WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL

Options for the Establishment of Longline Albacore Catch Limits for the Exclusive Economic Zone around American Samoa

161st Council Meeting
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Honolulu

I. Introduction

The American Samoa longline fishery (hereafter, the fishery) is managed under the Fishery Ecosystem Plan for Pelagic Fisheries of the Western Pacific Region (Pelagics FEP). The fishery primarily targets south Pacific albacore (SPALB). Most of the albacore caught by the fishery landed in Pago Pago for the processing at the local canneries.

SPALB is important to domestic longline fisheries of central South Pacific countries neighboring American Samoa, in terms of both domestic fisheries and for the revenue derived from foreign fishing access agreements. A substantial portion of the total catch of SPALB is offloaded in Pago Pago.

American Samoa plays a central role in the management of SPALB. The American Samoa longline fishery is a well-managed, highly monitored fishery that serves as example to other fisheries in the region. The tuna process facilities in Pago Pago make it a strategic port in the South Pacific.

The total catch of SPALB has more than doubled in the past decade, with about 82,000 mt caught in 2013, which is below the estimated Maximum Sustainable Yield (MSY) of approximately 99,000 mt (Piling et al. 2014). Although the stock is considered biologically healthy, catch rates of longline vessel targeting adult fish, when coupled with prevailing operating and ex-vessel prices, are resulting in conditions that are likely economically unsustainable. In other words, longline catch rates are higher than those associated with Maximum Economic Yield (MEY; Berger et al. 2014)

In 2013, the American Samoa longline fishery experienced a poor year, with its lowest catch rates of SPALB on record, and revenues that were unable to exceed operating costs. Other domestic longline fishery in neighboring South Pacific countries faced similar conditions. There is growing concern for the future of the SPALB and the domestic South Pacific longline fisheries which are primarily dependent on this stock.

The catch of the American Samoa longline fleet reached a maximum of about 6,000 mt (more than 300,000 fish) in 2002, and catches have declined since 2007. The catch per unit of effort (CPUE) has declined by 40% on average, and the 2013 catch rate is a record low and 70% less than the highest catch rate, recorded in 1996 (Figure 1). Albacore catches by the American Samoa longline fishery in 2013 were the lowest since the entrance of large vessels in the fishery in 2001.

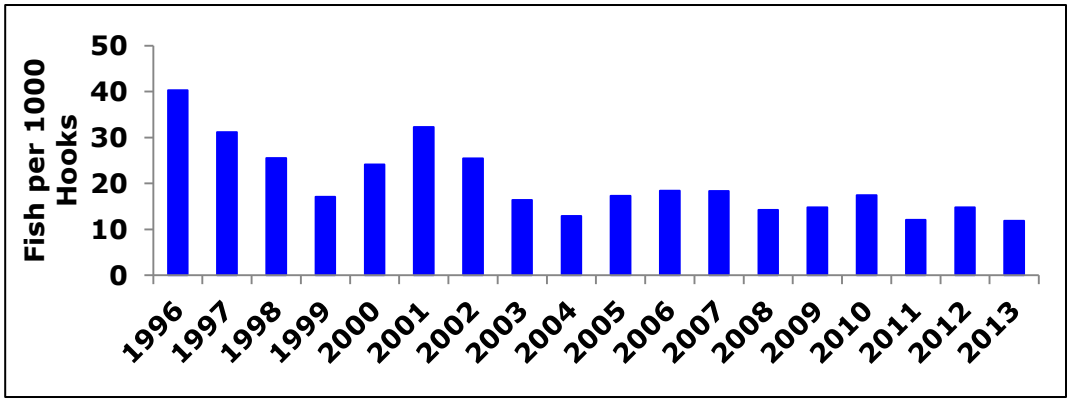

Figure 1: Time series of albacore CPUE in the American Samoa longline fishery 1996-2013
Source: NMFS WPacFIN[1] plus unpublished data

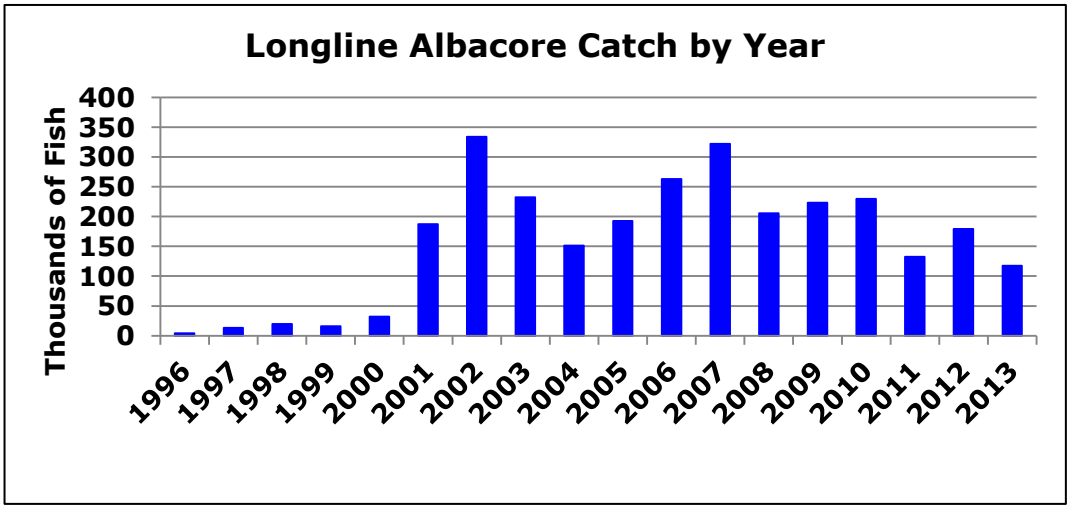

Figure 2: Time series of albacore landings by the American Samoa longline fishery 1996-2013
Source: NMFS WPacFIN plus unpublished data

[1] http://www.pifsc.noaa.gov/wpacfin/as/Pages/as_data_2.php

SPALB is a highly migratory species that requires international cooperation for effective management. In the Western and Central Pacific Ocean (WCPO), international management of highly migratory species including SPALB is conducted by the Western and Central Pacific Fisheries Commission (WCPFC). Existing international management measures have been ineffective to restrict the rapid increase SPALB catches in the last decade. To address what many are considering a dire situation, member countries of the Forum Fisheries Agency[2] (FFA) are proposing the following: 1) the establishment of EEZ-based catch limits; 2) flag-based high seas catch limits; and 3) a total catch limit of SPALB with the Western and Central Pacific Ocean (see Appendix 1).

II. Purpose and need

There is a need for coordinated, effective international management of SPALB. To meet this objective, high levels of cooperation among Pacific Island Countries and distant water fishing nations are required. The purpose of this action is the Council's consideration of EEZ-based SPALB catch limits that are consistent with the regional approach proposed by the FFA. Recognizing American Samoa's pivotal role in the region as strategic fish processing hub and its well-managed domestic longline fishery, advancing regional cooperation may also necessitate the need for American Samoa to be considered as an Associate Participant to the Tokelau Arrangement.

III. Initial Actions

In recent years, Te Vaka Moana, which sub-regional cooperative of FFA members, has voiced concern about the rapid increase in SPALB catches and the economic condition of their domestic fleets targeting SPALB. American Samoa is centrally located in the middle of Te Vaka Moana members, and as such, plays an important role in sub-regional cooperation on the conservation and management of SPALB (see Figure 4). Te Vaka Moana members recognize American Samoa's pivotal role in the region and has invited American Samoa representatives to observe Te Vaka Moana meetings on several occasions. At the 10th Regular Session of the WCPFC (December 2013), Te Vaka Moana members introduced a draft SPALB conservation and management, which however, was not adopted.

