

79 Recreation and tourism monitoring under increased pressure: practical tools and approaches for sustainable management

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This session will be organized as a discussion panel with short introductory presentations (approx. 15-20 minutes) and a discussion after each presentation, first between the panelists, and afterward opened to the public. We will cover an integrative view of the available technological tools to monitor visitor impacts on protected areas and their relationship with visitor preferences on nature (i.e., cultural ecosystem services). With the increased visitation to nature, especially to parks and protected areas (PPA), there is a growing need for tools that allow rapid gathering of data regarding the visitor preferences in PPA and their impact on the landscape. The session aims to achieve an overview of how the complexity of the combination of increasing visitation with degradation of natural features can be addressed by integrating different methods.

In this session, we will focus on how modern tools can improve the monitoring and management of visitor preferences and impacts. We have contacted participants with a strong multidisciplinary background, with experience from method development to hands-on management. First, we will focus on methodological aspects, emphasizing social media and mobile apps as a tool to retrieve geolocated information on user preferences, and the applicability of drones on monitoring of human impacts. Second, we will address the management consequences of increased recreation and tourism visitation and discuss how we can integrate the monitoring tools and the obtained results into spatial planning to reduce conflicts and ensure long-term conservation of the PPA. The session will end with an open discussion together with the listeners.

Session part 1:

We will cover methodological opportunities for visitor monitoring. We will present and discuss established visitor tracking methods such as GPS tracking of individual tourists and trail counters or game cameras. We will expand the presentation with the possibilities of passively generated data by recreational users of activity-logging apps such as Strava. We will also discuss how we can obtain tailored spatial data from areas of interest using high-resolution imagery obtained from overlapping photographs using Structure-from-Motion (SfM), both from aerial photographs (i.e., drones) and hand-held cameras.

There will be a short conversation over how these methods can be combined to take advantage of their strengths, together with the potential new applications of these methods.

Session part 2:

We will present how the methods mentioned in the first part of the session can be integrated by managers to improve their practices. The session will continue towards management challenges in spatial planning (e.g., fragmented habitats, protection of endangered species or infrastructure development) and the use of collaborative processes for integrating public input and values into sustainable recreation management practices.

There will be a short conversation integrating the main conclusions from this part of the session, followed by an open discussion with the audience.

We strongly encourage the audience to pose questions and comments.