National Coral Reef Monitoring Program (NCRMP)

2014 Socioeconomic Monitoring Survey Analysis For American Samoa

Background Photo Credit: NOAA Photo Library

Purpose and Methods

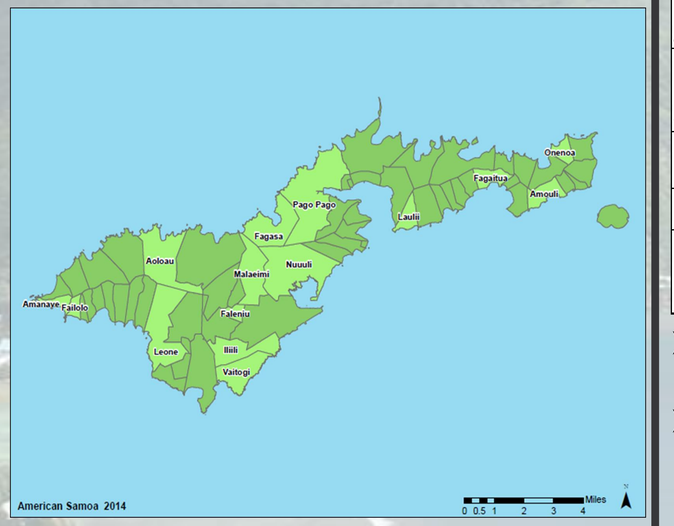
NCRMP gathers information to track the health of coral reefs and dependent human communities to develop effective management plans and actions for coral reef conservation.

The socioeconomic monitoring survey effort, to be implemented every 4-7 years in each US coral reef jurisdiction collects information regarding:

- Use of coral reef resources
- Knowledge, attitudes, and perceptions of coral reefs and coral reef management
- Population demographics

A total of 448 American Samoan residents over the age of 18 were surveyed in-person in February 2014.

15 villages on Tutuila were selected for the survey to obtain a random stratified sample of Urban, Semi-urban, and Rural locations from all parts of the island.



Cross-Tab of Respondent Education and Perceptions of Management Approaches

Management Approach	Did not complete college		Completed college		Statistical test for difference	
	n	Mean	n	Mean	t	p value
Ban on fishing "big fish" species including bumphead parrotfish, humphead wrasse, giant grouper	290	2.96	104	3.49	-3.49***	<0.01
Expansion of Fagatele National Marine Sanctuary	299	3.22	101	3.85	-4.72***	<0.01
Establishing community-based Village MPAs	306	3.86	103	4.18	-3.31***	<0.01
Establishing permanent no-take MPAs	299	3.32	104	3.92	-4.70***	<0.01
Establishing areas with temporary fishing closures	296	3.86	102	4.16	-2.62***	<0.01

- **Higher values indicate greater agreeability with the management option.**
- **College educated respondents responded more favorably to the various management measures proposed in the survey.**

Cross-Tab of Respondent Income and Condition Perceptions of Marine Resources

Resource	Household income greater than or equal to $20k		Household income less than $20k		Statistical test for difference	
	n	Mean	n	Mean	t	p value
Current Conditions						
Ocean water quality	95	2.87	180	3.21	-2.19**	0.03
Amount of coral	82	2.70	135	2.94	-1.44	0.15
Number of fish	74	3.08	128	3.21	-0.74	0.46
Amount of animals for gleaning	71	3.14	146	3.37	1.23	0.22
Change in conditions over last 10 years						
Ocean water quality	96	2.41	171	3.27	-5.34***	<0.01
Amount of coral	84	2.52	145	3.05	-3.03***	<0.01
Number of fish	82	2.73	130	3.15	-2.31**	0.02
Amount of animals for gleaning	77	2.73	149	3.36	-3.53***	<0.01

- **Higher values indicate a more positive perception.**
- **Respondents with higher annual incomes had an overall more pessimistic perception of the condition of marine resources.**

Cross Tabulation of Respondent Fishing Activity and Perceptions of Management Options

Management Approach	Respondent participates in fishing activity 2 times per month or more		Respondent participates in fishing activity once per month or less		Statistical test for difference	
	n	Mean	n	Mean	t	p value
Ban on fishing "big fish" species including bumphead parrotfish, humphead wrasse, giant grouper	125	2.92	269	3.19	-1.82*	0.07
Expansion of Fagatele National Marine Sanctuary	127	3.07	273	3.55	-3.30***	<0.01
Establishing community-based Village MPAs	131	3.91	278	3.95	-0.49	0.63
Establishing permanent no-take MPAs	129	3.16	274	3.66	-3.59***	<0.01
Establishing areas with temporary fishing closures	127	3.79	272	3.99	-1.80*	0.07