At its 156th meeting (March 2013), the Council recommended continued cooperation with Te Vaka Moana[3] (TVM) arrangement members, and for staff to facilitate American Samoa government and Council observer status in TVM meetings, with a goal of stronger WCPFC

[2] FFA members include: Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.

[3] Te Vaka Moana members include: Cook Islands, New Zealand, Niue, Samoa, Tokelau, and Tonga.

conservation and management measures of the South Pacific albacore fishery across the entire range of the stock.

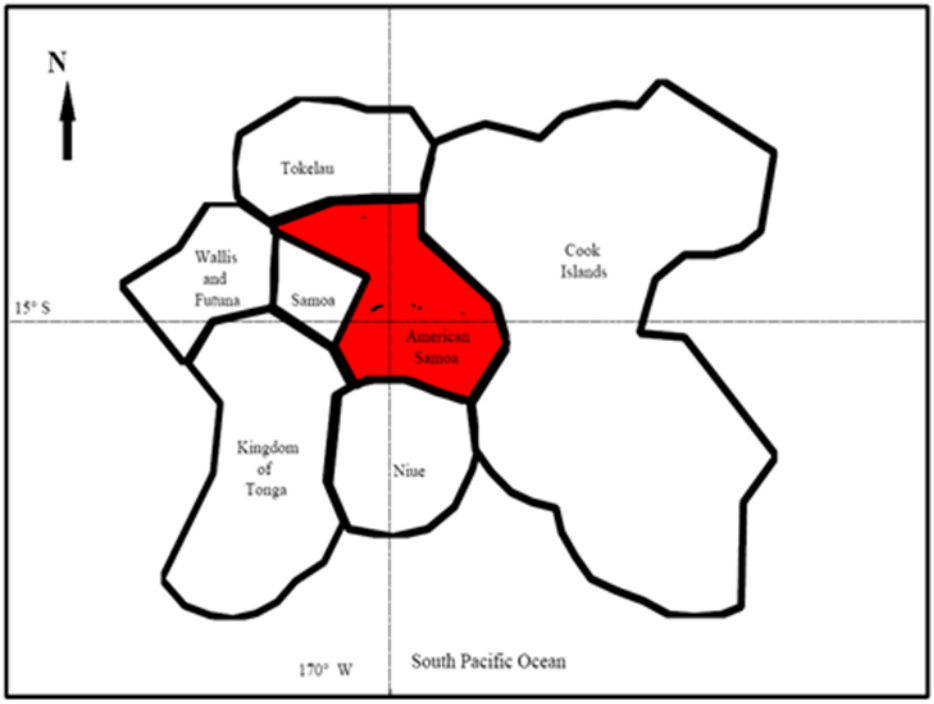

Figure 3: Map of EEZs bordering American Samoa
Source: WPFMC

IV. Options for Longline Catch Limits of South Pacific Albacore Within the Exclusive Economic Zone Around American Samoa

For all options considered below, it is assumed that FFA countries will be adopting EEZ-based limits according to the framework established under the Tokelau Arrangement (See Appendix 1). It is also assumed that the WCPFC will be considering the adoption of SPALB high sea catch limits at its 11th regular session occurring in early December 2014.

The catch of SPALB in the EEZ around American Samoa has varied since the beginning of the American Samoa longline fishery in the late 1990s (See Table 1).

Table 1: Annual catches (metric tons) of SPALB within the EEZ around American Samoa, 2000-2013

Year	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Catch (mt)	626	3217	5353	3212	2019	2880	4078	4667	2963	3299	3125	2224	2606	1859

Source: Piling et al. 2014

Note: At the time of writing, NMFS PIFSC is working to verify the catches listed in above table as presented in Piling et al. 2014.

Option 1: No Action

Under the No Action option, the Council would maintain existing management measures applicable to the American Samoa longline fishery and not recommend an EEZ-based albacore catch limit.

Pros	**Cons**
• Would not require in-season monitoring of SPALB catch in the EEZ around American Samoa • Existing catches by American Samoa longline vessels having minimal impact on stock • Would not burden existing American Samoa longline fishery participants.	• Would not support regional coordination with FFA countries with the long-term objective of producing catches associated with Maximum Economic Yield

Option 2: Establish an annual longline catch limit of 5,353 metric tons of albacore for the EEZ around American Samoa (highest level of SPALB catch reported from the EEZ)

Under this option, the Council would establish a SPALB longline annual catch limit of 5,353 mt for the EEZ around American Samoa. This limit would apply to all commercial fishing vessels operating in the EEZ.

Pros	Cons
• Would support regional coordination with FFA countries with the long-term objective of producing catches associated with Maximum Economic Yield.	• Would require in-season monitoring of SPALB catch within the EEZ around American Samoa. • Unless longline catches are reduced across the range of the stock, catch limits for EEZ are unlikely to improve existing catch rates in EEZ and poor economic conditions experienced by American Samoa longline fishermen are likely to continue. • Impacts to America Samoa longline fishery participants would occur if limit is reached. • To be effective, the WCPFC would need to adopt a measure to limit high seas catches.

Option 3: Establish an annual SPALB longline catch limit of 2,623 metric tons (recent 5-year average catch of SPALB within the EEZ around American Samoa)

Under this option, the Council would establish a SPALB annual catch limit of 2,623 mt for the EEZ around American Samoa. This limit would apply to all commercial fishing vessels operating in the EEZ.

Pros	Cons
• Would support regional coordination with FFA countries with the long-term objective of producing catches associated with Maximum Economic Yield.	• Would require in-season monitoring of SPALB catch. • Unless longline catches are reduced across the range of the stock, catch limits for EEZ are unlikely improve existing catch rates in EEZ and poor economic conditions experienced by American Samoa longline fishermen likely to continue. • Impacts to America Samoa longline fishery participants would occur if limit is reached. • To be effective, the WCPFC would need to adopt a measure to limit high seas longline catches.

V. Background Information

After being spawned in the tropical and sub-tropical waters in the South Pacific (i.e. north of 25° S), juveniles migrate south towards cooler waters in the vicinity of the sub-tropical convergence zone (at about 40°S). As a result of different movement patterns with respect to life stage, there is a latitudinal gradient in size distribution, with predominately small fish (<80 cm) at latitudes south of 35° S and large fish (>80 c) at latitudes north 30° S. Longline fisheries generally capture adult size albacore, whereas troll and other surface fisheries capture juvenile albacore.

The most recent stock assessment of SPALB indicates that the stock is in a healthy condition, with fishing mortality less than that associated with Maximum Sustainable Yield, and estimated spawning biomass above levels to produce MSY (Hoyle et al. 2011). The assessment indicates that fishing mortality on adult fish has increased considerably over the past decade, but that overall estimates of fishing mortality are well below FMSY (Figures 10 and 11) . Therefore, overfishing is not occurring. Spawning biomass levels remain well above SBMSY, indicating that the stock is not in an overfished state (see Figure 1).

