



The 9th International Conference on Monitoring and Management of Visitors in Recreational and Protected Areas (MMU9)

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

ABSTRACT BOOK

REVISED VERSION





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Introduction

Welcome

It is our pleasure to welcome you to the 9th international Conference on *Monitoring and Management of Visitors in Recreational and Protected Areas* (MMV9) with a program including keynote speeches, organized and poster sessions, a half-day field trip, social events and post conference trips.

This is the first time that France has hosted an MMV Conference. Our country is ranked as the world's top tourist destination, thanks largely to its culture, art, and gastronomy, as well as popular cities such as Paris and Bordeaux. On the other hand, France's potential as a destination for outdoor recreation and nature-based tourism is not hugely publicized, despite its many unique features in this respect: varied climate and natural assets (shoreline, mountains, lakes, and forests), large expanses of countryside, and a network of protected natural areas, to name but a few.

France's protected areas are often free to access for the general public. However, in contrast with other countries, nature conservation in specific areas is much less widespread. Where it does take place, it is often centered on territories that are perceived to be "attractive", and where many conflicting activities are practiced. This may be one of the reasons why contractual tools and regional park systems are quite popular in France. The MMV Conference offers an excellent opportunity to discuss the situation in France in greater depth.

The theme proposed for the conference was "*recreation, place and local development*". This reflects our assumption that recreational areas are not just physical assets designed to receive visitors for the purpose of leisure - which in itself would already be something of great importance - but that they reflect deeper social phenomena, as demonstrated through the range of organized sessions dedicated to discussing questions such as environmental education and economic development, but also emerging themes such as social integration, community resilience, environmental justice, and health. The traditional topics covered by MMV Conference reflect an evolving society: with innovations in monitoring techniques (both on people and nature), focus on new populations (Y generation, ethnic minority) and a larger concern for individual engagement and participative management.

The 9th Edition of MMV is co-hosted by Irstea and BSA. This would not have been possible without significant contributions from a large number of additional partners and sponsors as well as our national scientific and organizing committee. We would like to take this opportunity to thank everyone for their help.

After two years of planning, we are proud to announce that we have more than 160 presentations from 30 countries, meaning that the conference will host over 200 participants from across the globe. We are honored that the International Steering Committee has given us the opportunity to be part of this great MMV community, which organized its first meeting in 2002. We hope you will enjoy the conference as much as we enjoyed organizing it.

If you can't be with us in person, we hope that you will enjoy reading our publications.

All the very best from the organizing committee.

Jeffrey Dehez
Chair of MMV9 Conference

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The effect of interpretation by local guides in burabay aspiring geopark, Kazakhstan

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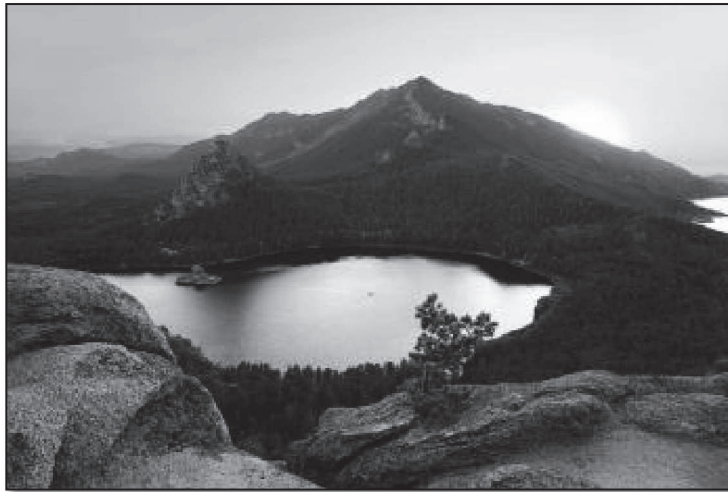
Dauletov Erbol, Deputy Chair of Kazakhstan National Committee on UNESCO Global Geoparks

Aisha Woodward, University College "Turan", Student

Burabay National Park was founded in 2000 with the area of 83 511 ha and is located in the north of the country near the capital of Kazakhstan. Over 1 000 000 tourists come to Burabay annually including up to 500 000 in the summer time. The numbers grew significantly from 120 000 people in 2011 and 12 000 people in 2005 respectively. Most tourists are attracted by outdoor recreation activities including hiking, fishing, horse back riding etc. In a recent study, Burabay was named the most popular destination among CIS destinations for tourists from neighboring Russia.

Since 2017 Burabay has received the status of an Aspiring Geopark, and currently, there are ongoing efforts to nominate the territory of the national park and adjacent territories to UNESCO Global Geopark. Unique geological formations such as in-depth magmatic rocks and metamorphic mountain rocks are represented in the territory. There are 14 picturesque lakes in Burabay and uniquely formed rocks that are associated with many legends told by local people. 757 species of plants including 95 rare species, 305 vertebrate species of animals including rare and endangered 200 species of birds are found in the park. All these create vast opportunities for geotourism, ecotourism, different sporting activities, heritage tourism etc.

The study **aims** to look at the effect of interpretation provided by local guides to visitors in Burabay National Park. The guides were selected and trained among representatives of local community within geopark project. The **methods** used included questionnaires and in-depth interviews. The questions asked included not only the ones that can reveal the usefulness of interpretation, but also its effect on satisfaction level and destination loyalty. Can the local guides transmit the love and passion for their land to visitors? How perceptive the tourists are for hearing the legends "first-hand" from locals? Finally, can the management of the park employ the "soft" management approaches by proper selection and training of the guides and appropriate interpretation techniques? These and other questions are answered in this study. The **results** of the study show that interpretation and environmental education can be used as powerful management tool in combination with other tools. The role of museum visitation prior to the actual visits as well as the use of information panels can increase the efficiency of the tool. The study confirms that tour guide interpretation influences tourist satisfaction levels and has a positive effect on destination loyalty.



Borovoye Lake and Zhumbaktas Mountain in Burabay National Park

References

- Manning R., (2012) *Managing Outdoor Recreation: Case Studies in the National Parks Reserves and National Parks of Kazakhstan*, (2006)
<http://apgazeta.kz/2017/12/18/eto-novyj-drugoj-kurort-burabaj/>