

Evaluation of 2013 Catches Relative to its Respective Annual Catch Limits

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Introduction

Since the introduction of the Annual Catch Limits (ACLs) by the re-authorization of the Magnuson-Stevens Fishery Conservation Act in 2006 and its implementation in 2012, the Councils are required to monitor all the catches of all management unit species with ACLs on an annual basis. This monitoring would be the basis for the following year's action when the accountability measures are triggered. Majority of the Western Pacific ACLs were set equal to the Acceptable Biological Catches based on the 75th percentile of the entire catch time series. By law when the ACLs had been exceeded more than twice on consecutive years, the ACL specification system will have to be reviewed and changed. The current accountability measure would entail a downward adjustment to the catch limit for the next fishing year by the amount of the overage.

At its 2014 Joint Meeting, the Archipelagic Fishery Ecosystem Plan Team evaluated the 2013 catches relative to its respective ACLs. Below are the summaries and the rationale behind the catches and overages (when applicable).

SSC's Task

The task of the SSC is to review the rationale provided by the Plan Team and provide recommendations on actions related to the limits for the next fishing year.

American Samoa

None of the American Samoa management unit species complex had exceeded their catch limits. Therefore no further action is required.

Table 1. Evaluation of 2013 catch relative to the 2013 ACL for the management unit species in American Samoa

Fishery	Management Unit Species	ACL (lbs)	2012 Catch (lbs)	2013 Catch (lbs)	Δ
Bottomfish	Bottomfish multi species stock complex	101,000	16,665	27,378	
Crustaceans	Deepwater shrimp	80,000	N.F.	N.F.	
	Spiny lobster	2,300	1,056	1,973	
	Slipper lobster	30		5	
	Kona crab	3,200	N.F.	N.F.	
Precious coral	Black coral	790	N.F.	N.F.	
	Precious coral in AS exploratory area	2,205	N.F.	N.F.	
Coral Reef Ecosystem	Acanthuridae-surgeonfish	19,516	6,394	10,751	
	Lutjanidae-snappers	18,839	2,240	6,312	

	S. crumenophthalmus-atule	8,396	7,314	1,167	
	Mollusk-turbo snails, octopus, giant clam	16,694	4,549	6,655	
	Carangidae-jacks	9,460	2,374	2,299	
	Lethrinidae-emperors	7,350	1,889	2,406	
	Scaridae-parrotfish	8,145	2,807	2,733	
	Serranidae-groupers	5,600	1,325	1,589	
	Holocentridae-squirrelfish	2,585	905	1,603	
	Mugilidae-mulletts	2,857	1,252	2,346	
	Crustaceans-crabs	2,248	1,055	2,074	
	B. muricatum-bumphead parrotfish	235	0	0	
	C. undulatus-humphead wrasse	1,743	0	0	
	Carcharhinidae-reef sharks	1,309	18	0	
	All other CREMUS combined	18,910	2,616	5,969	

Guam

The coral reef fishery in Guam exceeded the ACLs for 1 MUS particularly Carangidae (jacks).

Table 2. Evaluation of 2013 catch relative to the 2013 ACL for the management unit species in Guam

Fishery	Management Unit Species	ACL (lbs)	2012 Catch (lbs)	2013 Catch (lbs)	Δ
Bottomfish	Bottomfish multi species stock complex	66,800	24,108	30,571	
Crustaceans	Deepwater shrimp	48,488	N.F.	N.F.	
	Spiny lobster	2,700	991	611	
	Slipper lobster	20	0	0	
	Kona crab	1,900	N.F.	N.F.	
Precious coral	Black coral	700	N.F.	N.F.	
	Precious coral in AS exploratory area	2,205	N.F.	N.F.	
Coral Reef Ecosystem	Acanthuridae-surgeonfish	70,702	6,083	26,869	
	Carangidae-jacks	45,377	18,122	60,469	15,092
	S. crumenophthalmus-atule	56,514	120,513	24,326	
	Lethrinidae-emperors	38,720	18,425	33,318	
	Scaridae-parrotfish	28,649	6,673	10,244	
	Mullidae-goatfish	25,367	6,761	9,696	
	Mollusk-turbo snails, octopus, giant clam	21,941	8,463	5,004	
	Siganidae-rabbitfish	26,120	2,843	11,965	
	Lutjanidae-snappers	17,726	8,410	7,801	
	Serranidae-groupers	17,958	4,971	8,573	
	Mugilidae-mulletts	15,032	16,441	8,012	
	Kyphosidae-chubs/rudderfish	13,247	1,608	1,109	
	Crustaceans-crabs	5,523	2,453	2,550	