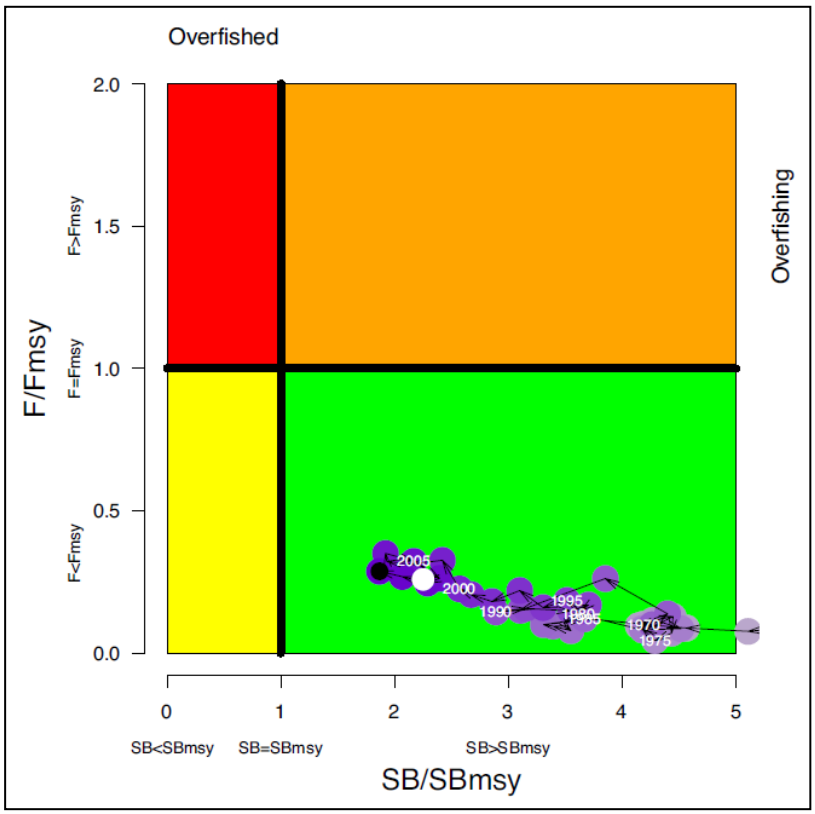

Figure 3: Kobe plot for SPAB showing the fishing mortality and spawning stock biomass relative to MSY.
Source: SPC-OFP (2012)

Nevertheless, the current level of longline catch is estimated to be having a considerably higher impact on the portion of the stock vulnerable to the longline fishery, i.e. adult size fish. The assessment indicates that the current level of impact is about 70% for fish of the sizes taken in the northern longline fisheries, having increased sharply in recent years. From the results of the assessment, the WCPFC Scientific Committee concluded that any increases in catch or effort are likely to result in catch rate declines, especially relating to longline catches of adult albacore, with associated impacts upon vessel profitability (Hoyle et al. 2011).

The South Pacific albacore catch in the WCP-Convention Area in 2013 was approximately 71,000 mt (Piling et al. 2014). Longline fishing has accounted for most of the catch of this stock (> 75% in the 1990s, but > 90% in recent years), while the troll catch, for a season spanning November to April, has generally been in the range of 3,000–8,000 mt, although it has declined to <3,000 mt in recent years.

Catches by flag, EEZ, and high seas are indicated in Tables 2 and 3. Most of the catch SPALB occurs in the EEZs of Pacific Island countries, although the amount of high seas catch of SPALB has increased in recent years. High seas catch is mostly attributable to Chinese and Chinese Taipei vessels operating under their own flags or under charter arrangements with Pacific Island countries. Identifying catches to be either in zone or on the high seas is problematic given that the China and Chinese Taipei do not submit operational level data to the WCPFC for their high seas fishing operations, but rather submit aggregate data. However, current estimates indicate that more than half of the albacore caught by China and Chinese Taipei occurs on the high seas (Piling et al. 2014).

China and Chinese Taipei have the highest catch estimates of SPALB in 2013 (23,842 mt and 13,248 mt respectively). China has increased its estimated catch of SPALB in recent years, from an average of 4,453 mt in the years 2000 to 2007, to a recent average estimated catch of 16,763 mt, in the years 2008 to 2013.

Chinese Taipei SPALB catch estimates average 10,903 mt from 2000 to 2011, ranging from 16,064 mt in 2002 to 7,609 mt in 2008, with an estimated catch in 2013 of 13,248 mt (Table 3). The trends in the SPALB annual catch estimates for China and Chinese Taipei vessels over the past decade may be influenced by changes in targeting from bigeye tuna to albacore tuna, and vice-a-versa.

As mentioned earlier, most of the catch of SPALB is taken in the EEZs of Pacific Island countries. The EEZ of the Solomon Islands has the highest catch of SPALB, followed by Cooks Islands and Vanuatu. The catch estimate for SPALB in the Solomon Islands EEZ increased from

12,929 mt in 2009, to 21,938 mt in 2010, but was estimated to be 8,751 mt in 2013. The next highest estimated EEZ catch in 2013 are Cook Islands and Vanuatu, with 6,077 mt and 6054 mt, respectively. The EEZ of American Samoa has historically ranked in the top 5 of in the South Pacific Region in terms of albacore catches.

Table 2: Annual Longline SPALB Catches by EEZ

EEZ/High Seas	ANNUAL SOUTH PACIFIC ALBACORE LONGLINE CATCH ESTIMATES BY EEZ AND HIGH SEAS													
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
American Samoa	626	3217	5353	3212	2019	2880	4078	4667	2963	3299	3125	2224	2606	1859
Australia	359	554	505	391	587	622	2526	1867	1256	1471	706	627	529	524
Cook Islands		9	1112	1854	2172	2282	1986	3670	2492	5413	5680	5525	10284	6077
Fiji	4524	7294	6239	4077	6161	5654	5797	3721	4552	5601	3769	5171	5053	4050
High Seas	12784	22178	28046	25646	23928	22618	18165	15189	20763	27855	23875	17086	24799	29096
Jarvis (USA)				53									0	
Kiribati	268	742	758	644	833	241	303	686	254	741	1034	561	1181	428
Non-attributed non-high seas area	4	4	1	19	11	12	4	5	2	24	6	5	7	
New Caledonia	885	1015	1160	1087	1367	1579	1348	1312	1484	1611	1923	1732	1700	1712
Niue			34			55	259	216	337	238	219			401
New Zealand	1334	2593	2522	2936	1246	602	496	277	382	422	460	418	266	302
French Polynesia	3463	4261	4555	3813	2210	2255	2849	3924	3064	3560	3482	3223	3590	3493
Papua New Guinea	105	72	82	645	1530	2182	1789	1920	509	865	806	720	1047	457
Solomon Islands	339	170	1074	932	2231	3001	6954	4922	8433	11619	20918	9859	11416	8751
Tokelau									121			90	130	
Tonga	858	1074	845	318	197	256	405	354	220	124	57	36	803	2104
Tuvalu	224	117	186	53	239	300	8	317	159	313	198	513	1091	1467
Vanuatu	2516	2759	2629	2812	3700	6957	8321	5717	6430	6174	5313	7408	4762	6054
Wallis and Futuna						34						3		
Western Samoa	4067	4820	4205	2253	1233	1263	2113	3113	2342	2816	2529	1415	2037	1640
Total	32356	50879	59306	50745	49664	52793	57401	51877	55763	72146	74100	56616	71301	68415

