Development of a Systematic Visitor Monitoring Program for Brazil Parks and Protected Areas

***Robert C. Burns**, West Virginia University, USA*
***Jasmine Cardozo Moreira**, Ponta Grossa State University, Brazil*

Introduction

The purpose of this study was to define the visitor profile of the Brazilian Amazon Basin using data from two different locations: The Tapajós National Forest and Anavilhanas National Park. This study also investigated satisfaction, perceptions of the number of other visitors, and methods of arriving at the protected areas.

Methods

The methodology consisted of on-site interviews with survey days spread across weekdays and weekends. A total of 2534 usable surveys were collected from October 2015 to May 2016. Frequencies, valid percentages, and means were used to describe the sample. For comparative analyzes between the two areas independent samples tests and Pearson's Chi-square tests were conducted. For the crowding analysis simple and multiple linear regressions were applied in order to understand the relationship between crowding and other variables.

Results

Most of the respondents were from Brazil (83.5%) while less than one-fifth were from a foreign country (16.5%). Of the Brazilian respondents, visitors were from three main states: Amazonas (27.6%), Pará (22.3%) and São Paulo (22.1%). The results show that one-fourth (25.4%) of the respondents came from the city of Manaus while the other third (33.3%) were distributed within the cities of São Paulo (17.9%) and Santarém (15.4%). Of the international respondents, the majority were from United States (29.8%) followed by Germany (20.2%), France (16.7%), and the United Kingdom (15.1%). Other popular countries included Argentina and Switzerland with a total 17.9% of the respondents.

The majority (84.6%) of respondents were first-time visitors while only 15.4% were repeat visitors. Over half of the visits (53.7%) were day visits with a length of stay of approximately 6 hours (mean= 5.55). Overnight visits represented 46.3% of the sample and the average length of stay of those were four days.

The survey also assessed the level of recreationist satisfaction. Over half of the respondents (66.7%) rated their visit as either *excellent* or *perfect*. A group of nearly one-third (30.1%) evaluated their satisfaction level as either *good* or *very good*. Only a few respondents (3.2%) rated their visit as *poor* or *fair*. On a 6-point scale (poor= 1 and perfect= 6), the mean rate for overall satisfaction was 4.80.

A 9-point negative and positive scale was created to better understand the extent of negative and positive impacts of other people on the recreationist's experience. Few visitors (6.5%) reported to be negatively impacted by the presence of others; of those, 3.9% reported that seeing others reduced their enjoyment. Less than one-fourth (22.6%) indicated that seeing others had no effect on their visit. Nearly three-fourths of respondents (70.0%) reported a positive impact caused by the presence of others. Of those, over one-third (34.3%) said that seeing others enhanced their enjoyment.

Visitors most commonly used private cars to get to the forest/park (42.4%). Other modes of transportation via water such as speed boat (14.3%) and boat (12.4%) were also found to be a commonly used. Transportation plays an important role on the development of tourism (Palhares, 2003). The evolution of modes of transportation have changed the face of tourism and directly influences a visitor's decision on whether or not visit an area (Mammadov, 2012). Westlake and Robins (2005), enumerated a series of factors in choosing the transportation mode (e.g. time limit, distance, status, comfort, security, benefit, price, geographical position, competition). Understanding this transportation system enables the federal agency and stakeholders to keep the traffic of visitors organized while guaranteeing easy access and good services for either boat or car users.

Implications

One of the aims of this study was to gather data to understand the current flow of visitors in the Amazon by zooming into their specific characteristics. As mentioned in other studies and reinforced in this one, incorporating visitor monitoring programs into the management of the Tapajós National Forest and Anavilhanas National Park is crucial. This is a useful tool for assessment and evaluation of impacts. The use of technologies such as game cameras, trail and traffic counters have been proved to be useful to understand visitor behavior and habits (Gordon & Muhar, 2003; Arnberger et al, 2005). Currently tourism concentrates in only one area and the activity is viewing wildlife, specifically the pink dolphins. Families and couples are the most prevalent type of group visiting the park, activities and tourism packages targeting these groups would enhance the quality of their visit. The Tapajós site has an advantage of already having some infrastructure due to the communities that live in the area. However, this infrastructure may need be supplemented to better attend to the needs of the visitors. Results of this study also shows that the sociocultural aspects of the traditional communities could be explored as a component of tourism. The National Forest has a potential for ecotourism and this should be taken into account by the managers (Tanner et al, 1997). The community's perceptions about tourism is as important as visitor's perceptions about its experience. Collective involvement is crucial for short and long term results in tourism. The Tapajós National Forest should seek more benefits of the flow of tourists already visiting Alter do Chão while developing its own name as a destination.

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