	Holocentridae-squirrelfish	8,300	1,956	5,613	
	Algae	5,329	61	80	
	Labridae-wrasse	5,129	590	2,185	
	B. muricatum-bumphead parrotfish	797	0	0	
	C. undulatus-humphead wrasse	1,960	160	319	
	Carcharhinidae-reef sharks	6,942	1,761	12	
	All other CREMUS combined	83,214	35,237	17,554	

2013 was a good year for jacks particularly for the runs of juvenile. The shore-based creel survey is capturing the data better due to changes in the fishing regulations and dynamics. There was a large run of i'e in areas that are being surveyed. The net ban in the harbor also contributed to the increase in catch. Areas that used to be occupied by net fishermen are now occupied by rod and reel in which are adequately captured in the shore-based creel survey. The net fishermen tend not to cooperate when attempted to be interviewed as well as these fishers are typically hard to capture in creel surveys. Better representation in the data resulted in an increase in the catch statistics in 2013.

Commonwealth of Northern Mariana Islands

The coral reef fishery in CNMI exceeded the catch limits for 2 MUS. These are caught predominantly in State/Territorial waters.

Table 3. Evaluation of 2013 catch relative to the 2013 ACL for the management unit species in CNMI.

Fishery	Management Unit Species	ACL (lbs)	2012 Catch (lbs)	2013 Catch (lbs)	Δ
Bottomfish	Bottomfish multi species stock complex	228,000	16,665	16,919	
Crustaceans	Deepwater shrimp	275,570	N.A.F.	N.A.F.	
	Spiny lobster	5,500		1,420	
	Slipper lobster	60	N.A.F.	N.A.F.	
	Kona crab	6,300	N.A.F.	N.A.F.	
Precious coral	Black coral	2,100	N.A.F.	N.A.F.	
	Precious coral in AS exploratory area	2,205	N.A.F.	N.A.F.	
Coral Reef Ecosystem	Lethrinidae-emperors	27,466	22,116	14,893	
	Carangidae-jacks	21,512	5,738	6,450	
	Acanthuridae-surgeonfish	6,884	1,369	2,811	
	S. crumenophthalmus-atule	7,459	14,245	7,743	284
	Serranidae-groupers	5,519	6,260	1,166	
	Lutjanidae-snappers	3,905	1,027	2,763	
	Mullidae-goatfish	3,670	964	4,152	482
	Scaridae-parrotfish	3,784	1,732	1,398	
	Mollusk-turbo snails, octopus, giant clam	4,446	5,620	168	
Mugilidae-mulletts	3,308	720	616		

	Siganidae-rabbitfish	2,537	2,577	983	
	B. muricatum-bumphead parrotfish	797	0	0	
	C. undulatus-humphead wrasse	2,009	0	0	
	Carcharhinidae-reef sharks	5,600	N.A.F.	N.A.F.	
	All other CREMUS combined	9,820	7,711	2,602	

The catches for goatfish and atule exceeded the ACLs by a couple of hundred pounds. One assumption is that fishermen may be seeing more goatfish so they have been targeting them lately. Another is that surveys have been catching some nighttime spear effort and those fishermen had good catches of goatfish. There was an increase in shore-based hook and line as well, which could explain some increase in atulai landings.

Hawaii

Seven complexes exceeded its ACLs in 2012. Five of which are from the coral reef fishery, one from the crustacean and one from the bottomfish fishery.