Source: Piling et al. 2014

Table 3: Annual longline catches by country

Flag	ANNUAL SOUTH PACIFIC ALBACORE LONGLINE CATCH ESTIMATES BY FLAG													
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Australia	381	591	553	490	667	743	2591	1925	1277	1523	745	653	572	572
Belize	191	4050	1472	885	353	7	0	164	7	26	10	105	32	
Cook Islands		2	490	1358	1869	2371	2223	2644	2224	1551	2423	2182	2614	1310
China	2030	2495	2704	6002	5828	4026	7115	5424	15059	20100	12950	11868	24538	23842
Spain					2	2	0	0	33	35	6	3	2	2
Fiji	5363	7230	7279	6337	10938	11104	11474	6981	9262	12096	8744	9942	9478	8678
Federated States of Micronesia	0	0		0	0	0	0	0	0	0	1	1	168	669
Japan	2254	3358	2637	3146	4004	4652	3223	2806	2384	2812	2461	2136	2046	1450
Kiribati	0	0		0	0						66	236	356	180
Korea	591	1728	2850	1394	743	2167	786	1035	1135	1141	907	443	856	643
New Caledonia	895	1020	1165	1111	1468	1590	1358	1324	1506	1649	1939	1736	1715	1714
Niue						55	213	216	337	154	97			
New Zealand	1344	2614	2545	2971	1248	602	496	357	382	422	460	418	266	302
French Polynesia	3473	4261	4557	3846	2218	2426	2918	3957	3068	3560	3483	3225	3594	3512
Papua New Guinea	105	72	82	645	1530	2182	1740	1556	438	807	791	245	693	232
Portugal												4	1	67
Solomon Islands	224	54	121	95	207	0					9391	1245		
Tonga	862	1268	1189	611	182	283	414	390	220	124	57	34	20	13
Tuvalu												184	435	92
Chinese Taipei	9502	12800	16057	12187	8313	8616	8590	8592	7577	11473	13762	13103	11750	13248
United States	1075	3861	6105	4234	2623	3058	4146	5298	3687	3937	4079	2750	3344	2182
Vanuatu		655	5275	3180	6237	7648	8001	6091	4825	7920	9198	4685	6783	8062
Wallis and Futuna												3		
Western Samoa	4067	4820	4223	2253	1233	1263	2113	3113	2342	2816	2529	1415	2038	1642
Total	32357	50879	59304	50745	49663	52795	57401	51873	55763	72146	74099	56616	71301	68412

Source: Piling et al. 2014

The longline catch is widely distributed in the South Pacific, but with catches concentrated in the western part of the Pacific (Figure 8). Troll catches are distributed in New Zealand's coastal waters, mainly off the South Island, and along the sub-tropical convergence zone (STCZ). Less than 20% of the overall South Pacific albacore catch is usually taken east of 150°W.

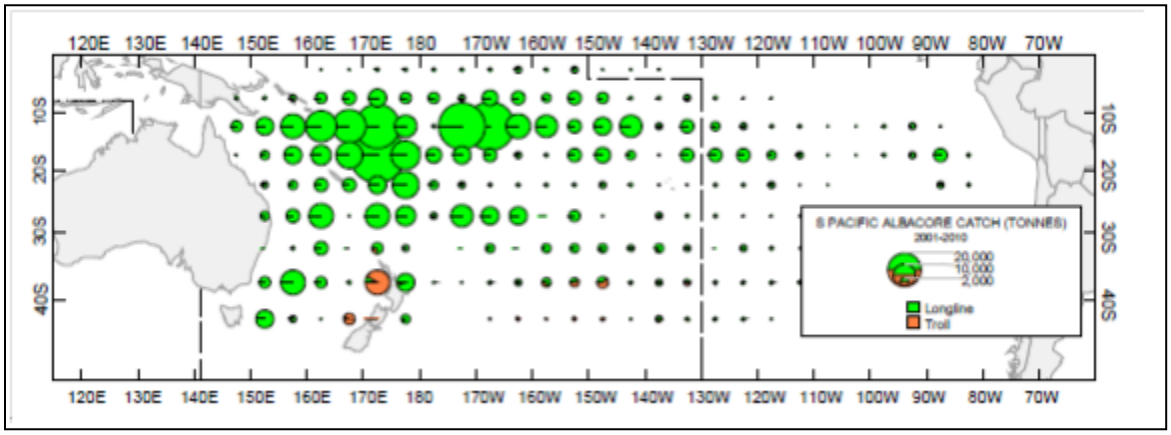

Figure 4: Spatial distribution of SPAB catch in the Western and Central Pacific Ocean (west of 130 deg W) and in the Eastern Pacific Ocean. Source. SPC-OFP (2012)

Regional management of SPALB

International tuna fishery management in the WCPO is conducted by the WCPFC. Within the WCPO, the independent and freely associated Pacific Island nations belong to the South Pacific Forum Fisheries Agency (FFA). The member nations in the FFA divide broadly between those nations bordering the Pacific Warm Pool (Palau, Federated States of Micronesia, Marshall Islands, Kiribati, Tuvalu, Nauru, Solomon Islands, Papua New Guinea), and the remaining countries of the Central South Pacific (Vanuatu, Fiji, Tonga, Samoa, Tokelau, Niue, Cook Islands.

The group of nations bordering the Pacific warm pool have formed the Parties to the Nauru Agreement (PNA). Their EEZs and adjacent high seas areas contains the majority of the WCPO skipjack tuna resource, fished primarily by purse seine vessels, fishing on free swimming schools and on fish aggregating devices (FADs). The EEZs and adjacent high seas of the latter group contain a major component of the SPALB resource, fished primarily by longliners. New Zealand and the Polynesian countries in the central South Pacific (Cook Islands, Niue, Samoa, Tokelau and Tonga) have formed Te Vaka Moana (TVM).

TVM's stated goal is to secure, protect and enhance associated long-term economic benefits able to be derived from fisheries and protect the important contribution fisheries make to the food security of the communities. Much of the work of the TVM takes place under the auspices of regional processes such as those within the Western and Central Pacific Fisheries Commission, the "Forum Fisheries Committee (FFC)" supported by the Pacific Islands' Forum Fisheries Agency, and the "Heads of Fisheries" supported by the Secretariat of the Pacific Community. In

addition, TVM also has important relationships with other key partners, including American Samoa, French Polynesia and New Caledonia, with whom TVM works closely with in the management of shared southern longline fisheries. The longline fisheries of Cook Islands, Niue, Samoa, Tokelau and Tonga are, like American Samoa, are heavily reliant on the American Samoa canning industry.

Current regional management for SPALB by the WCPFC is contained in Conservation and Management 2010-05. The provisions of CMM 2010-05 include the following:

- Commission Members, Cooperating Non-Members, and participating Territories (CCMs) shall not increase the number of their fishing vessels actively fishing for South Pacific albacore in the Convention Area south of 20°S above current (2005) levels or recent historical (2000-2004) levels.
- The provisions of the preceding paragraph shall not prejudice the legitimate rights and obligations under international law of small island developing State and Territory CCMs in the Convention Area for whom South Pacific albacore is an important component of the domestic tuna fishery in waters under their national jurisdiction, and who may wish to pursue a responsible level of development of their fisheries for South Pacific albacore.
- CCMs that actively fish for South Pacific albacore in the Convention Area south of the equator shall cooperate to ensure the long-term sustainability and economic viability of the fishery for South Pacific albacore, including cooperation and collaboration on research to reduce uncertainty with regard to the status of this stock.
- CCMs shall report annually to the Commission the catch levels of their fishing vessels that have taken South Pacific Albacore as a bycatch as well as the number and catch levels of vessels actively fishing for South Pacific albacore in the Convention area south of 20°S. Initially this information will be provided for the period 2006-2010 and then updated annually.
- The measure is to be reviewed annually on the basis of advice from the Scientific Committee on South Pacific albacore.

