Monitoring the patterns of visitor use at World Heritage sites

Luís Monteiro, Czech University of Life Sciences Prague, Czech Republic, monteiro@fzp.czu.cz
Kamila Svobodova, Czech University of Life Sciences Prague, Czech Republic
Petr Sklenička, Czech University of Life Sciences Prague, Czech Republic

Introduction

During the last 40 years, since the adoption of the Convention Concerning the Protection of the World's Cultural and Natural Heritage, the World Heritage List has been growing with the most outstanding places on Earth. These places, called World Heritage sites, are properties established by the United Nations Educational, Scientific and Cultural Organization (UNESCO), containing the most significant natural and cultural values in the world.

Nowadays, World Heritage sites represent important travel destinations worldwide attracting millions of visitors every year. However, the fact that these places attract so many tourists presents a serious challenge regarding the protection of their natural, cultural, and recreational values, since with visitors participating in heritage activities, there is an eminent potential for the occurrence of different types of impacts. Visitor impacts are able to carry several consequences to cultural and environmental conditions, affecting ecosystem components and processes; through the degradation of the soil, vegetation, water, and wildlife resources (Leung & Marion 2000:24). As the World Heritage sites are classified, it is essential to find ways of controlling visitor related impacts, while trying to provide visitors with high-quality experiences and guaranteeing that local communities benefit from the existence of these iconic places.

An efficient way how to control and anticipate negative effects on site resources and ensure visitor expectations are corresponded is through visitor management. As such, visitor data is crucial. This is particularly so in Průhonice Park, a 250 hectare World Heritage site, located 15 kilometres southeast of Prague city, that due to its combination of outstanding values and privileged location receives an average of 155,000 visitors per year. The related impacts caused by thousands of visitors and their different uses raised management concerns, and the need to understand visitation dynamics within park spaces. As a result, a research programme was developed in order to monitor the visitor's experience in Průhonice Park through the understanding and analyses of visitor movement and behaviour patterns.

Material and Methods

Study area

Průhonice Park, classified as the UNESCO World Heritage site since 1992, is one of the crown jewels of the Czech Republic's national historical parks and an exceptional example among its style. Covering an area of approximately 250 hectares and with 30 km of trails, the park has a privileged location just 15 kilometres southeast of Prague city centre, making it easily accessible and a perfect destination for domestic and international visitors. The park has one of the most unique and interesting characters of landscape in the country, standing out for its special combination of ecological and cultural values, together with an important outdoor recreational component.

Methodological approach

The research was based on a combined system approach consisting of two parts: questionnaires and a GPS survey, which in turn was structurally divided into three main phases: data collection, survey analysis and data synthesis (Figure 1).

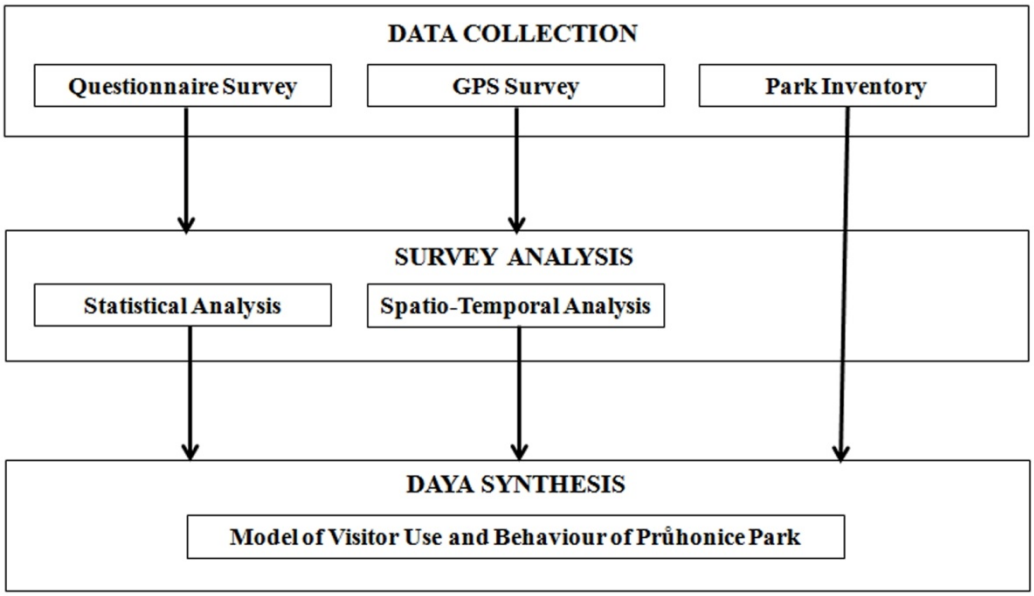

Figure 1 - Schematic representation of the methodological approach

During eleven random days in June 2012, visitors were contacted at the park's main entrance and invited to participate in the research survey before registration. If visitors decided to participate, they were introduced the research purposes and asked to fill in a simple questionnaire, which took between 5 and 10 minutes to complete. After that, one of ten available GPS-units was delivered to respondents and they were asked to carry it during the rest of their visit. Once visitors finished their visit, the GPS-units were returned to the survey representative and all data was stored into a Geographic Information System (GIS), in order to conduct all necessary spatial and temporal analyses. A total of 112 visitor surveys were completed. Afterwards, the GPS dataset was linked to equivalent questionnaires, more specifically visitor profile was related to the visit information, such as most popular places visited, preferred routes, time spent at each attraction, and the length and

speed of travelling. In the end, results were overlapped with a GIS inventory of Průhonice Park, containing different values, attractions and facilities. This allowed the production of realistic scenarios regarding different typologies of visitors and their movement patterns, preferences and behaviours within the park.

Results

The findings allowed understanding that Průhonice Park is mostly used near the main entrance and visitors tend to spend between one and two hours in the park, covering an average distance of 4.2 km per visit. The highest visitor use was found near important cultural and natural attractions, such as the castle complex, podzamecký pond, alpine and botanical garden. Therefore, it was possible to identify different park areas according to their susceptibility of being crowded and zones where potential ecological impacts can appear due to human activities and relate them with the different visitor profiles.

Conclusions

While the limited number of response rate might represent a limitation to the study, the proposed methodology represents a step forward in the understanding of patterns of visitor use within protected areas. In fact, GPS recorded travel routes and associated questionnaires proved to generate robust, detailed, and accurate data. Thus, it was possible to record unusual travel movements within the trail system and potential sites of interest for visitors. This research shows how important it is for protected areas management to adopt long-term monitoring of visitor movement and use patterns in order to protect the natural and cultural values and improve visitor experience within World Heritage sites.

References

Leung, Y--F & Marion, J., 2000, 'Recreation impacts and management in wilderness: A state-of-knowledge review', in Wilderness science in a time of change conference - Volume 5: Wilderness ecosystems, threats, and management, Proceedings RMRS-P-15-VOL-5 2000, Missoula, Montana, May 23–27, 1999, pp. 23-48.