# Planning and management of visitor impacts in traditional communities in the Reserva Extrativista do Rio Unini, Amazonas, Brasil

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## Introduction

The Extractive Reserve of the Unini River, located in the Ecological Corridor of Central Amazon, Amazonas, Brasil, is endowed with great potential to become an important destination for community-based tourism. Community-based tourism has only recently been introduced into the Unini River region. Prior to 2007, the only tourism developed in the area was sport fishing. However, since 2010 much has been done to increase the sensitivity for, and improve the planning of, community-based tourism in the region.

Many values of the Reserve were recognized such as the traditional activities of the inhabitants, the luxurious scenery of fluvial beaches, river rapids and aquatic and terrestrial trails. For example, Serrinha Trail is characterized by huge trees and beautiful buriti palms which attract a variety of animals, and therefore is considered to have an appealing quality in the reserve. This paper presents a project for managing the impacts in the Serrinha Trail region. This project relies on the engagement, capacity, and labor from the local communities in the region. This approach capitalizes on traditional knowledge in order to enable the local community to manage visitation autonomously.

#### Method

The Guide Book for Visitation Impacts Management (MMA/ICMBio, 2011) was used as a foundation and the project began with the convening of the Unini Trails Group, which gathered managers and local people. Thereafter the deliberative body in the protected area called an assembly to determine the theoretical and practical issues in managing visitor use in the Serrinha Trail region. Two workshops were carried out to examine the concepts of planning and managing visitor impacts on trails, (i.e., minimizing negative and maximizing positive impacts). Outdoor activities were also conducted that helped researchers understand the field conditions as well as identify the trail's most crucial areas. This enabled the Unini Trails Group to consider the best strategies for managing impacts.

## Results

The process described above resulted in the selection of indicators and the articulation of strategies to mitigate the impacts of trail visitation. Indicators were defined in a participative way in order to evaluate environmental, social, and visitor experience conditions (see Table 1).

In order to define indicators, specific characteristics of the conservation unit were taken into consideration as well as the conditions to check them. The management planning and visitors impact checking are then discussed in a progressive and adjustable way, and after checking indicators, it will be possible to identify the actions to be taken in order to minimize negative impacts as well as the creation of new indicators. For the next community workshop the indicator analysis and the specific pattern for each indicator will be foreseen. The base line of the Serrinha Trail will be measured, as well the planned interventions to settle the trail down.

## Discussion and Conclusions

Because trails are established mainly to protect natural resources and to improve visitor security and satisfaction (Lechner, 2006), the impact monitoring stage is considered to be the most important stage in the management and planning process. Therefore, monitoring should be systematic and cyclic (MMA/ICMBio, 2011). The participative planning experience from the Serrinha Trail turned out to be very positive. The inhabitants declared that although they know the area quite well, they are now acquiring technical knowledge along with the ability to share trail management in their communities. The responsibility for trail management rests in the hands of the community. This is essential because the trail is a resource for the communitybased tourism approach. By the end of the Unini Trails Project, the participants should be ready to develop the same approach in their communities and be able to ultimately support other communities.

Table 1. Indicators Matrix for the Serrinha Tra	ail visitation impacts management
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Indicator	Measured Variable	Indicator Pattern	Strategy for Impact Mitigation
Garbage left behind on trail	Garbage	Environmental	Instruct inhabitants and visitors to bring back the garbage.
Number of secondary trails	Bypathes disfiguring trail traces	Environmental	Close secondary trails. Instruct guides to avoid openning secondary trails
Inscriptions or marks on trees	Inscriptions on trees – Inhabitants and guides use samples from trees to smell or taste.	Environmental	Instruct inhabitants and guides to avoid damaging trees; Provide in advance an explanation and identification samples to avoid damaging trees.
Number of inhabitant- complaints about the use of the area by tourists	Disturbance totraditional activities as a re- sult from tourism	Social	Establish rules to avoid disagree- ments for the use of the area; Instruct inhabitants, guides and visitors to treat the area respectfully.
Number of visitors complaints about trail management.	Visitors content- ment regarding trail management	Visitors experience	Analyse complaints periodically in order to refine procedures.

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