



## EVALUATING THE EXPERIENCE OF VISITORS TO THE ANCHIETA ISLAND STATE PARK: PERCEPTIONS OF RECREATIONAL IMPACT

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### INTRODUCTION

In Brazil, many conservation units have experienced the pressure of an increasing number of visitors, often associated with a demand for diversified recreational opportunities (Magro and Barros, 2004). Particularly, the areas of concentrated visitor activities like trails and recreation sites, should receive more attention of managers concerning the impacts caused (Farrel and Marion, 2001). According to Manning *et al.* (2004) the visitor perceptions of recreational impacts tend to be limited, with the exception of the litter. They seldom reported complaints about site conditions and usually rated the environmental conditions of recreation sites as 'good' or 'better'.

The Anchieta Island State Park (AISP) is an area with great deal of demand in São Paulo State, Brazil. From 2003 on, the limit of 1020 visits per day at the historical cultural area has been established, in order to control the number of persons that arrive by schooners in the park (Robim *et al.*, 2005).

### OBJECTIVE

The goal of this work was to analyze how visitors perceive the recreational impacts in the Anchieta Island State Park.

### MATERIAL AND METHODS

Visitor related data were obtained using a questionnaire, based on Takahashi (1998). A set of questions was applied to visitors in Anchieta Island State Park between January and February 2005, about the characteristics and preferences of visitors and their perceptions about conditions found during visitation. Their opinion was asked initially on situations that could interfere in their visit and,

after the visit, on the situations that really interfered in it. Numbers were attributed to their answers, in order to categorize the data. For the hypothetical situations that could interfere in their visit, the following numbers were attributed to the answers: 0 (no interference), 1 (low interference), 2 (average interference) and 3 (high interference). For the real situations that interfered in their visit, the following numbers were attributed to the answers: 0 (excellent), 1 (good/acceptable), 2 (bad) and 3 (extremely bad). The answers of the visitors were compared among the seven questions both in the hypothetical situation and in the real/observed situation by Kruskal-Wallis non-parametric test, and if significant differences were observed, by the post hoc Dunnett T3 multiple comparison test. The hypothetical situation and the real/observed situation were compared by the Wilcoxon non parametric paired test. Responses to the survey were used to evaluate the visitors' age and the level of the interviewees' satisfaction, using correspondence analyses.

### RESULTS AND DISCUSSION

Two hundred and twenty-eight (228) people were interviewed, the majority being women (55%). Significant differences were observed when the hypothetical situation answers were compared ( $p=0,000$ ). Finding litter and residues in the area and writings in the state property were more expected than all the other possible happenings, showing high frequency of answers in the maximum category (high interference). Meeting with other groups was significantly less expected than all other happenings including, surprisingly, finding areas with many people and too many people in the beaches. After the visit, finding writings in the state property was the significantly highest observed happening ( $p=0.0000$ ), while the lowest was barbecue smell, that did not show significant differences only from the meeting with other groups

( $p=0,051$ ), finding litter and residues in the area ( $p=0,0665$ ) and meeting many people on the beaches ( $p=0,120$ ). For all questions there were significant differences between expectation and observed ( $p < 0,002$ ). The values of the answers are, in general, higher before the visit (mean = 1.67) than after (mean = 1.01) indicating that the expectations are worse than the real situation. The highest difference between expectations and observation remains within the presence of litter and residues on the beach. Although the most criticized item after the visit was the finding of writings in the state property, it was still significantly lower than the expectation. The only item with scores significantly higher after the visit (1.0) than before (0.7) was the one related to the meeting with other groups.

Besides, the correspondence analyses showed that visitors between 11 and 30 years old tend to be more satisfied with the visitation when compared to groups over 40.

## CONCLUSIONS

These results agree with the hypothesis of preliminary studies that the visitor perceptions of recreational impacts are limited and suggested that the young visitors tend to be more satisfied than the older ones.

## REFERENCES

- FARREL, T.A., MARION, J. Identifying and assessing ecotourism visitor impacts at eight protected areas in Costa Rica and Belize. *Environmental conservation*, 2001, vol. 28, nº3. pp. 215-225
- MAGRO, T.C., BARROS, I.A. Understanding Use and Users at Itatiaia National Park, Brazil. *Environmental Impacts of Ecotourism* (ed.R.Buckley). CAB International 2004. pp. 361-376.
- MANNING, R.E., LAWASON, S., NEWMAN. P. BUDRUK, M., VALLIERE, W., LAVEN, D., BACON, J. Visitor Perceptions of Recreation-related Resource Impacts. *Environmental Impacts of Ecotourism* (ed.R.Buckley). CAB International 2004. pp. 259-271
- ROBIM, M.J., FONTES, M.A, RIBEIRO, E., CORREARD, J. Capacidade de Carga em Zona de Uso Intensivo no Parque Estadual da Ilha

Anchieta, Ubatuba (SP). In: *Anais do VII Congresso de Ecologia do Brasil*, realizado em Caxambu/MG, no período de 20 a 25 de novembro de 2005. (CD-Room)

TAKAHASHI, L.Y. Caracterização dos visitantes, suas preferências e percepções e avaliação dos impactos da visitação pública em unidades de conservação do Estado do Paraná. Tese de doutorado apresentada no Setor de Ciências Agrárias da Universidade Federal do Paraná, 1998. 129 p.