

## 155 Understanding recreation use at Florida Keys National Marine Sanctuary: A pilot study

Danielle Schwarzmann<sup>1</sup>, Robert Burns<sup>2</sup>, Ross Andrew<sup>2</sup>, <sup>1</sup>NOAA/ONMS, USA. <sup>2</sup>West Virginia University, USA

NOAA's Office of National Marine Sanctuaries has a long history of understanding economic expenditures in and near sanctuary settings. Users use can be profoundly productive in terms of economic activity. Many studies have documented the linkage between users use and economic gain for particular areas. A 2016 study conducted by the Department of Commerce determined the gross value of recreational fishing and boating at approximately \$38 billion. Concurrently, the National Marine Sanctuary System (NMS) is estimated to support several billion dollars of economic activity each year. Nationwide, the National Marine Sanctuary system attract millions of users every year and serve as primary economic drivers in many communities. A better understanding of users' use patterns and motivations would certainly increase the capacity for sustainable use and preservation of ecosystem services in these areas.

The National Marine Sanctuaries Users Counting Process (NMS-COUNT) is a methodology being used to understand user expenditures at Florida Keys National Marine Sanctuary (FKNMS) during the 2020/21 timeframe. Field sampling was originally scheduled for spring and summer 2020, relying on a variety of data collection techniques including in-person surveys and point counts of users. However, the recent development and spread of novel coronavirus COVID-19 within the U.S. and around the world has caused disruptions in travel and everyday life, including research activities.

The NMS-Count process consists of four phases (Phase 1 Discovery, Phase 2 Develop, Phase 3 Design, and Page 4 Determine the amount and type of use and economic expenditures). Focusing on phase 1 and 2 of the NMS-COUNT process was necessary in order to develop survey instruments for the process. Phase 1 consisted of a foundation assessment and the creation of a literature review that were the point of departure for phase 2. This second phase consisted of a panel survey development that engaged local resource managers

and had two rounds of an expel panel survey. In phase 3, a custom methodology was designed, which also included the design and development of the survey instruments. Phase 4 is still an ongoing process. Several survey instruments were developed for the monitoring effort. The surveys asked questions about visitation patterns, trip characteristics, expenditures, location information, conditions that influence recreation, among others.

### Results

Results showed that in a typical year, users reported spending an average of 31 days participating in ocean recreation-related activities in FKNMS and an average of 19 days traveling offshore for any activity more than 3 miles. They also reported that in a typical year they visit 21 days on average the FKNMS and have approximately 4 people on average in their groups when fishing, 4 people when general boating, 4 when snorkeling and 3 when diving at the sanctuary. In the economic section users were asked to select the amount of money they use in each activity for a single trip in Florida Keys National Marine Sanctuary, the results showed that users spend on average \$260.11 on fishing and \$166.74 on general boating, approximately \$106.71 diving and \$65.64 snorkeling. The users reported the estimated total individual spending of their group on a typical visit/trip to the Florida Keys in different locations. The highest average amount of expenditures was in Islamorada/Upper Matecumbe Key area with \$690.12. Key Largo had an average expenditure of \$296.68 and users also reported they spent on average \$374.67 in other locations. Lodging (\$869.21), food at restaurants (\$405.71) and fees for charter fishing (\$398.01) are the categories with the highest averages of expenditure for a typical visit to the Florida Keys. The average amount of expenditures that users spend during the summer is \$1124.39, while fall (\$670.01) was considered the season when users spend less money during their trip in the Florida Keys. Users were asked how much money in total they would individually spend on a

typical trip to Florida Keys National Marine Sanctuary. Users reported they spend an average of \$1744.54.