The 9th International Conference on Monitoring and Management of Visitors in Recreational and Protected Areas (MMV9)

Place, recreation and local development
29-31 August 2018, Bordeaux, France

ABSTRACT BOOK

REVISED VERSION

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Visitor Numbers for Protected and Nature Areas: A Global Data Sharing Initiative

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Introduction

Tourism is contributing about 10% to global GDP and is growing (4.6%) faster than the rest of the economy (WTTC 2018). Nature-based tourism, which is primarily to protected areas (PA), is widely considered a growing segment of the market. Globally, PAs receive about 8 billion visits a year generating about US $600 billion/y in direct in-country expenditure and US $250 billion/y in consumer surplus (Balmford et al. 2015).

However, nature-based tourism is a double-edged sword. On the one hand nature tourism constitutes a substantial recreational value and a significant contribution to local economies generating income and employment. Thereby it may increase acceptance for nature conservation across the local population and may be used as an argument for conservation. On the other hand nature tourism may present a threat to natural ecosystems and biodiversity due to over-tourism, wildlife disturbance, induced land-use change and travel related emissions (Liddle 1997; Ceballos-Lascurain 1996). Therefore, to exploit nature tourism opportunities, but avoid its adverse side effects, it needs to be managed with caution.

The visitation rate of a park or PA is a basic piece of information that is necessary to gain understanding about tourism and its impacts in any nature area. Thus, the analysis of all tourism-intensity effect relationships must start with visitor use data.

For economic impact analysis of nature tourism accurate, visitor statistics are of primary importance. Empirical findings from Finland suggest that across different PA visitor numbers differ considerably more than visitor expenditure data and regional economic multipliers[1] (METLA 2009). Analyses of European data show that also the economic recreational value of nature areas (in terms of consumer surplus) is primarily determined by the number of visits. Variations across different nature areas of the economic value per visit are relatively low and are therefore only of secondary importance (Schägner et al. 2016, 2018).

These findings seem surprising as most of the scientific literature focuses on the valuation, but not on the estimation of visitor numbers, even though the latter seems of greater relevance. Multiple meta-analyses have been conducted on recreational valuation studies, which build on international and global valuation data bases (Schägner et al. 2018).

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[1] Economic multipliers are required to estimate indirect economic effects based on information of direct economic effects, such as expenditure data.

For the magnitude of tourism in nature areas no reliable, consistent and comparable data exist on the global level. This means that globally we do know only roughly how many tourists are visiting PAs, how long they stay, what they do, when they are there, how they benefit from the experiences, or what contribution their expenditure makes towards protected area budgets. First attempts of gathering available data have been made by Schägner et al. (2017) who have compiled visitor counts for more than 500 nature areas, but they cover Europe only (see Figure 1).

Method

To fill the gap on globally available visitor statistics for nature areas, a group of researchers from around the world including the authors of this paper formed an informal research project. The researchers' disciplinary backgrounds and interests in visitor data differ broadly. While part of the team originates in the domain of visitor monitoring, some focus on the economic impacts of nature tourism (TAPAS group), others concentrate on the modelling and mapping of cultural ecosystem services using earth observations (FAWKES-project) and again others work on nature conservation and how it may benefit from nature tourism (BIOPAMA.org). A kick-off workshop was held at the Joint Research Centre of the European Commission, Ispra Italy (January 2018) to discuss the different perspectives and interests and to elaborate the following key questions:

- What visitor data for nature areas exist around the world?
- How to obtain existing data most efficiently?
- How to store and share gathered visitor data?
- How to deal with data quality issues?
- What kind of analyses can be done with the data and what conclusions and messages may be elaborated?

A follow-up workshop was held in the end of April at UFZ, Leipzig Germany focusing on the so far gathered data and its geo-statistical analysis. The data collection will be pre-tested with at least two case study countries, one of which is Finland. Additional countries may be selected among the ACP-countries (Africa-Caribbean-Pacific) that are the case study countries of the BIOPAMA project. The approach of the visitor data collection will be presented to representatives of the ACP countries during six regional inception workshops within each of the six BIOPAMA project regions.

Results

As a starting point for future data collection, and to ensure data quality standards, a required metadata schema was developed, the GD-PAVIS (Global Database-Protected Areas Visits), which matches the WDPA metadata format. The GD-PAVIS schema includes information on the study site, a definition on the type of the data collected, basic information on the data collection method and a data quality indicator.

A data collection web-interface has been developed that allows anyone to submit data online and thereby to contribute to the data base http://rris.biopama.org/visitor-reporting.

