

National Coral Reef Monitoring Program (NCRMP)

2014 Socioeconomic Monitoring Survey Analysis

For South Florida

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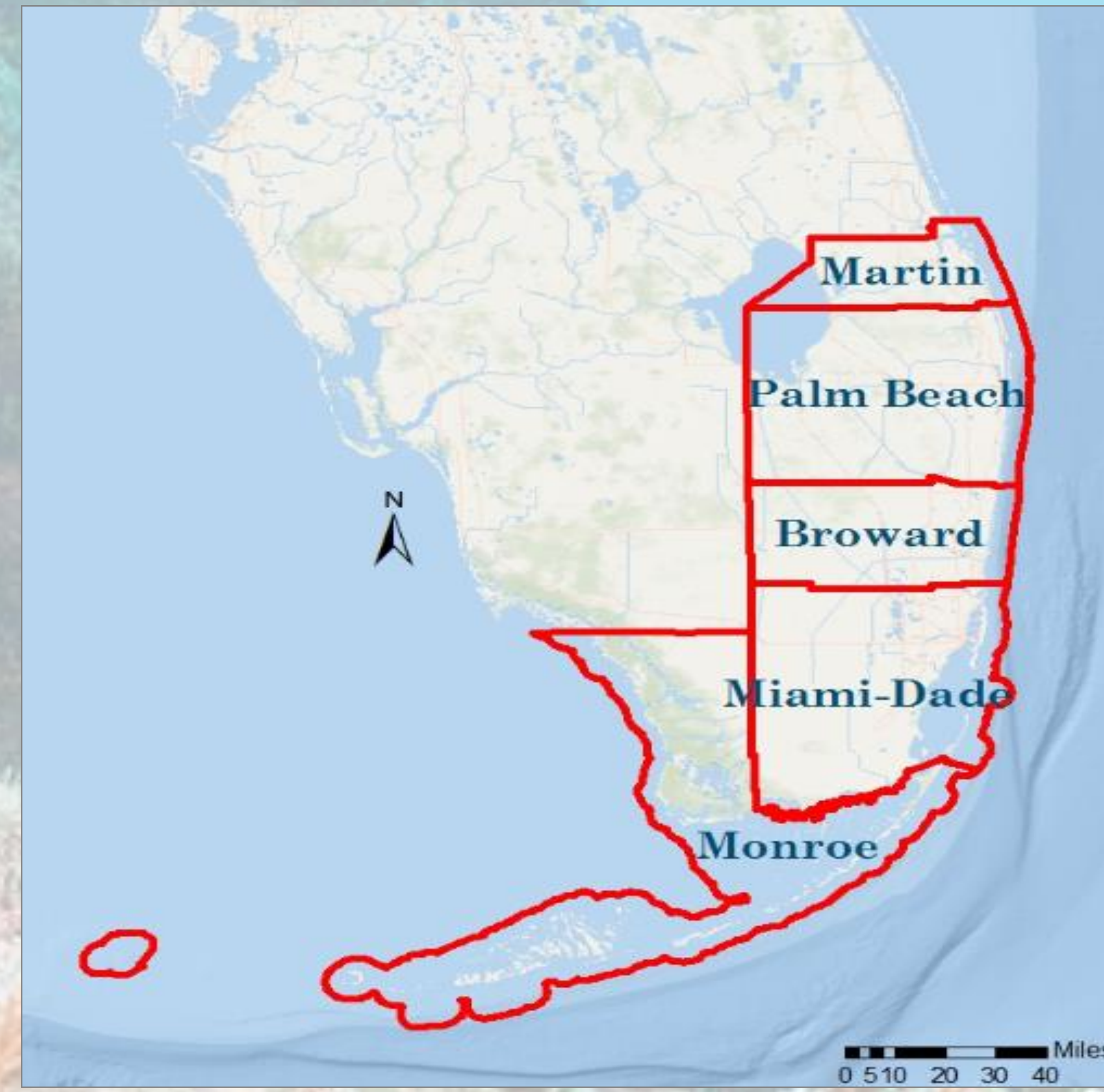
Purpose and Methods

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 1,210 South Florida residents from five counties (Monroe, Miami-Dade, Broward, Palm Beach, and Martin) over the age of 18 were surveyed through the Random Digit Dial (RDD) telephone method from January to July of 2014.