Despite this measure, or possibly as a result of it, effort and catch of SPALB have increased markedly to the north of 20 Deg N, and creating serious concern for the American Samoa longline fishery and for countries whose tuna fisheries are primarily focused on longlining for SPALB. At present, WCPFC has no catch limits for albacore, meaning the fishery is open and vulnerable to overfishing. WCPFC does have some effort limits in place, but these appear to have been ineffective in comprehensively managing the stock throughout its range.

FFA members are working on two fronts: 1) to establish a regional agreement called the Tokelau Arrangement that would at a minimum establish EEZ-based albacore limits (see Appendix 1). In addition, FFA has signaled that it will be introducing a SPALB conservation and management to

the 11th Regular Session of the WCPFC to be held in December 2014. The measure will likely propose a Total Allowable Catch (TAC) of 99,000 mt, flag-based high seas limits applicable to a recent timeframe, and a requirement to work towards reducing total catches to levels associated with MEY.

In 2002, the Council established the Large Vessel Prohibited Area (LVPA) to prevent the potential for gear conflict and catch competition between large fishing vessels and locally based small fishing vessels. In 2014, American Samoa longline fishery participants have requested the Council to make temporary modifications to the existing LVPA citing minimal effort by small longline vessels. The Council is currently considering making adjustments to the boundaries of the LVPA. See Figure 5 below.

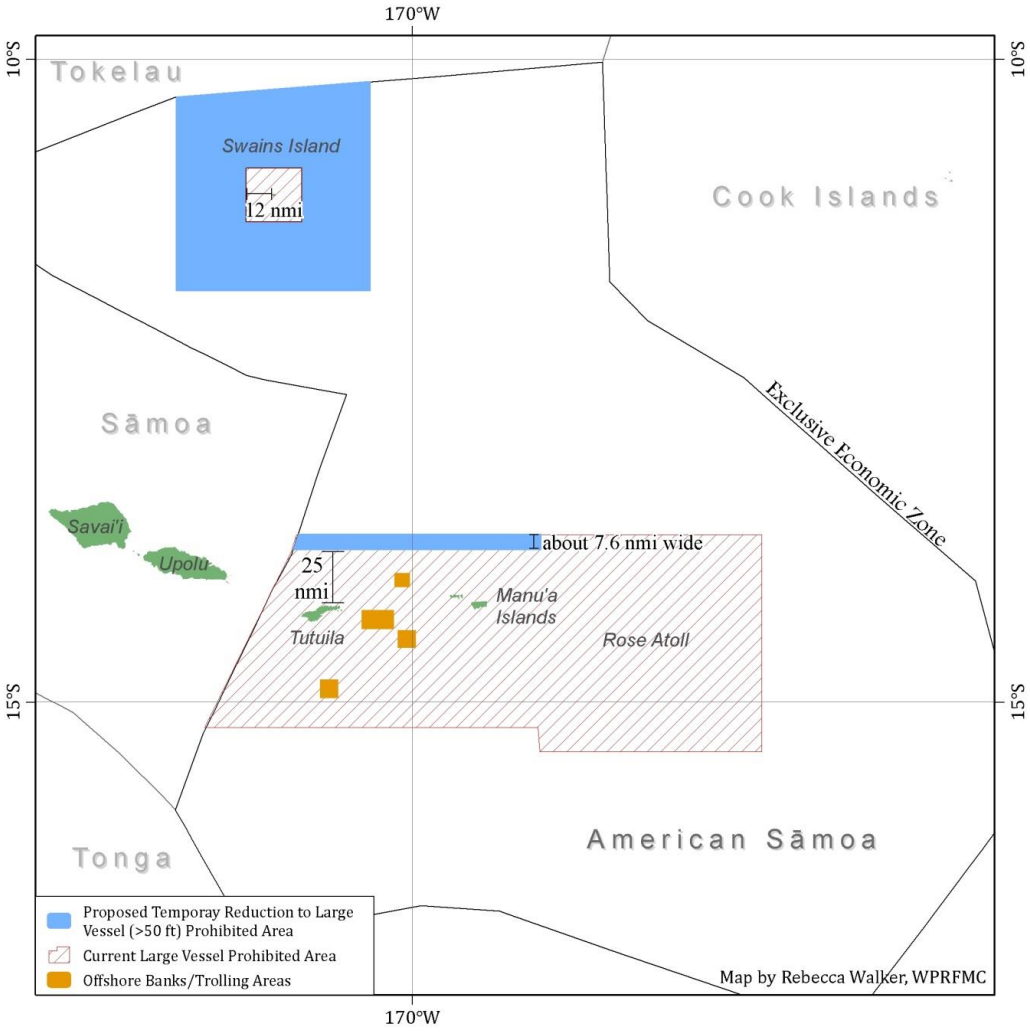

Figure 5: Existing LVPA boundaries and proposed modifications.
Source: WPFMC

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Appendix I. Proposed Tokelau Arrangement

Note: The FFA, at its Management Options Consultation occurring October 27-30, 2014, will be considering the finalization of the proposed Tokelau Arrangement. The proposed Tokelau Arrangement is expected to be made available to the Council prior to its 161st meeting.

Appendix II. American Samoa longline fishery

The American Samoa longline fishery was pioneered by 30-40 ft outboard powered alia catamarans in the early 1990s (WPRFMC 2013). The fishery began to expand rapidly after the year 2000 with the influx of large (≥ 50 ft overall length) conventional monohull vessels similar to the type used in the Hawaii-based longline fisheries. These vessels were larger, had a greater range, and were able to set more hooks per trip than the average alia vessel. SPALB is the target species in the longline fishery with depth distribution ranging from surface down to at least 380 m. Vessels over 50 feet can set 1,500 - 4,000 hooks per day and have a greater fishing range and capacity for storing fish (8–40 metric tons) as compared with small-scale vessels. Larger vessels are also outfitted with hydraulically powered reels to set and haul fishing gear, and with modern electronic equipment for navigation, communications, and fish finding. Most vessels are presently being operated to freeze albacore onboard. Some vessels also land fresh fish for off-island export on a limited basis.

In 2001-2002, while the Council established the 50 nm large vessel area closures around American Samoa to reduce the potential for gear conflicts between small- and large-scale fishing sectors, American Samoa's active longline fleet increased from 21 mostly small, alia-type vessels to 75 vessels of a variety of sizes with American Samoans mostly owning small vessels and non-American Samoans mostly owning large vessels (WPRFMC 2003). The rapid expansion of longline fishing effort within the EEZ waters around American Samoa prompted the Council to develop a limited entry system for the American Samoa pelagic longline fishery.

The purpose of the limited entry system was to: (1) avoid a "boom and bust" cycle of fishery development that could disrupt community participation in the American Samoa small-scale pelagic fishery; (2) establish a framework to adjust regulations for the American Samoa-based longline fishery; (3) reduce the potential for fishing gear conflicts in the EEZ around American Samoa; (4) maintain local catch rates of albacore tuna at economically viable levels; and (5) provide an opportunity for substantial participation by indigenous islanders in the large vessel sector of the fishery. The Council established four vessel size classes, and the limited entry program's regulations were implemented on August 1, 2005 (70 FR 29646).

