



Sanctuary Preservation Areas and Ecological Reserves: Monroe County Reef Using Residents' Opinions on "No-Take Zones"



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.

Opinions on "No Take Zones"

The 2000-01 Reef Study gathered the opinions Monroe County reef using residents have towards "no take zones". The survey provided an introductory statement to the respondents explaining the nature of "no take zones"; the distinction between SPAs and ERs, how many of each currently exists, and the size encompassed by the SPAs and ERs. With this background information given, the survey then questioned residents' opinions concerning their support for the current "no take" zones and possible expansion of the current

"no take zones".

One must keep in mind that these opinions are limited to Monroe County reef using residents only, visitors were not asked these sets of questions because the researchers thought that they could not properly control for the **"not in**

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

"my back yard" (NIMBY) effect for the visitor population due to the length of the survey. One should also note that there is no comparison with the 1995-96 study, as "no take areas" were not in existence in 1995-96. The resident group was disaggregated to distinguish between SPA & ER users and Non-SPA & ER users.

The first question asked Monroe County reef using residents whether they supported the currently designated "no take zones" in the Florida Keys. For all resident reef users, an overwhelming majority supported the existing "no take zones" (78 percent—see Table 1). Also there was no significant difference between all reef users and recreational fishermen (76 percent support the no take zones). While the majority of respondents favored the current design of "no

Table 1. Opinions on "No Take" Zones: All Residents vs. Recreational Fishermen

Question	Recreational	
	All Reef Users (% Yes)	Fishermen (% Yes)
1. Do you support currently designated "No Take" zones in the Florida Keys?	78%	76%
2. Would you support creation of additional "No Take" zones on some of the reefs in Palm Beach, Broward, and Miami-Dade Counties?	44%	39%
3. Would you support the creation of additional "No Take" zones on some of the reefs in your county of residence?	57%	55%
4. What percentage of the coral or natural reefs in Southeast Florida do you think would be a reasonable proportion to protect by giving them "No Take" designation?	Mean: 32% Median: 25% Mode: 0%	27% 20% 0%

take zones" in the FKNMS, a higher proportion of resident SPA & ER users favored the currently designated "no take zones" than Non-SPA & ER using residents (Table 2). These differences were statistically significant.

Not in My Backyard Hypothesis.

Questions two and three tested the "NIMBY" (Not In My Backyard) hypothesis by asking residents whether they supported the creation of new "no take zones" in the waters off the three counties to the north (Palm Beach, Broward, and Miami-Dade), versus whether they supported additional "no take zones" in Monroe County.

The results do not support the NIMBY hypothesis. The results were in fact opposite of what was expected. Monroe County reef using residents were generally not in support of "no take " zones in the three counties to the north, while supporting the creation of additional "no take" zones in Monroe County-FKNMS. SPA & ER users supported both additional "no take" zones in the three counties to the north and additional "no take" zones in Monroe County-FKNMS, while non-users were much less supportive (less than a majority for both options).

Proportion of Reefs that Should be Protected. Question four asked what percentage of the coral or natural reefs in Southeast Florida did residents feel would be a reasonable proportion to protect by giving them "no take" designation.

The all reef using resident mean was about 32% and 27% for reef using recreational fishermen. This implies that of the survey respondents, Monroe County residents desire, on average, that 32% of the coral or natural reefs in Southeast Florida be protected through "no take" designations. When looking at the disaggregated breakdown of SPA & ER users versus non-users, the support for "no take" designation varies significantly. On average, SPA & ER users support a "no take" percentage of 35%, while non-users, on average, support designation at the level of 26%.

A more conservative measure of central tendency (the median) indicates that 50 percent of SPA & ER using residents would support 25 percent or more of the coral reefs be protected in "no take zones", while 50 percent of non-using residents would support 20 percent or more of the coral

we see for SPA & ER users the mode, desired protection level, is 50%, while the mode for Non-SPA & ER users lies at 0%. These results indicate that there is a large rift at present between resident SPA & ER users and Non-SPA & ER using residents in the willingness to protect corals or natural reefs in Southeast Florida through "no take" designations.

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
 -Comparative Importance-Satisfaction Ratings of SPA & ER Users and Non Users
 -Economic User Value of the SPAs and ERs
 -Linking Ecological Monitoring with Socioeconomic Monitoring Results
 Go to:
<http://marineeconomics.noaa.gov/SocmonFK/rectour.html>

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Table 2. Opinions on "No Take" Zones: SPA & ER Users vs. Non Users

Question	SPA & ER	
	Users (% Yes)	Non Users (% Yes)
1. Do you support currently designated "No Take" zones in the Florida Keys?	83%	72%
2. Would you support creation of additional "No Take" zones on some of the reefs in Palm Beach, Broward, and Miami-Dade Counties?	51%	35%
3. Would you support the creation of additional "No Take" zones on some of the reefs in your county of residence?	63%	49%
4. What percentage of the coral or natural reefs in Southeast Florida do you think would be a reasonable proportion to protect by giving them "No Take" designation?	Mean: 35% Median: 25% Mode: 50%	26% 20% 0%

reefs be protected in "no take zones" (Table 2).

While comparison of the mean and median show that SPA & ER Users desire higher levels of protection than Non SPA & ER Users (differences in means and medians are statistically significant), comparisons of the modes (the mode indicates the most common response)