

The 6th International Conference on Monitoring and Management of Visitors in Recreational and Protected Areas

Outdoor Recreation in Change – Current Knowledge and Future Challenges

Stockholm, Sweden, August 21–24, 2012



PROGRAM

PARTNERS



SPONSORS



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Photos: Ulrika Håård

THE 6TH INTERNATIONAL CONFERENCE ON MONITORING AND MANAGEMENT OF VISITORS IN RECREATIONAL AND PROTECTED AREAS

Co-chairs

Professor Peter Fredman, Mid Sweden University
Professor Marie Stenseke, University of Gothenburg

Local planning committee

Peter Fredman, Mid Sweden University (Co-chair)
Marie Stenseke, University of Gothenburg (Co-chair)
Anders Mossing, Mid Sweden University (Extension specialist)
Anneli Åhman, Mid Sweden University (Administrator)
Andreas Hallberg, Mid Sweden University (Budget)
Hanna Liljendahl, Mid Sweden University (Editor, graphic design)

Local reference group

Anders Lindhagen, Swedish University of Agricultural Sciences
Gabriel Bladh, Karlstad University
Mattias Boman, Swedish University of Agricultural Sciences
Lars Emmelin, Blekinge Institute of Technology
Linda Lundmark, Umeå University
Christina Frimodig, Swedish Environmental Protection Agency
Ulf Silvander, Swedish Association for Outdoor Organizations

International advisory committee

Tetsuya Aikoh – Hokkaido University, Japan
Arne Arnberger – University of Natural Resources & Applied Life Sciences, Austria
David Cole – Aldo Leopold Wilderness Research Institute, USA
Terry Daniel – University of Arizona, USA
Don English – United States Department of Agriculture – Forest Service, USA
Martin Goossen – Wageningen University and Research Centre, Alterra, The Netherlands
Wolfgang Haider – Simon Fraser University Vancouver, Canada
Marcel Hunziker – Institute for Forest, Snow & Landscape Research, Switzerland
Robert E. Manning – School of Natural Resources, University of Vermont, USA
Andreas Muhar – University of Natural Resources & Applied Life Sciences, Austria
Ulrike Pröbstl – University of Natural Resources & Applied Life Sciences, Austria
Dominik Siegrist – University of Applied Sciences Rapperswil, Switzerland
Tuija Sievänen – Finnish Forest Research Institute, Finland
Liisa Tyrväinen – Finnish Forest Research Institute, Finland

Field trip partners

The Archipelago Foundation
Tyresta National Park
Stockholm County Board

About the Conference

The MMV conference provides a forum for presentations and other exchanges of ideas and experiences related to the monitoring and management of visitors in recreational and protected areas. The emphasis is on policies, problems, practices and innovative solutions, and will be of relevance to both managers and researchers.

Previous MMV conferences

2002	Vienna, Austria	2008	Montecatini Terme, Italy
2004	Rovaniemi, Finland	2010	Wageningen, The Netherlands
2006	Rapperswil, Switzerland		

Friluftsliv i förändring

The organizing consortium of the sixth MMV conference is the Swedish national research program Friluftsliv i förändring (Outdoor Recreation in Change) – an interdisciplinary research program for the study of outdoor recreation and nature-based tourism supported by the Swedish Environmental Protection Agency. The program is a network involving 15 researchers from seven universities and colleges; Mid Sweden University, University of Gothenburg, Karlstad University, Örebro University, Umeå University, Blekinge Institute of Technology, and the Swedish University of Agricultural Sciences.

www.friluftsforskning.se

WELCOME

It is our pleasure to welcome you all to the 6th *International Conference on Monitoring and Management of Visitors in Recreational and Protected Areas (MMV)* and a program including six keynote, 155 oral and 23 poster presentations, a half day field trip, special guests, local food and entertainment.

