



Sanctuary Preservation Areas and Ecological Reserves: Comparative Importance-Satisfaction Ratings: Users vs. NonUsers



Background. Results presented here are part of the Recreation and Tourism component of the Socioeconomic Research and Monitoring Program for the Florida Keys National Marine Sanctuary (FKNMS). The Socioeconomic Research and Monitoring Program was designed in a workshop held in Islamorada, Florida in January 1998, which was attended by 50 social scientists and community stakeholders. Baseline measurements for Recreation and Tourism were obtained in a 1995-96 study entitled "Linking the Economy and Environment of the Florida Keys/ Florida Bay." However, in our baseline year of 1995-96, the Sanctuary Preservation Areas (SPAs) and Ecological Reserves (ERs) or "no take zones" were not yet in existence. The information presented here was obtained from a multi-agency partnership project entitled "Socioeconomic Study of Reefs in Southeast Florida, 2000-2001."

We were able to add several modules of questions to the 2000-01 surveys about use of the SPAs and ERs. From the broader survey, we were also able to produce comparative socioeconomic profiles of SPA & ER Users versus Non Users, comparative importance and satisfaction scores, and estimates of economic user value. Twenty-two of the SPAs and ERs (18 of which are open to nonconsumptive recreation activities) went into effect on July 1, 1997. The Tortugas Ecological Reserve went into effect on July 1, 2001. The Socioeconomic Study of Reefs in Southeast Florida was for the time period of June 2000 through May 2001. Therefore, the Tortugas Ecological Reserve was not part of the 2000-01 survey results.

Comparative Importance-Satisfaction Ratings: SPA & ER Users vs. Non Users

The 2000-01 Reef Study was the first time both residents and visitors were surveyed about their use of the FKNMS Sanctuary Preservation Areas (SPAs) and Ecological Reserves (ERs). The SPAs and ERs, with only a few exceptions, like netting bait, are "no take areas".

In the 2000-01 Reef Study, importance/satisfaction ratings were obtained on 25 natural resource attributes, facilities, and services. Here we compare measurements taken in 2000-01 for both residents and visitors, and we further disaggregate these groups into SPA & ER users versus Non-SPA & ER users. We do this for only eight (8) of the 25 items that are more directly or indirectly related to SPAs & ERs. The eight items include six (6) natural resource attribute items and two

Sanctuary Preservation Areas are marine zones that focus on the protection of shallow, heavily used reefs where conflicts occur between user groups, and where concentrated visitor activity leads to resource degradation. These areas are designed to enhance the reproductive capabilities of renewable resources, protect areas critical for sustaining and protecting important marine species, and reduce user conflicts in high-use areas. This is accomplished through the prohibition of consumptive activities within these areas. SPAs are chosen based on the status of important habitat, the ability of a particular area to sustain and protect the habitat, the level of visitor use, and the degree of conflict between consumptive and nonconsumptive users. The actual size and location of these zones have been determined by examination of user patterns, aerial photography, and ground-truthing of specific habitats.

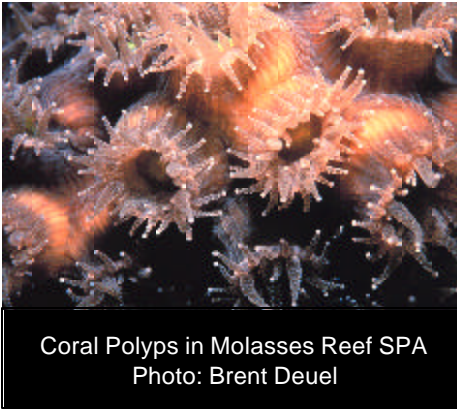
Ecological Reserves are designed to encompass large, contiguous diverse habitats. They are intended to provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life and to protect and preserve all habitats and species particularly those not protected by fishery management regulations. These reserves are intended to protect areas that represent the full range of diversity of resources and habitats found throughout the Sanctuary. The intent is to meet these objectives by limiting consumptive activities, while continuing to allow activities that are compatible with resource protection. This will provide the opportunity for these areas to evolve in a natural state, with a minimum of human influence. These zones will protect a limited number of areas that provide important habitat for sustaining natural resources such as fish and invertebrates.

