38 Did low-cost companies in the Azores provided an increase in the practice of recreational activities in nature? – Trail Running and Geocaching in São Miguel Island as a case-study

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Introduction

Natural landscapes are among the greatest tourist attractions all over the world. Nature is a way to regain energies from the stress experienced in urban areas. In the Azores archipelago, the nature-based tourism is one of the main touristic products of the islands, according to the Strategic and Marketing Plan for Tourism in the Azores. The liberalization of the Azorean airspace in 2015 to low-cost airlines, helped to boost the tourism industry in the archipelago, with a focus on nature-based activities such as nature sports and adventure events (e.g. MTB and Trail Running epic races). Other landscape outdoor activities such as Geocaching have also developed, the latter reaching about 2000 geocaches placed in many touristic locations of the islands.

Here we analyzed two nature sports, Trail Running, a pedestrian run performed on trails in natural areas, with one of the essential elements of this race being the practitioners' approach to nature; and Geocaching, which is a treasure hunt of modern times, practiced all over the world, where all it takes is a spirit of adventure and equipment with a GPS receiver, using the coordinates to provide hidden containers (geocaches) and share the experience of your online adventure.²

Having low-cost airlines flying to the archipelago, has led to an increase in the number of visitants; this is in turn reflected on an increase on the number of people that go to nature to relax or practice any kind of sport. Some of these areas are legally protected due to their sensitive nature, so we anticipate an increase on the negative impacts felt on these areas, and consequently on the natural resources¹. Problems such as loss of native vegetation, waste deposition, soil compaction,

erosion, are some of the negative impacts that can arise from an intensive use of trails crossing natural areas³. Since the above-mentioned sports are mostly practiced along these trails, an increase in the intensity of use of the trails by this kind of events, will most probably lead to an increase on the impacts felt.

The present study aimed to analyze the variation in the practice of recreational activities linked to nature in the Azores, after the entry of Low-Cost airlines, based on Trail Running and Geocaching practiced on the island of São Miguel.

Study Area

The Azorean archipelago, an outmost region of Portugal, has 9 inhabited islands grouped into 3 groups: western, central and eastern. Our work was developed in São Miguel, the largest island of the archipelago located in the eastern group, at latitudes 37°42' and 37°54'N and longitudes 25°51' and 25°08'W (Fig. 1a), and with an area of 746 km^{2,4}.

Methodology

We have adopted a mixed methodology based on: (1) collection of data on the number of passengers arriving in S. Miguel from national and international flights, along with the number of guests and overnight stays, for the period of 2010-2019; (2) elaboration of a survey aimed at athletes participating in the <u>Epic Trail Run Azores</u>, a race that took place from 5th to 8th December, 2019; (3) collection of volunteer geographic data from the 19 most sought-after geocaches in São Miguel (https://www.geocaching.com), within the same time frame (Fig. 1b).



Figure 1b. Map of São Miguel island with the location of the Geocaches used in the analysis, and the route of the EPIC110 race considered in this study. Representation of the various categories of protected areas present on the island (Source: prepared based on data taken from the sites: https://www.geocaching.com, http://www.epictrailrumazores.com/pt/provas/epic-110/, and annex II of DLR n.* 19/2005/A).

Results

Since the entry of Low-Cost airlines in the Azorean air market, the number of passengers disembarked on the island of São Miguel, as well as the overnight stays, increased significantly. As an example, there was an increase of 38% in disembarked passengers in the first year of Low-Cost flights (2015), the majority of which came from national flights. This increase was also observed in the number of practitioners of the sports of nature analyzed, a result corroborated by the application of the survey to the Epic Trail Run Azores athletes, who said that the possibility of flying Low-Cost, had a great impact in their decision to participate in this event. Moreover, the majority of the athletes participated in the event for the first time and were escorted by family or friends.

The Geocaching results showed that the maximum number of registrations occurred in the year of the air space liberalization, however the number of logs has been decreasing over time, following a global trend around this activity. Through the analysis of both activities, we conclude that their practice has been combating the so-called seasonality that existed before the airspace liberalization, since what was previously more common in the months from July to September, now expands throughout the year. This applies to both Geocaching and Trail Running events such as Epic Trail Run Azores, which takes place every year in the month of December.

Conclusion

Our data confirms a significant positive variation in the number of practitioners of these nature-based recreational activities in S. Miguel island, with a tendency to increase over time. In view of this growth, there is a need to take measures in order to fight the potential increase of negative impacts on nature, and to maintain the international certification of the Azores as a "sustainable destination". The creation of Nature Sport Cards to each protected area, can help to manage and monitor the several recreational activities that can take place in a certain area, in order to improve the quality of the nature-based sports while protecting the environment.

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