So far, data collection resulted in total annual visitor counts for approximately 1,500 separate nature and/or protected areas (see Figure 1).
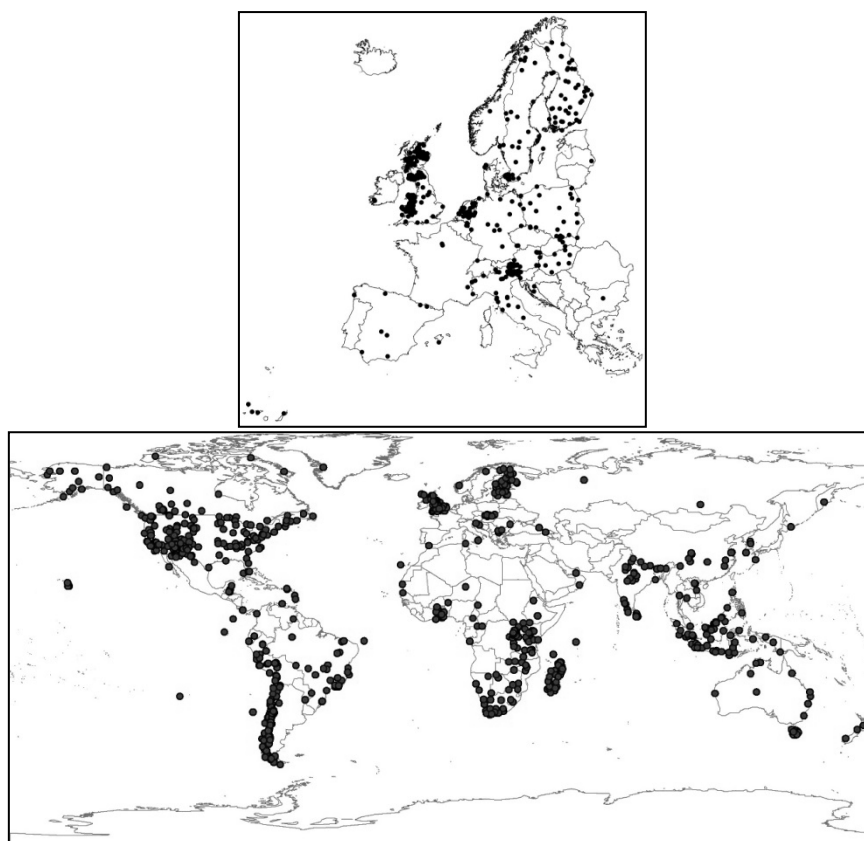
Figure 1: Nature and protected areas with annual visitor statistics; left: data presented within Schägner et al. (2017); right: extended global data collection (unpublished).

Conclusion

Pure accurate annual visitor data for nature areas are basic, but very relevant piece of information. They are not only the primary variable determining the economic value of nature recreation and tourism, but also the starting point for the analysis of any adverse environmental effects that intense visitation may cause.

There is still insufficient aggregated visitor data on the international scale; far less than for example on recreational valuation accounts. This is somehow surprising, as visitor numbers seem to be the driving force in the overall economic value of different nature areas.

To overcome this gap in data availability we aim at constructing a global visitor database that is to be up-dated on an annual basis.

References

Balmford, Andrew, Jonathan M. H. Green, Michael Anderson, James Beresford, Charles Huang, Robin Naidoo, Matt Walpole, and Andrea Manica. 2015. "Walk on the Wild Side: Estimating the Global Magnitude of Visits to Protected Areas." *PLoS Biol* 13 (2): e1002074. https://doi.org/10.1371/journal.pbio.1002074.

Ceballos-Lascurain, H. 1996. "Tourism, Ecotourism, and Protected Areas: The State of Nature-Based Tourism around the World and Guidelines for Its Development." *Tourism, Ecotourism, and Protected Areas: The State of Nature-Based Tourism around the World and Guidelines for Its Development.* https://www.cabdirect.org/cabdirect/abstract/19961808274.

Liddle, M. 1997. "Recreation Ecology: The Ecological Impact of Outdoor Recreation and Ecotourism." *Recreation Ecology: The Ecological Impact of Outdoor Recreation and Ecotourism.* https://www.cabdirect.org/cabdirect/abstract/19981802087.

METLA, (Metsähallitus). 2009. "Kansallispuistojen ja retkeilyalueiden kävijöiden rahankäytön paikallistaloudelliset vaikutukset (in Finnish only)." 3017/52/200. Metsähallitus, Luontopalvelut yhteistyössä Metsäntutkimuslaitoksen kanssa.

Schägner, Jan Philipp, Luke Brander, Joachim Maes, Maria Luisa Paracchini, and Volkmar Hartje. 2016. "Mapping Recreational Visits and Values of European National Parks by Combining Statistical Modelling and Unit Value Transfer." *Journal for Nature Conservation* 31 (June): 71–84. https://doi.org/10.1016/j.jnc.2016.03.001.

Schägner, Jan Philipp, Luke Brander, Maria Luisa Paracchini, Joachim Maes, Florian Gollnow, and Bastian Bertzky. 2018. "Spatial Dimensions of Recreational Ecosystem Service Values: A Review of Meta-Analyses and a Combination of Meta-Analytic Value-Transfer And," Ecosystem Services, .

Schägner, Jan Philipp, Joachim Maes, Luke Brander, Maria-Luisa Paracchini, Volkmar Hartje, and Gregoire Dubois. 2017. "Monitoring Recreation across European Nature Areas: A Geo-Database of Visitor Counts, a Review of Literature and a Call for a Visitor Counting Reporting Standard." *Journal of Outdoor Recreation and Tourism* 18 (June): 44–55. https://doi.org/10.1016/j.jort.2017.02.004.

WTTC, (World Travel & Tourism Council). 2018. "TRAVEL & TOURISM GLOBAL ECONOMIC IMPACT & ISSUES 2018." https://www.wttc.org:443/research/economic-research/economic-impact-analysis/.