Source: National Marine Sanctuary Program

Table 1. Comparison of 2000-01 Importance/Satisfaction Scores: SPA & ER Users versus Non-SPA & ER Users

Item	Visitors		Residents	
	Importance	Satisfaction	Importance	Satisfaction
Natural Resource Attributes				
A. Clear Water (high visibility)	+•	+	+•	ND
B. Amount of living coral on reefs	+	+	+•	-
C. Many different kinds of fish and sea life to view	+•	+•	+•	-
D. Many different kinds of fish and sea life to catch	-•	+	-	-•
E. Opportunity to view large wildlife (manatees, whales, dolphins, sea turtles)	-	+	+•	-
F. Large number of fish	-	+•	+•	-
Natural Resource Facilities				
H. Parks and specially protected areas	+•	+•	+•	+
K. Mooring buoys near coral reefs	+•	+	+•	+

• = statistically significant difference in mean scores at 0.05 or lower level of significance
 + = higher mean score, not statistically significant
 - = lower mean score, not statistically significant
 +• = higher mean score and statistically significant at 0.05 or lower
 -• = lower mean score and statistically significant at 0.05 or lower
 ND= no difference



Coral Polyps in Molasses Reef SPA
Photo: Brent Deuel

(2) natural resource facility items (Table 1).

Importance Scores

Visitors. Visiting SPA & ER users had higher mean importance scores than Non-SPA & ER users for four of the eight items;

- A. Clear Water (high visibility)
- C. Many different kinds of fish and sea life to view
- H. Parks and specially protected areas
- K. Mooring buoys near coral reefs

Visiting SPA & ER users had a lower mean importance score than Non-SPA & ER users for;

- D. Many different kinds of fish and sea life to catch

This is as expected since catching fish and sea life is prohibited in the SPAs and ERs.

Residents. Resident SPA & ER users had higher mean importance scores than Non-SPA & ER users for seven of the eight items, all except

- D. Many different kinds of fish and sea life to catch

Again for item (D), this is expected since catching fish and sea life is prohibited in the SPAs and ERs. The difference from the result for visitors was that mean scores for item (D) were lower for

SPA & ER users than Non-SPA users, but not statistically significant.

Satisfaction Scores

Visitors. Visiting SPA & ER users had higher mean satisfaction scores than Non-SPA & ER users for three of the eight items;

- C. Many different kinds of fish and sea life to view
- F. Large numbers of fish
- H. Parks and specially protected areas

All other differences were not statistically significant.

Residents. Resident SPA & ER users had a lower mean satisfaction score than Non-SPA & ER users for only one item:

- D. Many different kinds of fish and sea life to catch

All other differences were not statistically significant.

Conclusions

For most of the key attributes, both visitor and resident SPA & ER users had significantly higher importance scores than non-users. Visiting SPA & ER users have generally higher satisfaction scores than non users with statistically significant higher scores for three key items; 1) Many different kinds of fish and sea life to view, 2) Large numbers of fish, and 3) Parks and specially protected areas. Resident SPA & ER users, however, had a mix of lower and higher satisfaction scores than non-users, but none of the differences were statistically significant.

Even though the SPAs and ERs have been in existence for a relatively short period of time, it appears visitors already perceive them as relatively higher quality areas. As of 2000-01, residents

do not seem to perceive a difference in the SPAs and ERs versus the open areas of the FKNMS.

For Further Information:

For the full report containing the Comparison of Socioeconomic and Ecological Monitoring Results go to our web site:

<http://marineeconomics.noaa.gov/SocmonFK/rectour.html>

For the 2001 Science Report containing details of the Ecological Monitoring Results go to:

http://www.fknms.nos.noaa.gov/research_monitoring/welcome.html

For the full report on the Socioeconomic Study on Reefs in Southeast Florida, 2000-2001 go to:

<http://marineeconomics.noaa.gov/Reefs/02-01.pdf>

For fact sheets addressing the following topics:

- Comparative Socioeconomic Profiles of SPA & ER Users and Non Users
 - SPA and ER Use
 - Economic User Value of the SPAs and ERs
 - Monroe County Reef Using Residents Opinions on "No Take" Zones
 - Linking Ecological Monitoring with Socioeconomic Monitoring Results
- Go to:
- <http://marineeconomics.noaa.gov/SocmonFK/rectour.html>

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