Cross-Tab of Respondent Tenure & Condition Perceptions of Marine Resources

| Resource | Lived in Florida for 10 years or less | | Lived in Florida for more than 10 years | | Statistical test for difference | |
|--|---------------------------------------|---------------|---|---------------|---------------------------------|---------|
| | n | Weighted Mean | n | Weighted Mean | t | p value |
| Current Conditions | | | | | | |
| Ocean water quality | 131 | 3.53 | 949 | 3.24 | 2.60*** | 0.01 |
| Amount of coral | 98 | 2.58 | 706 | 2.48 | 0.69 | 0.49 |
| Number of fish | 100 | 3.19 | 770 | 2.78 | 3.13*** | <0.01 |
| Beach quality | 137 | 3.58 | 924 | 3.40 | 1.75* | 0.08 |
| Mangroves | 88 | 3.10 | 729 | 3.28 | -1.25 | 0.22 |
| Change in conditions over last 10 years | | | | | | |
| Ocean water quality | 116 | 2.89 | 951 | 2.51 | 3.36*** | <0.01 |
| Amount of coral | 79 | 2.29 | 754 | 2.08 | 1.70* | 0.09 |
| Number of fish | 92 | 2.53 | 820 | 2.20 | 2.89*** | <0.01 |
| Beach quality | 118 | 3.00 | 935 | 2.66 | 3.02*** | <0.01 |
| Mangroves | 93 | 2.60 | 737 | 2.63 | -0.25 | 0.80 |

- Higher mean values indicate a more positive perception.
- Respondents that have lived in Florida for over 10 years had an overall more pessimistic perception of the condition of marine resources.

Cross-Tab of Respondent Income & Perceptions of Management Approaches

| Management Approach | Household Income greater than or equal to \$50k | | Household Income less than \$50k | | Statistical test for difference | |
|--|---|---------------|----------------------------------|---------------|---------------------------------|---------|
| | n | Weighted Mean | n | Weighted Mean | t | p value |
| Law enforcement of existing rules/regulations | 494 | 4.18 | 254 | 4.15 | 0.40 | 0.69 |
| Community participation in management | 492 | 4.20 | 245 | 3.95 | 3.89*** | <0.01 |
| Seasonal openings/closures of fisheries | 485 | 4.03 | 242 | 3.88 | 2.07** | 0.04 |
| Stricter control of pollution sources | 495 | 4.32 | 265 | 4.39 | -1.38 | 0.17 |
| Restrictions on coastal development | 497 | 4.08 | 259 | 4.11 | -0.41 | 0.68 |
| Marine zoning | 428 | 3.99 | 214 | 3.85 | 1.84* | 0.07 |
| Designated marine protected areas | 497 | 4.25 | 255 | 4.02 | 3.62*** | <0.01 |
| Limited recreational use | 488 | 3.56 | 257 | 3.81 | -3.22*** | <0.01 |
| Restricted access | 489 | 3.65 | 254 | 3.72 | -0.84 | 0.40 |
| No-take zones | 466 | 4.12 | 210 | 3.87 | 3.10*** | <0.01 |
| More restrictions on construction practices for sediment control | 493 | 4.18 | 255 | 4.21 | -0.55 | 0.58 |
| Catch limits for certain fish species | 500 | 4.12 | 268 | 4.05 | 1.16 | 0.25 |

- Higher mean values indicate greater agreeability with the management option.
- Respondents with higher annual incomes tended to respond more favorably to coral reef management initiatives, except for "limited recreational use".

Cross-Tab of Respondent Reliance on Marine Resources for Sustenance and Perceptions of Management Approaches

| Management Approach | Fish/harvest marine resources to feed myself/my family "sometimes" or more | | Fish/harvest marine resources to feed myself/my family "rarely" or less | | Statistical test for difference | |
|--|--|---------------|---|---------------|---------------------------------|---------|
| | n | Weighted Mean | n | Weighted Mean | t | p value |
| Law enforcement of existing rules/regulations | 168 | 4.01 | 183 | 4.15 | -1.33 | 0.18 |
| Community participation in management | 175 | 3.88 | 177 | 4.23 | -3.53*** | <0.01 |
| Seasonal openings/closures of fisheries | 187 | 3.93 | 173 | 3.98 | -0.57 | 0.57 |
| Stricter control of pollution sources | 185 | 4.29 | 182 | 4.40 | -1.22 | 0.22 |
| Restrictions on coastal development | 180 | 3.97 | 183 | 4.13 | -1.55 | 0.12 |
| Marine zoning | 156 | 3.69 | 147 | 4.00 | -2.82*** | <0.01 |
| Designated marine protected areas | 183 | 4.09 | 179 | 4.18 | -1.09 | 0.28 |
| Limited recreational use | 180 | 3.08 | 178 | 3.40 | -2.47** | 0.01 |
| Restricted access | 180 | 3.16 | 175 | 3.66 | -3.95*** | <0.01 |
| No-take zones | 167 | 3.57 | 165 | 4.09 | -4.55*** | <0.01 |
| More restrictions on construction practices for sediment control | 173 | 4.01 | 175 | 4.25 | -2.22** | 0.03 |
| Catch limits for certain fish species | 187 | 3.86 | 183 | 4.26 | -3.86*** | <0.01 |