Sweden is globally known for excellent outdoor recreation opportunities based on a Right of Public Access. Participation has historically been associated with the Nordic 'friluftsliv' tradition, but more recently there are signs of changing recreation behaviors indicative of broader societal changes such as urbanization, globalization and technical developments, as well as more localized factors like accessibility and resource management actions. The Eco-tourism Society of Sweden developed the first national quality label for nature tours in Europe, and the number of nature-based tourism businesses is growing. In December 2010 the Swedish parliament voted for the government bill 'The Future of Outdoor Recreation' which was followed by a process where measurable goals were identified. One conclusion from this work was a call for good knowledge and high quality data in order to implement and evaluate a policy serving the need of the general public. The MMV conference offers an excellent opportunity to discuss the Swedish experiences in a broader international context.

The 2012 MMV program covers a broad range of topics on outdoor recreation and nature-based tourism from more than 30 countries around the world. While different aspects of visitor monitoring and management are at the core of the conference, the replies to our call for papers clearly indicate a supply of related research which goes far beyond these central topics. The main theme of the 2012 MMV conference is *Outdoor Recreation in Change – Current Knowledge and Future Challenges*. This is to reflect not just changes in outdoor recreation participation and behavior alone, but also changes in management of recrea-

tional areas and society in general that will impact the future of outdoor recreation. A future we believe is of great interest not only to other researchers, but just as much to natural resource managers, park rangers, foresters, policy makers, planners, environmentalists, tourism operators and the outdoor industry – just to mention a few.

The organizing consortium of the 2012 MMV conference is the Swedish national research program *Friluftsliv i förändring* (Outdoor Recreation in Change) – an interdisciplinary research program for the study of outdoor recreation and nature-based tourism supported by the Swedish Environmental Protection Agency. But this conference would not have been possible without significant contributions from a large number of additional partners and sponsors. Thank you so much!



Peter Fredman



Marie Stenseke



GENERAL INFORMATION

Name badge

Please wear your name badge while attending the sessions and events, as it indicates that you are registered and permitted to attend.

Oral presentations

Each lecturer will have 15 minutes for the presentation and 5 minutes for questions/discussions. Make sure you download your presentation to the computer in your lecture room before your session begins. There is a room-keeper in each lecture room who will assist you with practical matters. Each session also has a chair person who is responsible for time keeping and introduction of each presenter. Please introduce yourself to the chair before your session begins.

Poster sessions

The poster session is Wednesday August 22 at 15.00–16.00 in a separate room next to the restaurant and registration area in the main building. Refreshments will be served and an award for best poster will be given at the conference dinner.

Field trip and social events

See information on page 8.

Exhibitions

The exhibition area is located in the main building close to the registration area.

Recreation facilities

The conference center has a 25 meter indoor swimming pool, saunas and a small gym free of charge to conference participants. There are also marked trails for walking / running, a tennis court, canoes and a small beach.

Internet

All conference participants have free access to the Internet through wireless and cable connections (in the rooms). Access codes for wireless Internet is available at the reception.

Electricity

Voltage: 220-240 V. Primary Socket Type: Europlug.

Meals and refreshments

All meals and refreshments, except field trip, are served at the main building (no. 9 on the map). Breakfast is served between 7 a.m. and 9 a.m.

Credit cards

All major credit cards are accepted at the conference center, and at most restaurants, hotels and stores in Sweden.

Money exchange

You can use your credit card for most transactions, but if you need cash small amounts are available at the reception using your credit card.

Medical care

You can call the Stockholm Health Care Guide Hotline (Vårdguiden) free of charge (minus the small charge for a local phone call) for medical advice 24 hours a day by calling +46(0)8 320 100. Press option #1 for general information about health care in Stockholm and #3 for personal advice by a nurse. For more information, visit www.vardguiden.se.

Emergency number

General emergency number (police, ambulance, firefighters etc): **112**

Conference "emergency line"

If you run into problems during the meetings, you are welcome to call the conference organizer at +46 (0)70 273 69 53 and we will do our best to help you.

