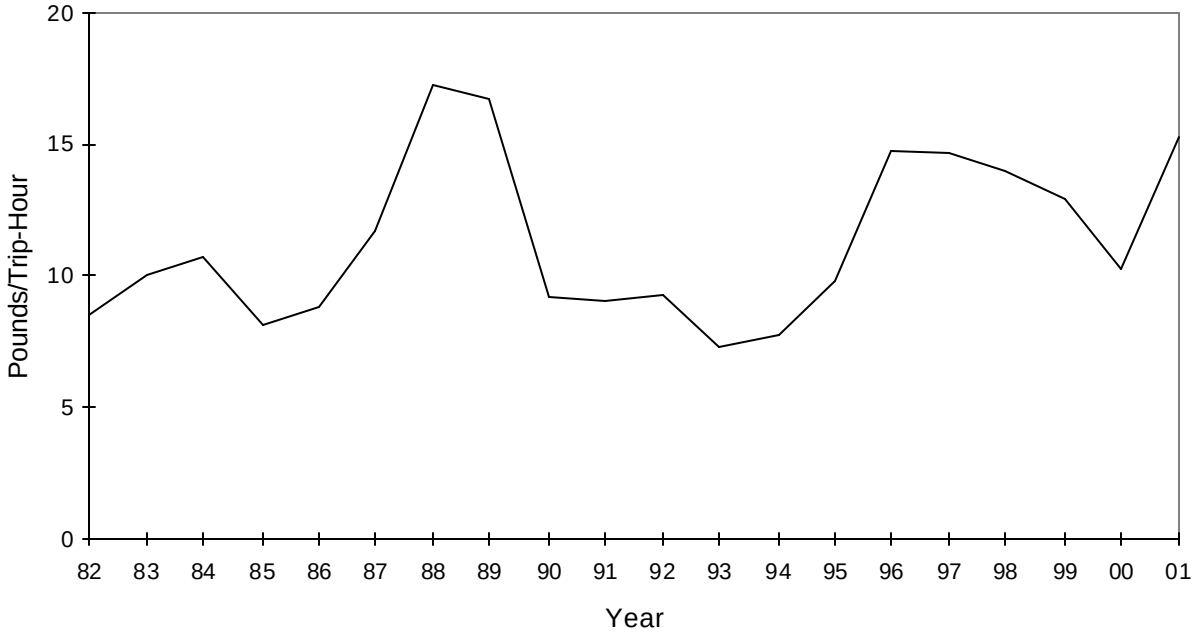
Interpretation: Prices were generally higher between 1982 and 1984 during the exportation of high-priced deepwater snappers to Hawaii. After this period, inflation-adjusted local prices have generally been stable. Prices of locally caught bottomfish are generally higher than imported fish, and could have been even higher had the local markets not been flooded by imported fish, which are usually of lower quality. The only imported bottomfish in 1994 were from western Samoa and these were sold at an average price of $1.67/lb. Imported bottomfish (mainly from western Samoa) have always helped in meeting the demand for bottomfish. The increase in average price in 1998 is attributed mainly to the increase in demand for fresh bottomfish by a few new restaurants. Since 1999 there has been a general increase (16% in 1999 and 290% this year) in pounds of fish (miscellaneous bottomfish and pelagics) imported from western Samoa and may contribute (increase supply) to last year's price drop. A relatively unchanged price/lb was recorded for this year.

Year	Unadjusted Price/Lb	Adjusted Price/Lb
1982	$1.83	$3.09
1983	$2.15	$3.60
1984	$1.80	$2.96
1985	$1.38	$2.25
1986	$1.50	$2.36
1987	$1.52	$2.30
1988	$1.61	$2.36
1989	$1.54	$2.16
1990	$1.66	$2.16
1991	$1.68	$2.10
1992	$2.09	$2.50
1993	$1.96	$2.35
1994	$1.87	$2.20
1995	$1.71	$1.96
1996	$1.83	$2.03
1997	$2.16	$2.33
1998	$2.48	$2.64
1999	$2.49	$2.63
2000	$2.10	$2.13
2001	$2.12	$2.12
Average	$1.87	$2.41
Std. Dev.	$0.31	$0.40

Source: DMWR Offshore Creel Survey database

Calculation: The average price of all bottomfish species combined is calculated by dividing total bottomfish revenue by total sold weight. The inflation-adjusted price is calculated by multiplying the unadjusted annual average price by the annual calculated consumer price index (CPI) for American Samoa using the current year as base.