Table 4. Evaluation of 2013 catch relative to the 2013 ACL for the management unit species in Hawaii

Fishery	Management Unit Species	ACL (lbs)	2012 Catch (lbs)	2013 Catch (lbs)	Δ
Bottomfish	MHI Deep 7 stock complex	325,000	235,958	199,453	
	Non deep 7 stock complex	140,000	190,729	158,169	18,169
Crustaceans	Deepwater shrimp	250,773	11,894	13,254	
	Spiny lobster	10,000	9,727	10,429	429
	Slipper lobster	280	74	67	
	Kona crab	27,600	8,212	7,423	
Precious coral	Auau channel black coral	5,512	C.D.	C.D.	
	Makapuu bed-pink coral	2,205	N.A.F.	N.A.F.	
	Makapuu bed-bamboo coral	551	N.A.F.	N.A.F.	
	180 fathom bank-pink coral	489	N.A.F.	N.A.F.	
	180 fathom bank-bamboo coral	123	N.A.F.	N.A.F.	
	Brooks bank-pink coral	979	N.A.F.	N.A.F.	
	Brooks bank-bamboo coral	245	N.A.F.	N.A.F.	
	Kaena point bed-pink coral	148	N.A.F.	N.A.F.	
	Kaena point bed-bamboo coral	37	N.A.F.	N.A.F.	
	Keahole bed-pink coral	148	N.A.F.	N.A.F.	
	Keahole bed-bamboo coral	37	N.A.F.	N.A.F.	
Precious coral in HI exploratory area	2,205	N.A.F.	N.A.F.		
Coral Reef Ecosystem	S. crumenophthalmus-akule	651,292	296,876	264,592	
	D. macarellus-opelu	393,563	257,211	252,183	
	Carangidae-jacks	193,423	46,813	38,934	
	Mullidae-goatfish	125,813	51,035	57,182	

	Acanthuridae-surgeonfish	80,545	122,552	132,447	51,902
	Lutjanidae-snappers	65,102	33,874	42,079	
	Holocentridae-squirrelfish	44,122	56,531	53,917	9,795
	Mugilidae-mulletts	41,112	15,083	6,200	
	Mollusk-turbo snails, octopus, giant clam	28,765	37,566	38,764	9,999
	Scaridae-parrotfish	33,326	77,678	84,813	51,487
	Crustaceans-crabs	20,686	14,731	36,555	15,869
	Carcharhinidae-reef sharks	111,566	2,787	2,512	
	All other CREMUS combined	142,282	117,158	127,298	

The catches from surgeonfish, parrotfish, squirrelfish, mollusk (mostly octopus), coral reef crustaceans had exceeded its respective ACLs. These are the highly targeted species that are commercially landed. The Hawaii Plan Team members think that this is associated with the implementation of the Civil Resource Violation System where civil penalties are imposed on CML holders that do not report their catch. There also appears to be an increase in the number of license holder compared to the 4 year average that sold these species (parrotfish, mollusk, uku). The rest had shown a decrease in the number of license holder below the 4 year average.

Table 5. Number of license holders, effort and CPUE estimates that landed CREMUS, non-deep 7 bottomfish, and crustacean MUS.