For questions regarding lodging, please contact the conference center at +46 (0)8 571 490 00 or dial 6 on the phone in your room.

Transportation

Busses 433 and 434 take you from Djurönäset to subway station Slussen, which is located two stations away from the central railway station (T-centralen). Tickets can be purchased at the reception. Please note that you cannot buy tickets on the bus. A route planner for public transportation is available at www.sl.se/en

If you leave by taxi we recommend the local company Värmdö Taxi, +46 (0)8 57035700. Ask for a fixed price if you are going straight to the airport.

More visitor information about Stockholm






www.visitstockholm.com

MAP, DJURÖNÄSET



- 1-7 Conference houses
- 8 Seregården
- 9 Reception, Lobby & Restaurant
- 10 Pergola
- 11 The red cottage
- 12 Firewood sauna
- 13 The boathouse
- 14 Laundry & Goods reception

- A Tennis court
- B Fotball pitch
- C Petanque court
- D Canoes-boats
- E Running track
- F Swimming pool
- G Steamboat jetty
- H Beach
- I Fågelsången Island
- J Grilling place
- K Bicycles
- L Bus stop
- M Group meeting points
- S Djurönäset Spa
- P1 Parking
- P2 Parking Seregården

-  Path
-  Running track
-  Gravelled nature trail
-  Nature trail
-  Public road

SOCIAL EVENTS

The conference has three main social events (besides lunches, refreshments and the field trip) – the conference appetizer Tuesday night, Wednesday dinner and the conference dinner Friday night.

Conference appetizer, Main hall, Tuesday Aug 21, 19.00–21.00

This welcome reception is a mix of food, entertainment and information. It is co-hosted by Värmdö municipality and will include information from our field trip hosts as well as local marine heritage.

Wednesday evening program, Main hall / restaurant, Wednesday Aug 22, 19.15–late

The evening program starts at 19.15 with a slideshow by Staffan Widstrand, a celebrated nature photographer and founder of ‘Wild Wonders of Europe’ – a project featuring the natural wonders of Europe. Dinner starts at 20.00 in the restaurant.

Conference dinner, Main hall, Friday Aug 24, 19.15–late

A mix of good food, friendship and Swedish entertainment – this is simply the highlight of the social program, and perhaps even the entire conference... Our toastmaster this evening is Prof. Lars Emmelin. Information about the dinner is provided in the welcome package.

FIELD TRIP

Thursday August 23, 12.30–21.00

The in conference field trip Thursday afternoon will be a combination of a boat tour in the Stockholm archipelago and a visit at Tyresta National Park south of Stockholm.

For this field trip we will divide the conference delegates into two groups of equal size. Group A will start with the boat tour and then visit Tyresta national Park, while group B will first visit Tyresta and then do the boat tour. Both tours have the same content. You will receive information about your group upon registration. If you for some reason want to change group, please change with a participant assigned to the other group.

The tour includes some easy hiking and you should dress for outdoor activities. Refreshments and a field dinner are included.

Group A

- 12.15 Meeting time at Djurönäset jetty for boat departure. Boat tour of Stockholm archipelago including visit at Nämndö island with animal farm, culture walks and nature reserve. Information about management of recreational and protected areas in coastal environments. Refreshments. Hosted by the Archipelago Foundation (www.archipelagofoundation.se)
- 16.30 Arrival by boat at Dalarö, transfer to bus.
- 17.00 Visit at Tyresta National Park including forest hike and the House of National Parks. Information about recreation management in an urban proximate wilderness area. Dinner. Hosted by Tyresta National Park (www.tyresta.se)
- 20.00 Departure by bus from Tyresta.
- 21.00 Arrival at Djurönäset.