- Class A Permits— ≤ 40 ft
- Class B Permits— 40.1 to 50 ft
- Class C Permits— 50.1 to 70 ft
- Class D Permits— > 70 ft

In developing the American Samoa longline limited entry program, the Council identified 138 individuals who owned a longline vessel at any time prior to March 21, 2002 with 93 individuals owning Class A size vessels, nine owning Class B size vessels, 15 owning Class C size vessels and 21 owning Class D size vessels (WPRFMC 2003). However, upon initiation of the initial

permit application and issuance process, only 60 initial permits were approved and issued by NMFS. Of these 60 permits, with fewer than 30 percent of potential Class A size vessel owners applied for and received permits in comparison to 56 percent of Class B, 75 percent of Class C, and 100 percent of Class D size vessel owners (Table 1).

Table 1: Longline Vessels Prior to Permit Program and Initial Permit Allocation

Class Sizes	Number of Vessels in 2002	Initial Permits Issued
A (≤ 40 ft)	93	22
B (40.1 ft to 50 ft)	9	5
C (50.1 ft to 70 ft)	15	12
D (> 70 ft)	21	21

Source: NMFS PIRO

The American Samoa limited entry program is designed to maximize American Samoan participation in the fishery. Further, the limited entry program was established with the intent that the pioneer alia fishermen may be able to upgrade to larger conventional monohull vessels and thus increase benefits from the fishery. However, it appears that active participation in the smaller scale alia longline fishery is now limited to a single vessel, with most of the fleet comprising conventional monohull longliners (Figures 1 and 2). In 2011, the Council recommended amending the Pelagics FEP to modify the longline limited entry permit program to reduce programmatic barriers that may be limiting small vessel participation, which in turn may be affecting sustained community and indigenous American Samoan participation in the longline fishery. Specifically, the Council recommended to replace the four size classes (A,B,C, and D) with two size classes: small (vessels less than 50ft) and large (50 ft or greater), remove the permit eligibility criteria that required past history in the fishery, and reduce the small vessel size class minimum harvest requirement from 1,000 pounds to 500 pounds within three years. This document has yet to be officially transmitted to the Secretary of Commerce for review and approval.

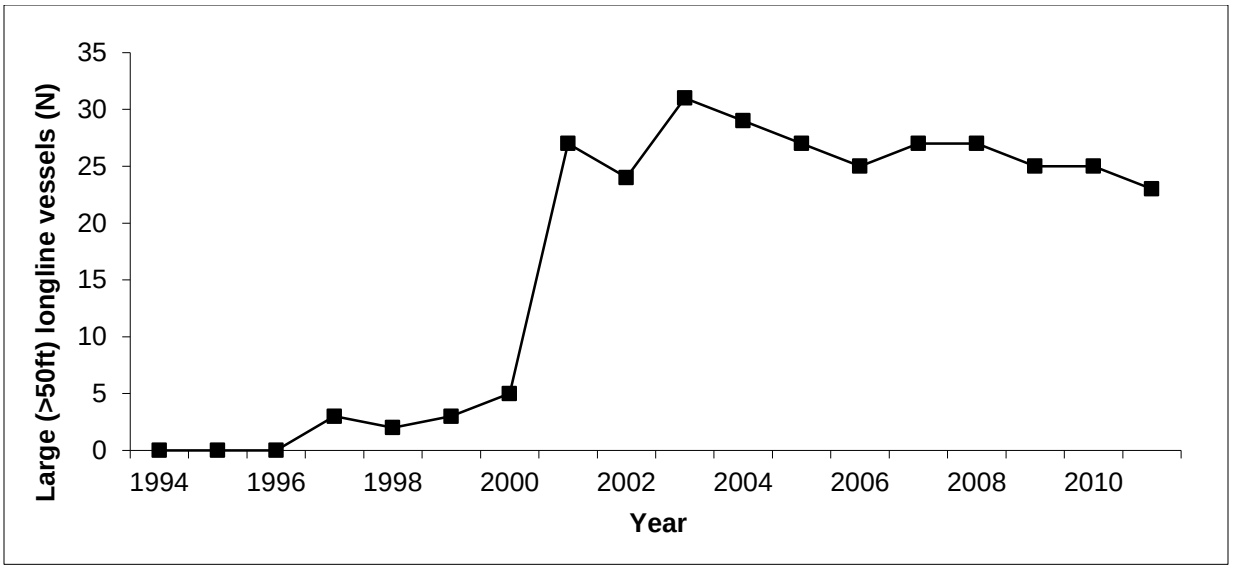

Figure 1. Time series of the number of large (>50ft) conventional monohull longline vessels in American Samoa (WPRFMC 2012 & unpublished data)

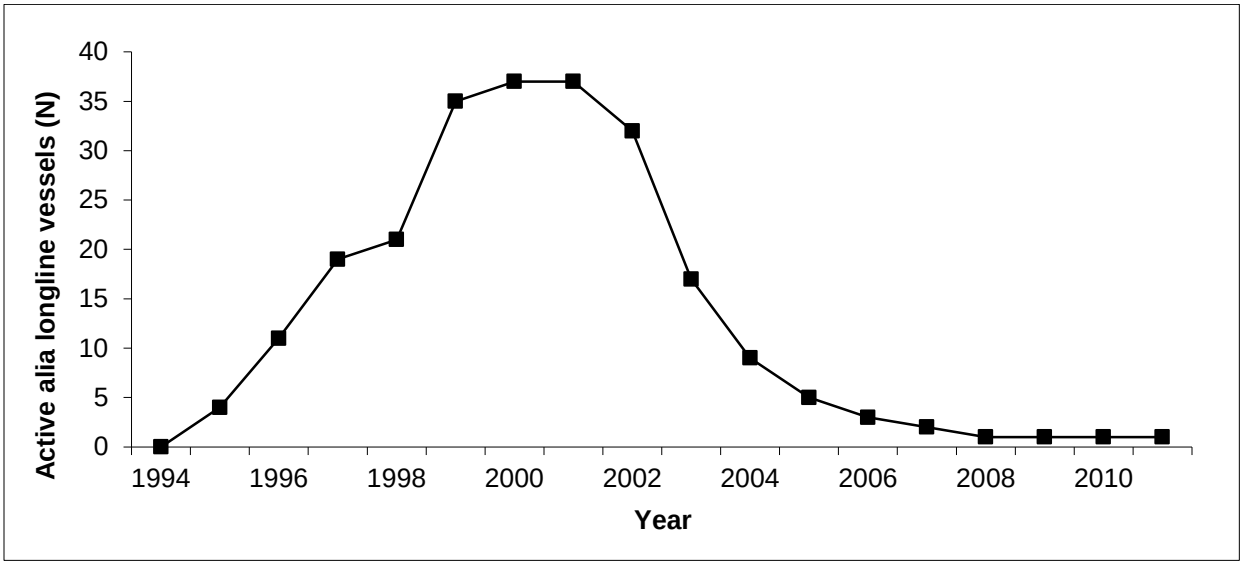

Figure 2. Time series of the number of small (<50ft) conventional monohull longline vessels in American Samoa. (WPRFMC 2012 & unpublished data).

A summary of the longline fishing effort and catch is given in Table 2. There were 23 large longliners operating in 2011, and 25 vessels operating in the first half of 2012 (NMFS PIFSC unpublished data). After 2000, when the fishery was still dominated by *alia* vessels, catches rose markedly from about 2 million pounds to about 16 million pounds in 2002. Catches have been variable but continue to be dominated by albacore tuna. The fishery peaked again in 2007 at 14 million pounds but declined thereafter to about half this total or 7 million pounds in 2011 (Figure 3). Albacore forms almost 80% of landings, followed by yellowfin (10%), bigeye (3.6%), wahoo (3.5%) and skipjack (3.2%).