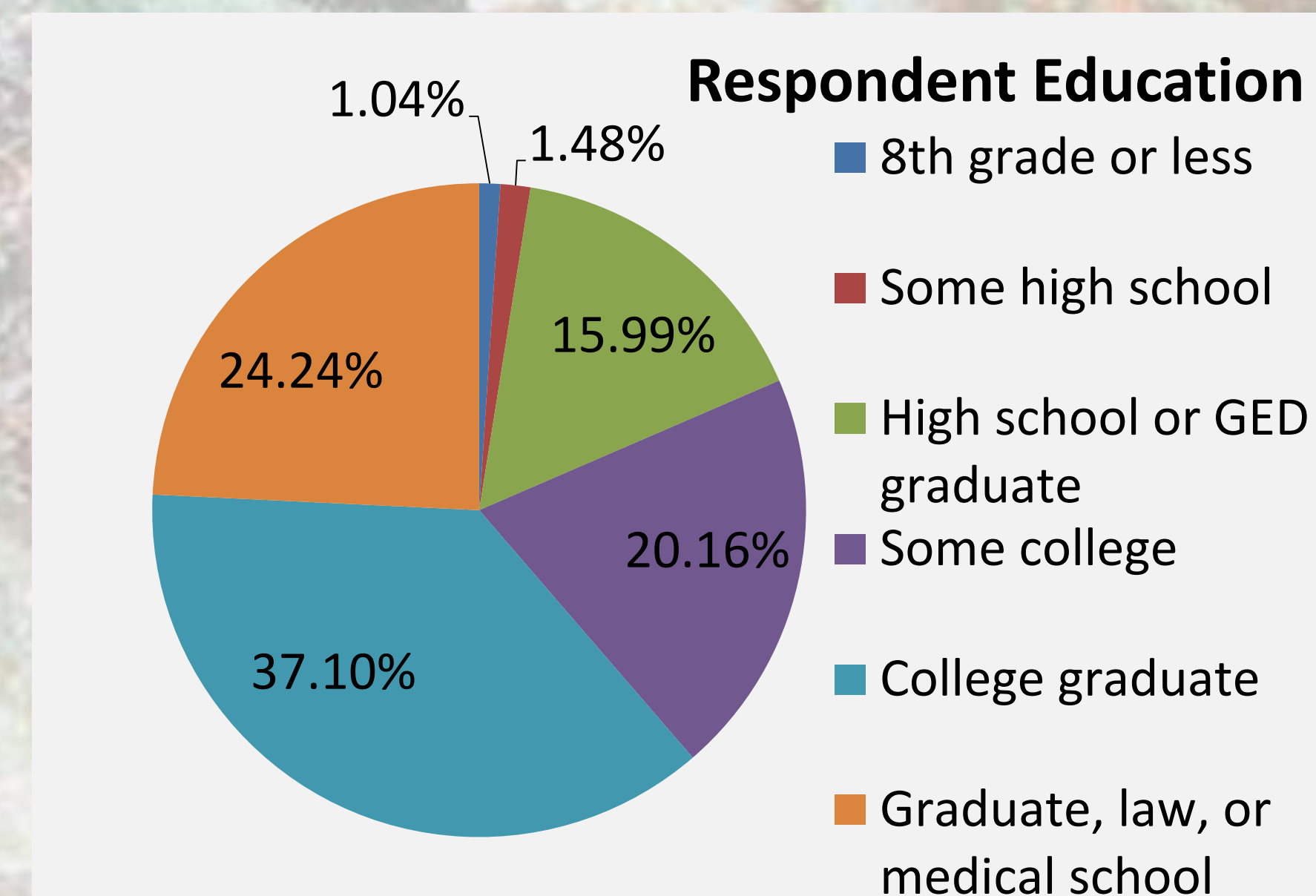
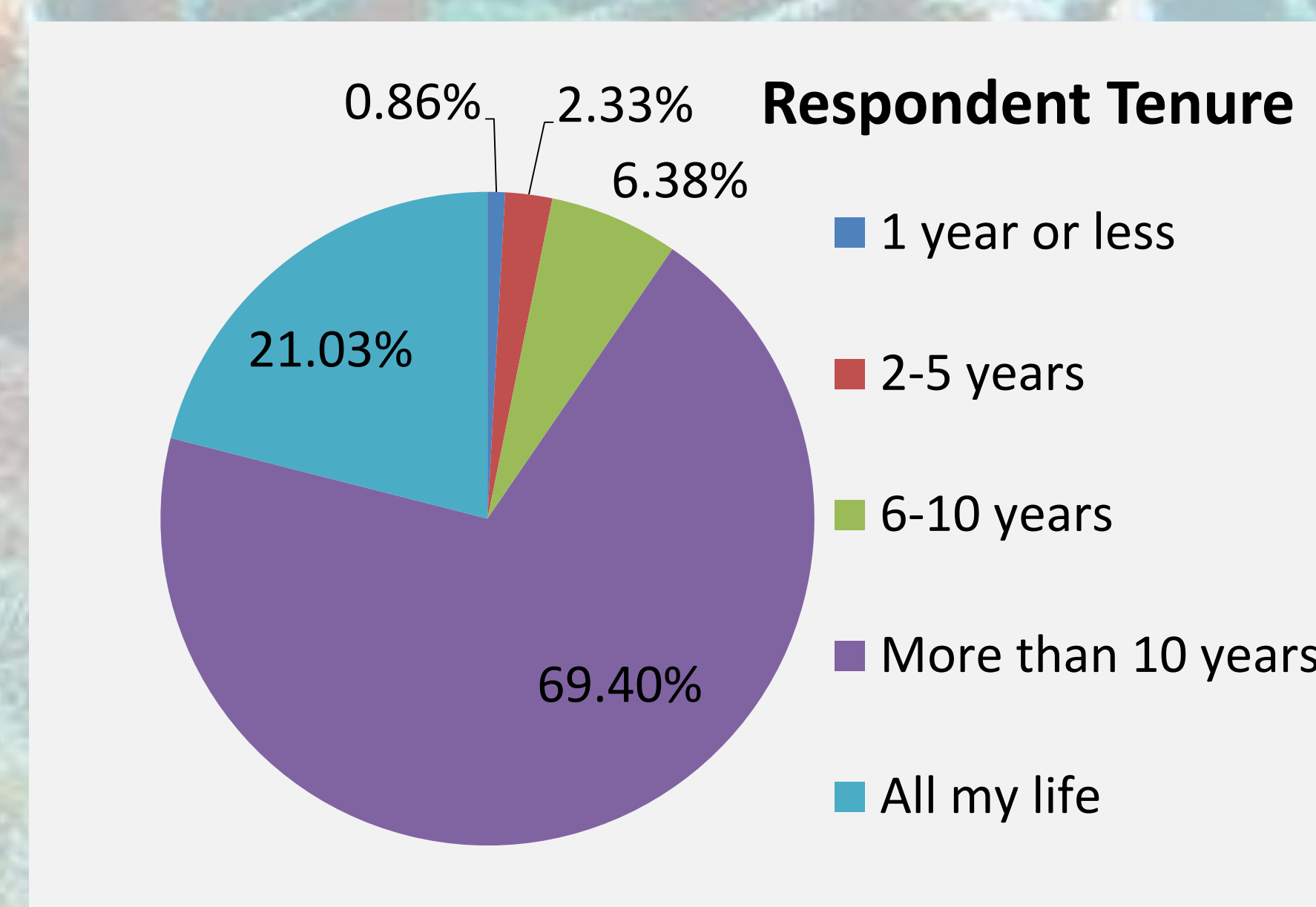
- Higher mean values indicate greater agreeability with the management option.
- Respondents who rely more on fishing/harvesting marine resources for food and sustenance responded less favorably to the various management options when compared to respondents who rely less.

Regression Analysis

| Independent Variable | Coefficient | T statistic | P-value |
|--------------------------------------|-------------|-------------|---------|
| Resource Condition Index | -0.079 | -0.67 | 0.506 |
| Last 10 Years Condition Index | -0.454 | -3.99*** | <.0001 |
| Condition Get Worse in Next 10 Years | -0.567 | -0.61 | 0.540 |
| Reef Value Index | 0.869 | 4.48*** | <.0001 |
| Threat Familiarity Index | 0.283 | 5.23*** | <.0001 |
| Activity Participation Index | -0.005 | -0.07 | 0.946 |
| Live in Florida for Over 10 Years | 4.634 | 3.14*** | 0.002 |
| Completed College | 4.318 | 4.99*** | <.0001 |
| Annual Household Income | -0.000004 | -0.46 | 0.648 |
| Age | -0.038 | -1.37 | 0.171 |

- Dependent variable: An index measure of respondents' relative agreeability with management initiatives. Familiarity with threats to coral reefs, positive perceptions of coral reef value, tenure in Florida, and education had significant positive effects. Positive perceptions about the change in reef resources over the last 10 years had a significant negative effect.

Respondent Demographics



Population Demographics