Figure 6. American Samoa Annual Bottomfish CPUE



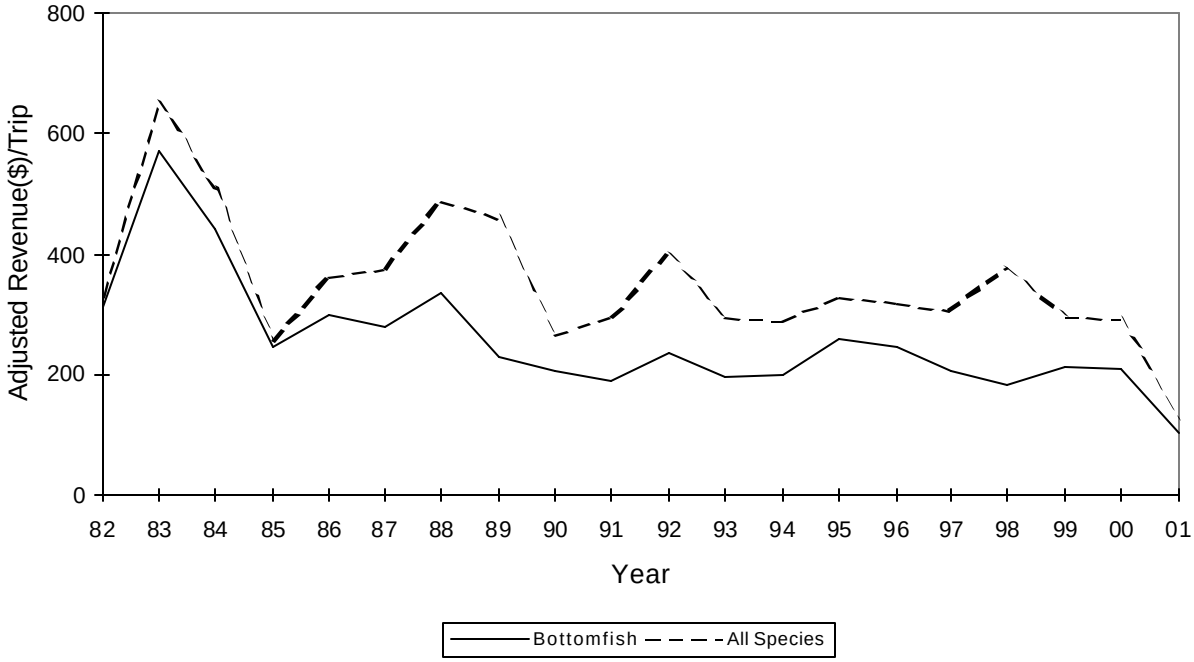
Interpretation: The initial increased CPUE in 1983 and 1984 occurred during the intense fishing of some new fishing grounds for deepwater snappers for export to Hawaii. A relatively high number of boats and local fishermen participated in the fishery during this period. The decline in 1985 and 1986 might be expected following the ardent harvesting of the limited fishing grounds. Reasons for the CPUE peak in 1988-89 are unknown. The decline in CPUE from 1989 to 1991 can be partially attributed to a combination of some new inexperienced fishermen entering the fishery and the exit of experienced and full-time commercial fishermen. CPUE has essentially remained stable during 1990-1992, increased for a few years and was relatively stable in 1996-1998. Bottomfishing techniques and gear have generally remained the same in the past years with the Alias being the highliners since the early 1970's. The 1996 high CPUE estimates (and most probably the 1988-89 CPUE increase) can be attributed mainly to improved sampling and may also be related to favorable environmental conditions. This also maybe representing cyclical trends that maybe caused by decadal and inter-annual climatic changes with similar trends shown in the Hawaii bottomfish fishery. The past five year's CPUE was not less than 50% of the average aggregate CPUE for the first three years of available data and this years CPUE is the highest since 1990

Source: DMWR Offshore Creel Survey database

Calculation: CPUE is calculated using only trips in which only the bottomfish method was used and trip hours were recorded. The average is calculated by using each CPUE from each trip as an observation and dividing by the number of trips.

Year	CPUE
1982	8.50
1983	10.00
1984	10.70
1985	8.10
1986	8.80
1987	11.70
1988	17.30
1989	16.70
1990	9.20
1991	9.10
1992	9.30
1993	7.30
1994	7.70
1995	9.80
1996	14.80
1997	14.70
1998	14.00
1999	12.90
2000	10.20
2001	15.20
Average	11.30
Std. Dev.	3.05

Figure 7. American Samoa Average Inflation-Adjusted Revenue Per Trip Landing Bottomfish.



Year	Bottomfish Unadjusted	Bottomfish Adjusted	All Species Unadjusted	All Species Adjusted
1982	$185	$312	$196	$330
1983	$341	$572	$388	$651
1984	$269	$441	$309	$508
1985	$151	$246	$157	$255
1986	$189	$298	$229	$362
1987	$184	$278	$249	$376
1988	$231	$338	$332	$486
1989	$163	$229	$327	$458
1990	$160	$209	$205	$267
1991	$151	$189	$237	$296
1992	$196	$235	$332	$397
1993	$165	$197	$246	$295
1994	$171	$201	$245	$288
1995	$227	$260	$288	$331
1996	$221	$244	$290	$321
1997	$190	$206	$283	$306
1998	$172	$184	$355	$378
1999	$204	$215	$281	$297
2000	$208	$211	$290	$294
2001	$102	$102	$127	$127
Average	$194	$258	$268	$351
Std. Dev.	$48	$99	$64	$108

Interpretation: There have been no notable changes in revenues since 1990. The distance between these two lines reflects the relative importance of bottomfish species in the total catch whenever any bottomfish are landed. The prominent importance of bottomfish between 1982 and 1985 occurred during the targeting of deepwater snappers (mainly ***Etelis*** and ***Prisitipomoides***) for export to Hawaii. Bottomfish fishing was also the more profitable method of fishing during that period. The relative importance of bottomfish has generally been declining since 1985 as most of the full-time commercial fishermen quit this fishery with the remaining opting for trolling and lately, longlining. The supply of locally caught bottomfish has been supplemented by bottomfish imported from western Samoa.

The effects of the low price/lb recorded this year and the 290% increase in imported (from western Samoa) miscellaneous fish partially explains the decline in revenues per trip for this year.

Source: DMWR Offshore Creel Survey database

Calculation: The average revenue per trip for all species is calculated by summing the revenues of all sales for any trip which landed any bottomfish species, and dividing by the number of trips. The average bottomfish revenue per trip is calculated from those same trips by summing the sales of only bottomfish species and dividing by the number of trips. Figure 7 plots the inflation-adjusted bottomfish and all species revenue per trip for the period 1982-2001.