Group B

- 12.15 Meeting time outside Djurönäset lobby for bus departure. Visit at Tyresta National Park including forest hike and the House of National Parks. Information about recreation management in an urban proximate wilderness area. Refreshments. Hosted by Tyresta National Park (www.tyresta.se)
- 16.30 Arrival by bus at Dalarö, transfer to boat.
- 16.30 Boat tour of Stockholm archipelago including visit at Nämndö island with animal farm, culture walks and nature reserve. Information about management of recreational and protected areas in coastal environments. Dinner. Hosted by the Archipelago Foundation (www.archipelagofoundation.se)
- 21.00 Arrival by boat at Djurönäset.



Photo: www.flickr.com / Henrik Ismarker

ORGANIZED SESSIONS

- Management and visitor experience in Europe's wilderness areas
Session organizer: Stuart Cottrell, Zoltan Kun
- Outdoor recreation demand trends and prognosis in the Nordic Countries
Session organizer: Tuija Sievänen
- Outdoor learning in the context of landscape – Reflect, rethink and reform
Session organizer: Anders Szczepanski
- Interpretation as strategic communication in protected area management
Session organizer: Sam H. Ham, Eva K. Sandberg
- Risk, safety and conflict in a changing outdoor arena
Session organizer: Rebecca Stenberg
- Financing of nature and landscape protection through tourism
Session organizer: Dominik Siegrist, Andreas Voth
- Tourism, hiking trails and local development
Session organizer: Áurea Rodrigues, Filipa Fernandes
- Visitor monitoring in a landscape context
Session organizer: Daniel Laven
- Recreation "betwixt and between"
Session organisers: Dorothy Fox, Katherine King
- Communities in change: managing local tourism impacts
Session organizer: Linda Lundmark
- Recent advances in visitor monitoring: GPS tracking and GIS technology
Session organizer: Isabelle Wolf
- Sustainable tourism in Sweden's protected areas
Session organizer: Ulrika Karlsson, Ingvar Jundén
- Nature and health
Session organizer: Lisa Bergström
- Values of outdoor recreation– Economics, perceptions, attitudes and beyond
Session organizer: Mattias Boman, Marie Stenseke, Peter Fredman
- Addressing challenges in managing recreation in protected areas: A cross-cultural approach
Session organizer: Eick von Ruschkowski, Arne Arnberger, Robert C. Burns
- Current research on informal trails: Effects on ecology and landscape fragmentation
Session Organizers: Yu-Fai Leung Catherine Pickering

KEYNOTE SPEAKERS



Klas Sandell

Outdoor recreation in change – What about Sweden?

*Professor Klas Sandell, Karlstad University, Sweden
Wednesday, August 22, 10.10–10.50, Main Hall*

Klas Sandell has a B.A. in Human Geography, a Ph.D. in Water and Environmental Studies and is now Professor in Human Geography at the Department of Geography and Tourism, Karlstad University, Sweden. He has also a background as a teacher in outdoor recreation at a folk high school and he has been a visiting professor at the Department of Sports, Leisure and Learning, Education in Arts and Professions at Stockholm University.

His overall research focus is the interrelationship between development strategies and human relation with "nature" (in terms of landscape, views and practices) especially in terms of outdoor recreation and nature based tourism.

Klas is also an editor and co-author of several wide spread text books in Sweden with regard to outdoor recreation, its history and practices and education for sustainability. In his presentation he will introduce some characteristics with regard to outdoor recreation and nature-based tourism in Sweden as well as highlight some themes that could be of special interest such as the right of public access and current political initiatives.



Rauno Väisänen

Challenges of visitor monitoring and management in protected areas

*Director Rauno Väisänen, Metsähallitus Natural Heritage Services, Finland
Wednesday, August 22, 10.50–11.30, Main Hall*

Metsähallitus Natural Heritage Services (NHS) manages all the national parks and the other state-owned protected areas, wilderness areas, national hiking areas and public waters in Finland. Dr Väisänen has been the Director of NHS since 1995. He has a Ph.D. in zoology (1984) and long experience in the environment administration. He has been active in international organizations, e.g. WWF, IUCN and EUROPARC.