CREMUS	Year	No. licensees	Trip count	Ave. lbs. per trip	Lbs. caught	ACL	ACL diff.	Stdev Lbs. per trip
BF non-D7 complex¹	2010	464	2,058	70.94	145,987	140,000	(5,987)	229.01
BF non-D7 complex ¹	2011	502	2,446	61.14	149,553	140,000	(9,553)	107.91
BF non-D7 complex ¹	2012	464	2,054	60.48	124,224	140,000	15,776	111.19
BF non-D7 complex ¹	2013	495	2,132	74.19	158,169	140,000	(18,169)	150.39
Crustaceans-crab²	2010	22	317	135.04	42,808	20,686	(22,122)	137.15
Crustaceans-crab ²	2011	20	292	104.22	30,433	20,686	(9,747)	96.83
Crustaceans-crab ²	2012	15	179	82.30	14,731	20,686	5,955	91.38
Crustaceans-crab ²	2013	17	272	134.39	36,555	20,686	(15,869)	125.58
Mollusks	2010	116	1,108	29.37	32,543	28,765	(3,778)	36.44
Mollusks	2011	133	1,274	31.29	39,866	28,765	(11,101)	43.01
Mollusks	2012	126	1,254	29.96	37,566	28,675	(8,891)	33.55
Mollusks	2013	138	1,262	30.72	38,764	28,675	(10,089)	34.99
Parrotfish	2010	106	1,273	42.27	53,809	33,326	(20,483)	58.50
Parrotfish	2011	110	1,339	57.51	77,011	33,326	(43,685)	82.60

Parrotfish	2012	109	1,261	61.60	77,678	33,326	(44,352)	89.36
Parrotfish	2013	115	1,342	63.20	84,813	33,326	(51,487)	104.07
Squirrelfish	2010	262	1,820	34.63	63,023	44,122	(18,901)	47.12
Squirrelfish	2011	262	1,921	41.59	79,903	44,122	(35,781)	62.52
Squirrelfish	2012	257	1,647	34.32	56,531	44,122	(12,409)	52.41
Squirrelfish	2013	241	1,630	33.08	53,917	44,122	(9,795)	54.62
Surgeonfish	2010	169	1,748	58.80	102,781	80,545	(22,236)	107.55
Surgeonfish	2011	191	1,865	72.86	135,888	80,545	(55,343)	130.71
Surgeonfish	2012	175	1,711	71.63	122,552	80,545	(42,007)	120.87
Surgeonfish	2013	165	1,648	80.37	132,447	80,545	(51,902)	139.34
Spiny lobster	2010	23	356	40.36	14,368	10,000	(4,368)	37.25
Spiny lobster	2011	26	264	43.51	11,486	10,000	(1,486)	48.51
Spiny lobster	2012	21	264	39.21	10,352	10,000	(352)	39.45
Spiny lobster	2013	18	230	45.34	10,429	10,000	(429)	45.44

The non-Deep 7 BF complex includes uku, butaguchi, gungkan, white ulua, and yellow-tail kalekale. The effort in terms of lbs. per trip has been rising in the in the last 3 years and most of this is attributed to the recent large uku landings.

The crustacean crab category excludes Kona crab, and the majority of this catch is white crab or kuahonu. The trends appear to be cyclical with high effort in the bookend years, 2010 and 2013. Most of this fishery occurs off of the north shore on Oahu.

The mollusk category is an octopus or 'tako' fishery primarily on Oahu and is taken by spear/dive operations. Although the ACL was exceeded every year between 4K and 11K, the trip count, landings and effort appears to be static throughout the time series.

The parrotfish category is an Oahu and Hawaii fishery and is taken by spear/dive, net, and trap operations. The annual trip count is steady, but landings and effort in terms of average lbs per trip has increased every year. The 2013 overage of 51.5K is more than the ACL (33.3K) by 55%.

The squirrelfish category is a menpachi or u'u fishery primarily taken by inshore handline and spear/dive operations. This fishery is important to Hawaii, Oahu and Kauai. Although annual landings exceed ACL, the number of licensees, trip counts, landings and effort in terms of lbs. per trip have been declining since 2011.

The surgeonfish category is dominated by kala, manini and palani; and is primarily taken by spear/dive and net operations on Oahu and Maui County. The annual number of licensees and trip counts have been declining since 2011, but landings and effort in terms of lbs. per trip are increasing. Looks like there are less fishers now making slightly less trips, but they are fishing harder than before.

The spiny lobster category is a spear/dive fishery and primarily occurs off of Hawaii and Maui County. The recent annual trends appear to approach the ACL level. The number of divers and

trip counts have declined since 2011. This commercial fishery is primarily driven by the hotel market demand. It is also a popular recreational fishery for which we do not account for landings against the ACL.