

# Monitoring recreational use in protected natural areas. Alt Pirineu Natural Park 2011-2017. Spain

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## Introduction

The management of public use and the promotion of sustainable tourism are two of the main concerns of protected natural areas. Regarding the planning and management of the public use of these areas, it is essential to gain further knowledge of the characterization and monitoring of the recreational, sporting and tourist demand that takes place within their boundaries. Despite the appearance of new methods to monitor public use in these areas, eco-counters and questionnaires are still reliable monitoring tools. During 2011, a technical study was carried out in the Alt Pirineu Natural Park to assess the number, distribution and characterization of visitors (Fariás, 2011). Six years later, in 2017, a detailed study was carried out with the following aims: to review the data collected in 2011; 2) to assess the changes related with the use made by the visitors of this area; and 3) to advance in the knowledge of other aspects related to visits to the Park, which in this case focused on the direct economic impact generated by visitors in the Park territory. The purpose of this oral presentation is to discuss with the scientific community the results and their application in the monitoring and the management of public use in these areas.

## Methodology

The same study methodologies were applied in the two reports (2011 and 2017): 1) estimation of visitor inflow and distribution in the area, and 2) questionnaires on motivations, habits and preferences. Visitor estimation was based on the consideration of nine different indicators: registration time, number of people per group, means of access to the park, direction of travel -input/output-, itinerary visited, activity carried out, crossing/non-crossing and passage/non-passage through the eco-counter). For the questionnaires, 32 questions were considered including five principal dimensions: socio-type, visit characteristics, expenses incurred, motivations for the visit, activity carried out, and itinerary visited. A total of 1,859 surveys were conducted during the two years: 1,150 in 2011 and 709 in 2017, including the consideration of 80 sampling units developed over 18 field work days.

## Results

On the one hand, regarding the number of visitors to the area, the results obtained allow estimating 314,000 visitors in 2017, an increase of 100,000 visitors in the period from 2011 to 2017. On the other hand, in terms of the use of the area (distribution) the results revealed visitors' increased dispersion in the area. With the exception of the Sant Joan access point, the rest of the entrances reviewed showed 10 to 20% increased dispersion of use (Figure 1). Furthermore, based on the 1,859 surveys, it was possible to identify the following main changes in terms of use of the area: a higher frequency of visits (average: from 3 to 3.61 times in the last two years); a shorter duration of the visit to the park (average: from 3.20 to 2.60 hours), and a smaller number of people per group (average: from 4.26 to 3.42 people per

group). Moreover, important changes were identified related with the recreational activity carried out during the visit to the park, and shorter walks and activities linked to staying around the entrance point (from 25.3% to 42.6%). Finally, taking into account the identification of an average expenditure of 69.39 euros/visitor/day, a direct economic impact in the area of more than 14,500,000 euros was estimated.

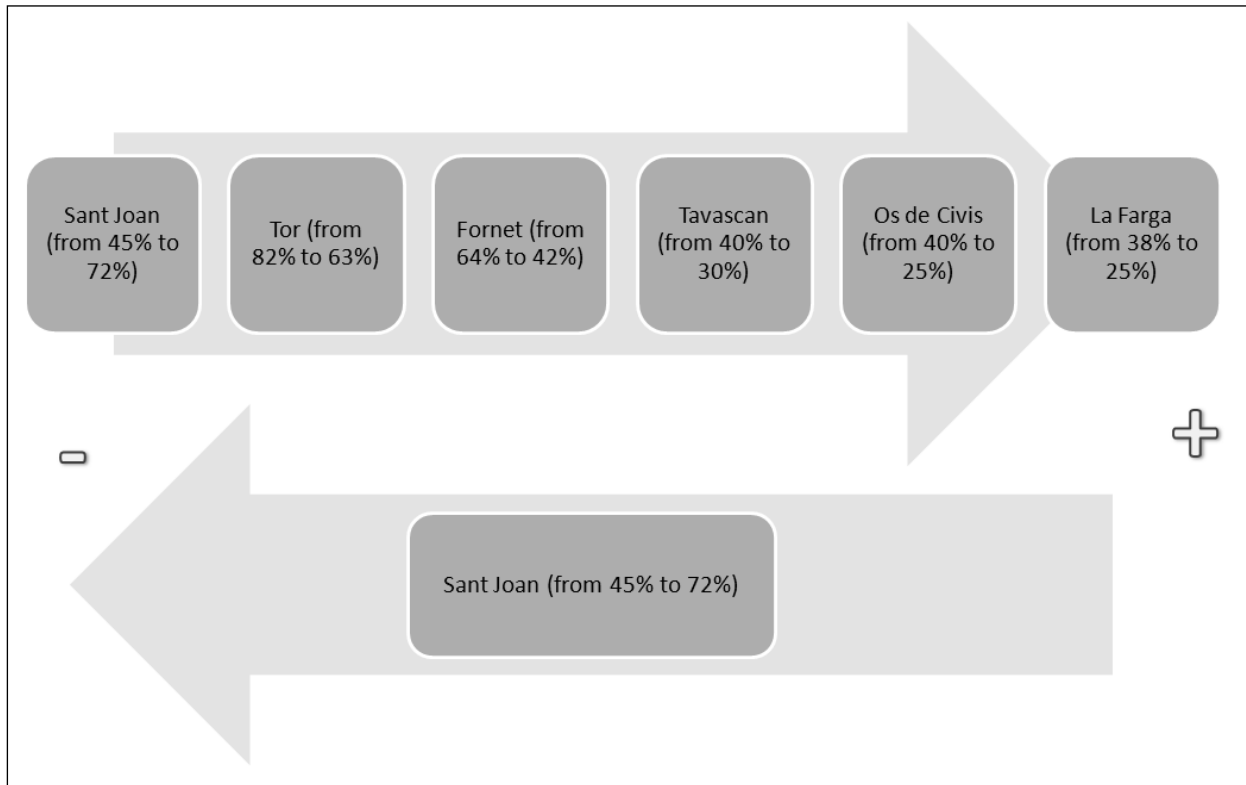


Figure 1. Main changes in terms of dispersion of uses 2011-2017.

**Note:** Percentages represent the level of concentration of use (number of visitors who use the four main trails at the entrance). The direction of the arrow indicates increasing or decreasing concentration.

## Conclusions

This study not only shows that common public use monitoring systems (eco-counter and questionnaires) are still valid systems for tracking the public use of this kind of areas, but also demonstrates the utility of the results obtained by this system for public use management decision-making, both in terms of quantity (variation in the number of visits), as well as in terms of distribution and visitor behaviour (activities, trail visited, etc.). The simplicity and usefulness of the methodology used in the first assessment of the direct economic impact derived from the public use of this kind of areas and the system for tracking dispersion are other contributions of this study.

## References

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