"Master of Data" shows some jewels from his visitor monitoring drawer (interesting results from visitor monitoring in Czechia)

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Introduction

Nature Conservation Agency of the Czech Republic ("NCA") administrates 24 Protected Landscape Areas and several hundreds of National Nature Reserves and National Nature Monuments. Some impact of tourism is visible in those areas not only on protected natural phenomena, but also on visitors' experience. To assess these impacts, data about visitation rate is essential. Modern visitor monitoring started in 2009 and is performed at about 100 profiles in last years. Although the results represent only natural areas in the Czech Republic, they can serve as a reference to other data or as an inspiration for comparable research in other countries. Such a huge amount of data represents good background for methodological alterations, too. Issues dealing with methodology were presented at MMV8 (Vitek, 2016).

Study Area

The profiles, where visitation is monitored, are spread all over the Czech Republic. They mostly occur on the territory of Protected Landscape Areas, some of them are located in National Natural Reserves or National Natural Monuments.

Methods

Systematic monitoring using automated counters started in 2009 at first profiles and is performed at about 100 profiles in last years. In this abstract, data from 2016 is presented. The oral presentation shows data from 2017. The data is stored in MS Excel sheets, since 2018 in Eco-Visio internet database. "Profile" is the cross-section of a trail monitored with an automated counter sensor.

Results

In 2016, there were 3,280,000 passes recorded at all profiles monitored by NCA. In 2017 it was 3,250,000 passes. Although generally tourism in Czech natural areas increases in past years (at some profiles it redoubled during 6 years), it is not common for all monitored profiles. The highest visitation on a trail was recorded close to the top of the Beskydy Mts. called "Lysa hora" (eastern part of Czechia on the border with Slovakia; 2016: 272,000 passes) and that is one of the 8 profiles, where passes are recorded every single day throughout the year (daily minimum was 34). Maximum visitation in one day was recorded in 2016, July 5th, at Radhost (also in the Beskydy Mts.): 4,534 passes.

In an average, maximum monthly values occur in July and August: those months are the school vacation in Czechia. Nevertheless, some trails are more used during winter (Iser Mts. in northern part of Czechia on the border with Poland). 42 % of canoers recorded on Luznice River (southern part of Czechia) paddled in July, while from November to April it was almost zero. At Mednik (central part of Czechia, some 20 km south from downtown of the capital

Praha), which is known for occurrence of Dogtooth Violet, 33 % of annual visits are made in March during blooming.

Average ratio between "weekend+holiday" and "weekday" visitation in our profiles is 2.52. It ranges from 0.51 (ancient forest closed for public) to 12.36 (researched cave). Significant differences between profiles were detected also in visitation during average day (see Fig.). Typically it forms "lunch saddle", when visitation temporarily decreases after midday.
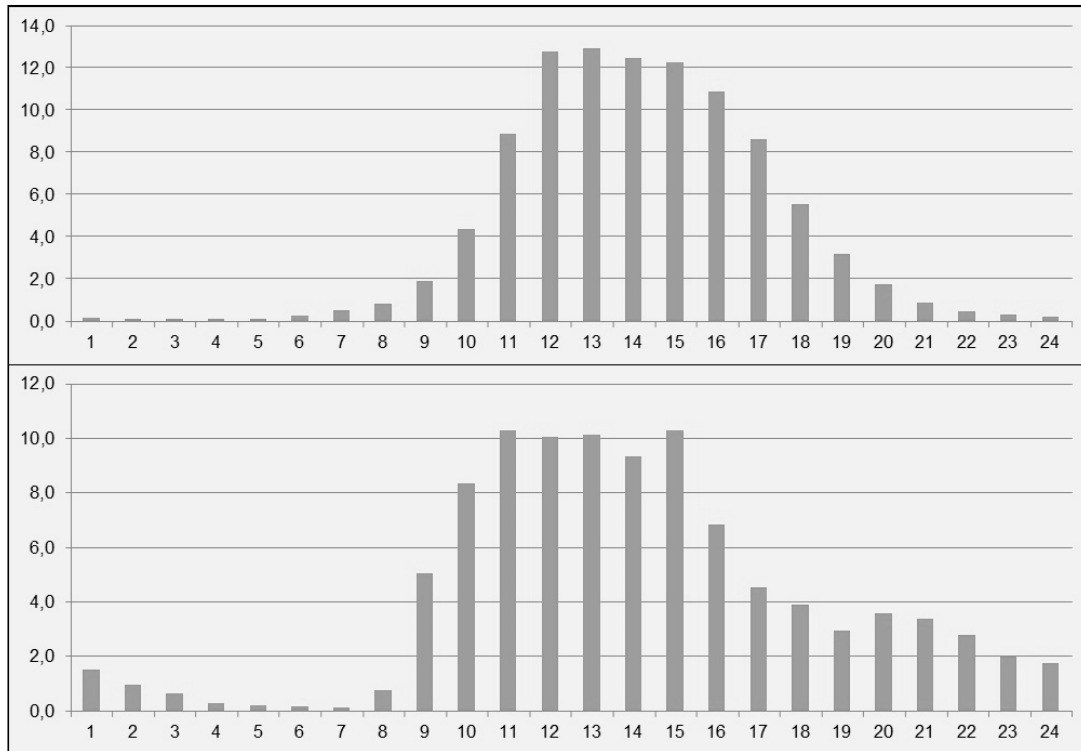

Figure: Average day visitation from all profiles (above) and from a profile with highest equability (below). X Axis: hour, Y Axis: Percentage ratio between hour total and daily total.

Conclusions

Over 3,000,000 passes recorded every year give the possibility to assess natural areas visitation by statistical methods. However, researchers are not interested to cooperate in this topic yet and NCA has not got sufficient capacity to perform detailed statistical analysis. The data is not open to public; it could be obtained upon request.

Visitor monitoring will be continued in the next years. Decreasing amount of available finances results in a decreasing number of monitored profiles. Visitor monitoring brings important information for planning, decision-making and maintenance of protected areas. NCA shares know-how among own employees as well as among National Park Authorities and visitor monitoring companies through organising professional seminars, that usually take place each year.

References

Vitek, O. (2016): Methodological questions raised from visitor monitoring in the Czech Republic. In: Vasiljevic [ed.]: Monitoring and Management of Visitors in Recreational and Protected Areas, pp. 283-285).