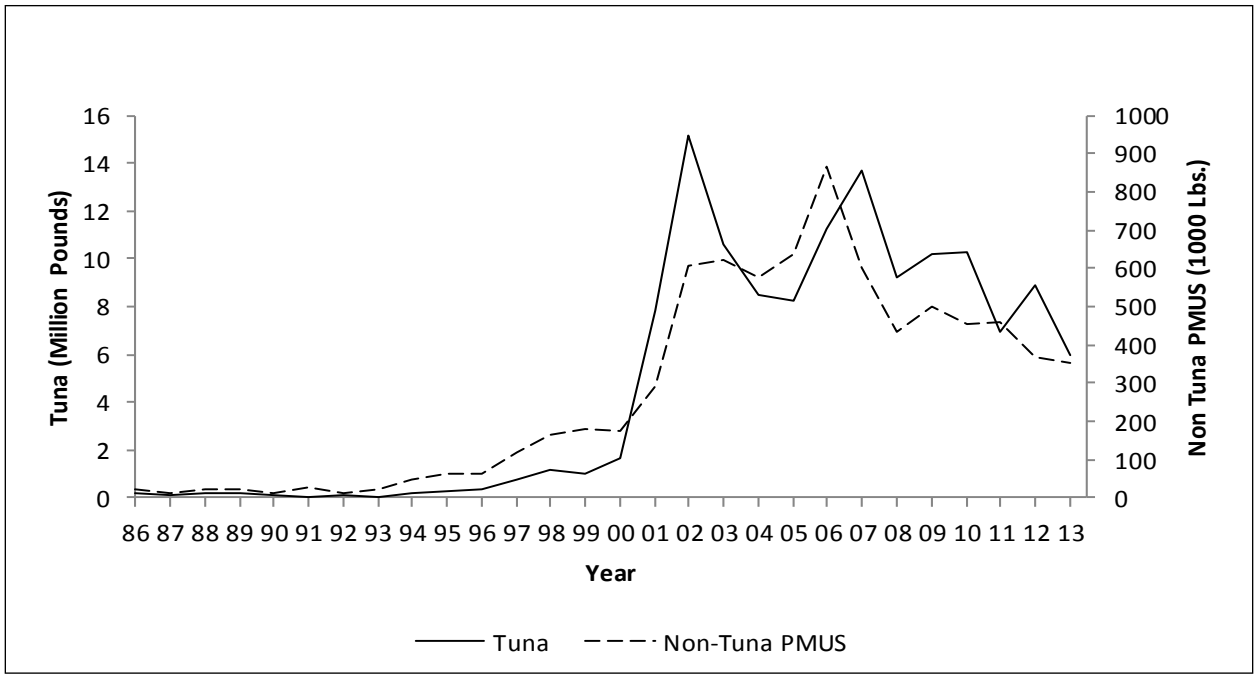

Figure 3: Time series of tuna and non-tun catches by the American Samoa longline fishery. Source: WPRFMC (2014) and unpublished data.

The fishery continues to operate mostly in the U.S. EEZ around American Samoa and in a high seas pocket to the northeast of American Samoa (Figure 4). In the past, some vessels also have had fishing access agreements with the Cook Islands, and occasionally other neighboring countries.

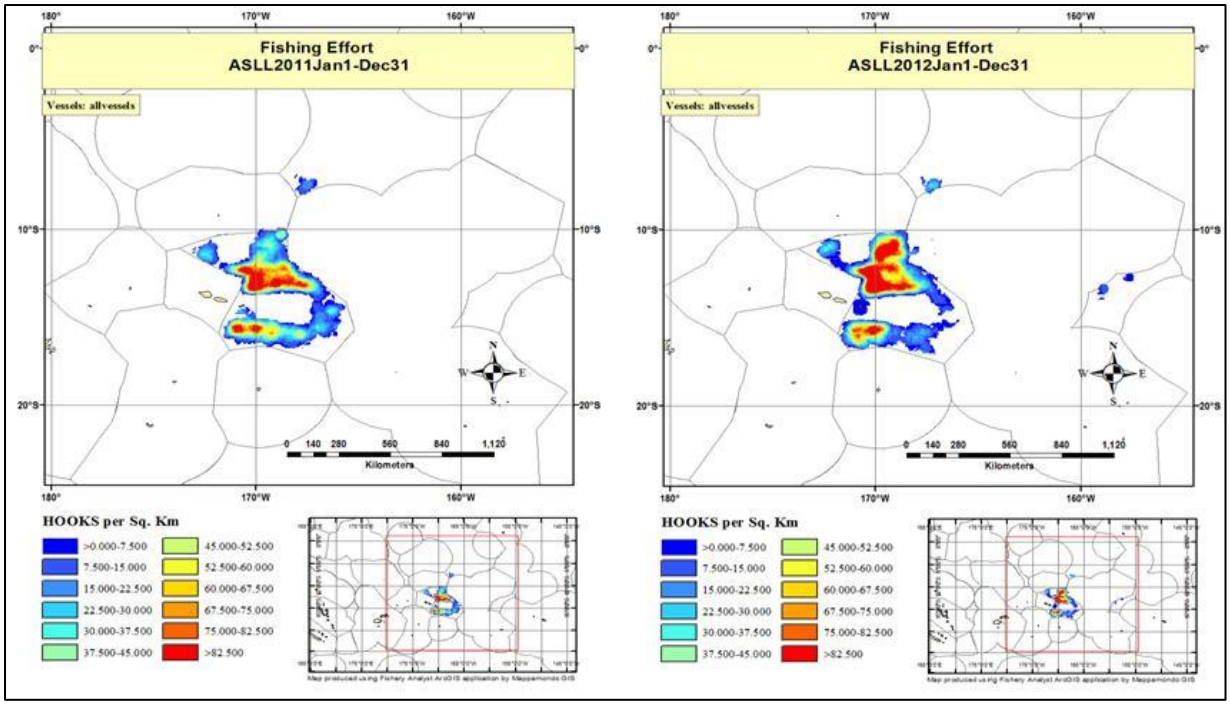

Figure 4: Distribution of fishing effort within and beyond the U.S. EEZ around American Samoa in 2011 and 2012.
Source: NMFS Pacific Islands Fisheries Science Center
Note: Some fishing effort may not be shown due to NMFS confidentiality protocols

Expressing the CPUE trends for the American Samoa longline fishery is problematic in that the fishery initially comprised few monohull vessels and many *alia* catamarans[4]. After the year 2000, the number of *alias* declined markedly from 37 in 2000 to 1 by 2011. Figure 5 shows the time series of the aggregate CPUE from all longliners from 2002 onwards, when large conventional monohull longliners were the predominant fishing vessel used in the fishery. Albacore CPUE declined from around 25 fish per 1,000 hooks in 2002, varying from around 12-18 fish per 1,000 hooks thereafter. Skipjack tuna CPUE show a declining trend from a 2002 high of 5 fish per 1,000 hooks, to about 2 fish per 1,000 hooks in recent years. Yellowfin tuna CPUE has been variable, with a peak in 2004 of about 3 fish/1000 hooks and a low of about 1 fish/1000-hooks in 2008. The bigeye tuna CPUE trajectory is similar to that of yellowfin, with a peak in 2004 of about 1 fish per 1,000 hooks, and a low of 0.5 fish per 1,000 hooks in 2008.

[4] The CPUE values are sums of the longline logbook catch (number of fish kept+released) from the longline logs for the two types of longline vessels in Samoa, alias and monohulls, divided by the total number of hooks set by each type of vessel.