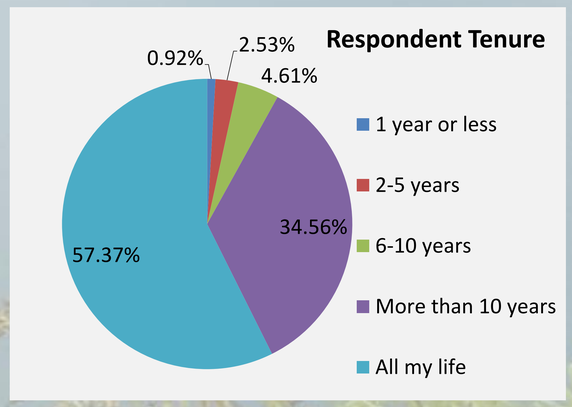
- **Higher mean values indicate higher agreeability with the management option.**
- **Respondents who participate in fishing activity less often responded more favorably to the various management options when compared to respondents who participate in fishing activity more often.**

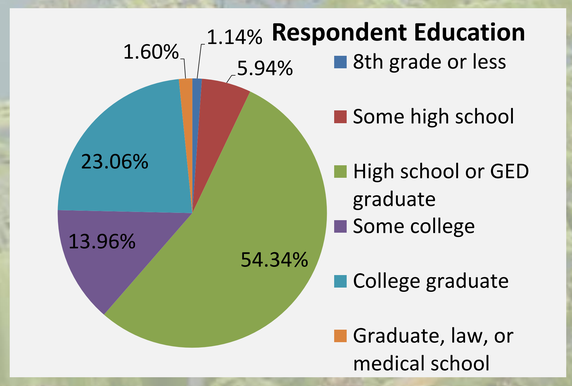
Regression Analysis

Independent Variable	Coefficient	T statistic	P-value
Generally Support MPAs	6.568	2.14**	0.037
Fish/Harvest Index	0.183	1.58	0.121
Resource Condition Index	-0.295	-1.89*	0.063
Last 10 Years Condition Index	0.252	1.87*	0.066
Condition Get Worse in Next 10	1.183	0.84	0.404
Reef Value Index	0.668	3.15***	0.003
Completed College	-0.537	-0.45	0.652
Live in American Samoa Their Whole Life	-0.587	-0.51	0.609

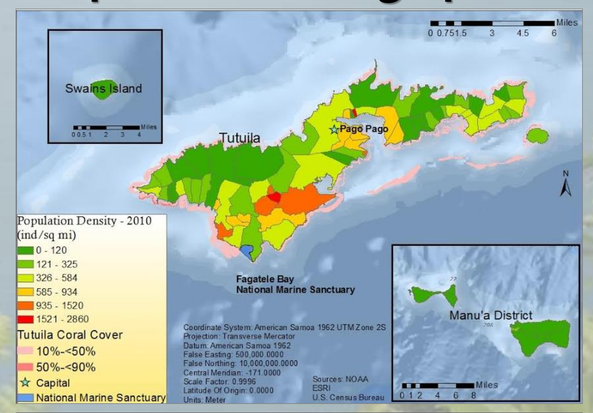
- **Dependent variable: An index measure of respondents' relative agreeability with various management initiatives. General support for MPAs, positive perceptions about reef resources over the last 10 years, and positive perceptions of coral value had significant positive effects on support for management. Positive perceptions about the current condition of reef resources had a significant negative effect.**

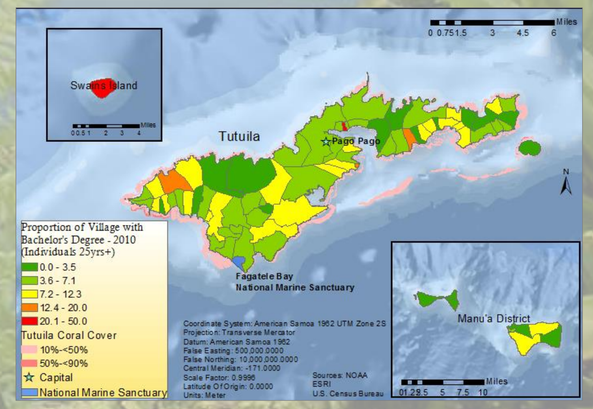
Respondent Demographics





Population Demographics





The Socioeconomic Component of NCRMP is implemented by the National Centers for Coastal Ocean Science in partnership with the National Coral Reef Conservation Program. For more information, visit http://www.coris.noaa.gov/activities/projects/ncrmp_socio/