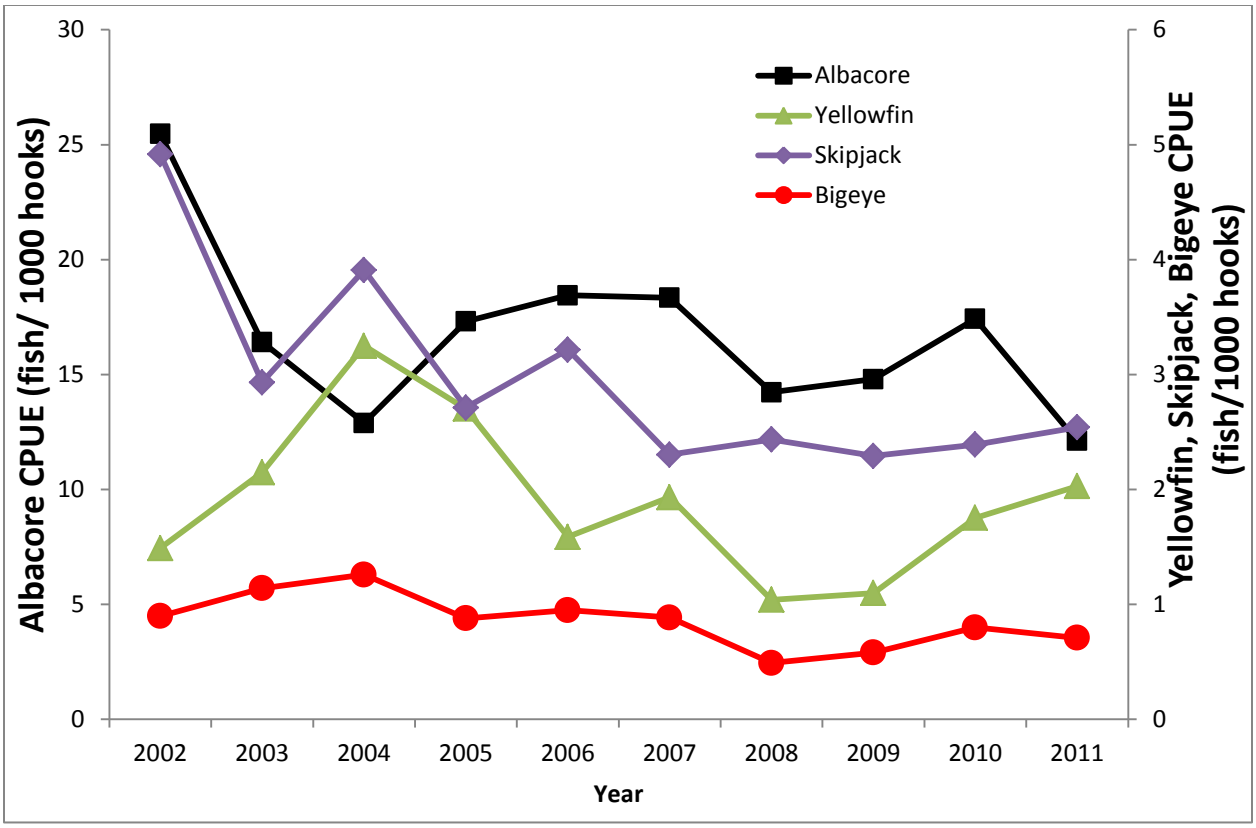

Figure 5 : CPUE time series for the American Samoa longline fishery. Source: WPRFMC (2012) and unpublished data.

The CPUEs for non-tuna pelagic species, including sharks, is shown in Figure 6. Sharks and mahimahi CPUEs have exhibited a declining trend since 2002. Wahoo CPUE has been variable, peaking in 2004 at about 1.6 fish per 1,000 hooks and a low in 2008 of 0.8 fish per 1,000 hooks. The wahoo CPUE trend is similar to that of bigeye and yellowfin tunas. Billfish CPUE has shown little variation ranging between 0.3 and 0.5 fish per 1,000 hooks between 2002 and 2011.

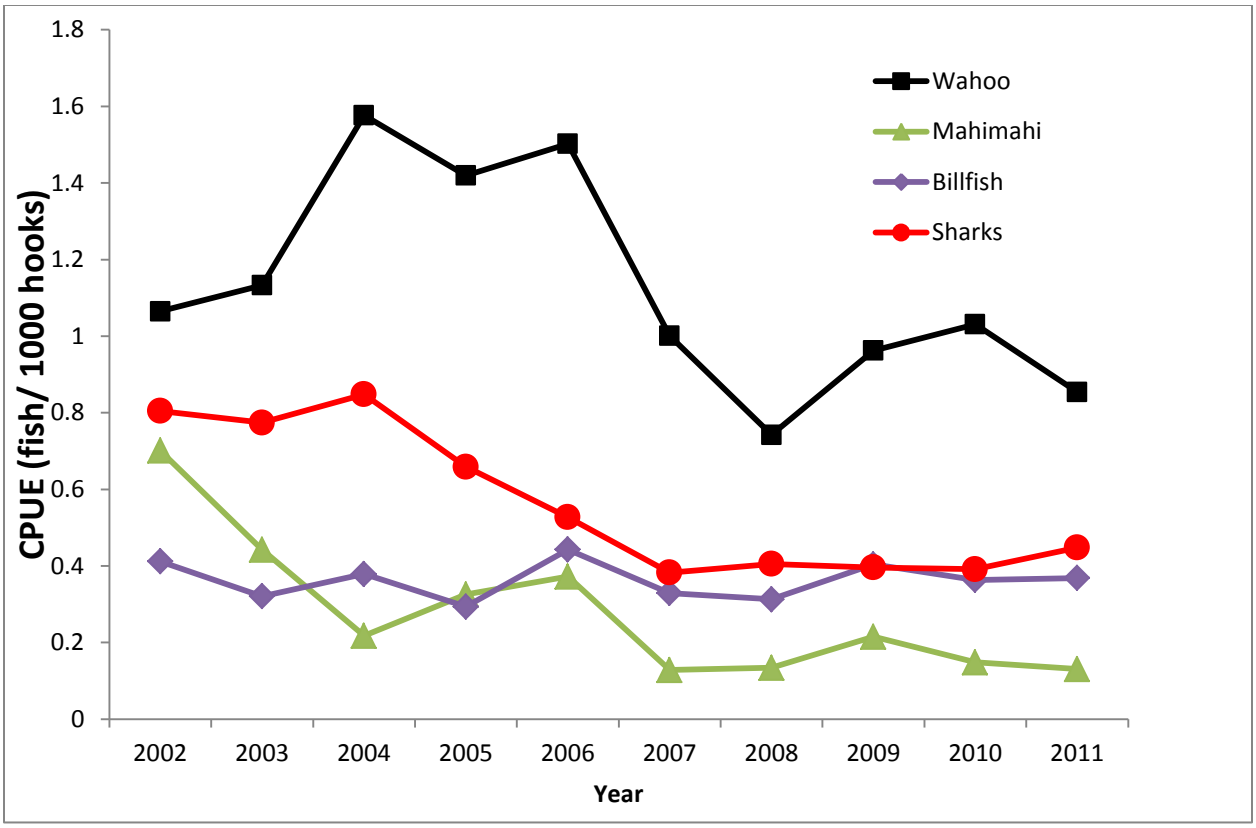

Figure 6: CPUE time series for other pelagic fishes in the American Samoa longline fishery. Source: WPRFMC (2012) and unpublished data.