In his presentation, Dr Väisänen will introduce the Finnish centralized way of monitoring and managing the national protected area network, good practices, efficient toolkit and the importance of international cooperation and feedback. He will bring to our focus the future challenges of recreation management, including understanding ecosystem services, capability of measuring benefits, and connection to national and international policies.

Current and future issues in natural area tourism

*Associate Professor Susan Moore, Murdoch University, Australia
Thursday, August 23, 11.00–11.45, Main Hall*

Associate Professor Susan Moore leads the Nature Based Tourism Research Group at Murdoch University, Western Australia. Her expertise is natural area tourism, protected area management and biodiversity conservation policy. She has 150 publications including journal articles, books and reports and has successfully led more than 30 research projects delivering outputs to industry, government and non-government organizations, and the Australian Research Council. She currently leads the national ARC Project on National Park Positioning and Visitor Loyalty, the Policy Research Program for the Western Australian Centre of Excellence for Climate Change and Tree Health, and she leads the Social and Institutional Futures Program within the Landscapes and Policy National Research Hub at University of Tasmania. Current honorary roles relevant to protected areas include Governor, World Wide Fund for Nature – Australia, and member, IUCN World Commission on Protected Areas.

My talk will cover at least the following five complexities associated with natural area tourism. What is “natural” and does it matter? Is natural area tourism becoming mass tourism? Where might technology take us with our visitors and in our research? What progress have we made in adaptive management over the last decade and where to now? And what do global issues such as population growth, climate change, poverty, water scarcity, peak oil and the global financial crisis mean for natural areas and their tourism?

Managing difference in shared recreational space: understanding the role of the body, movement and emotion

*Dr. Katrina Myrvang Brown, James Hutton Institute, Scotland UK
and Centre for Rural Research, Norway
Friday, August 24, 11.00–11.45, Main Hall*

Katrina Myrvang Brown is a senior researcher in human-environment relations at the interdisciplinary James Hutton Institute in Scotland. She has led and contributed to a number of projects relating to outdoor access and recreation, dealing with issues such as participation, benefits to economy and health, implementation of new legislation (the Land Reform (Scotland) Act 2003), commodification, and conflict management. A key goal of her research is to understand the role of formal and informal regulatory mechanisms – from law to cultural norms – in striking a balance between the health and social inclusion benefits of outdoor recreation participation, and environmental and land management objectives.

To explore outdoor recreation as an embodied and socially and geographically situated practice, Katrina and colleagues have developed innovative mobile and visual methods; in particular extending ‘go-along’ interviewing to include ‘headcam’ video techniques.

In her presentation she will talk about how she has used these methods to explore the key spaces of encounter and ‘contact zones’ of outdoor recreation, focussing on the role of the body, movement and emotion in the crucial but often-contested choreography of sharing space across mobile and species difference. This will be illustrated with reference to conflicts surrounding mountain biking and wildlife disturbance.



Susan Moore



Katrina Myrvang Brown



Thomas A Heberlein



Bi Puranen

Attitudes, norms and the art of visitor management

*Professor Thomas A Heberlein, University of Wisconsin, USA and the Swedish University of Agricultural Sciences
Friday, August 24, 15.30–16.10, Main Hall*

Thomas Heberlein is an environmental social psychologist who has had a long interest in outdoor recreation. He is the co-author of *Carrying Capacity in Recreation Settings* (with Bo Shelby) and is currently completing *Navigating Environmental Attitudes* to be published by Oxford University Press.

Heberlein began studies on National Park visitors to establish social carrying capacity for rafting on the Colorado River in the Grand Canyon. He and Jerry Vaske developed measures of crowding and visitor satisfaction that have been used in hundreds of studies. Heberlein was visiting professor in the Department of Tourism Studies at Mid Sweden University and a guest Researcher at The European Tourism Research Institute. He has served on three U. S. National Research Council Committees related to visitor management and monitoring and has taught at the National Park Service Albright Training Academy. Heberlein is a Professor Emeritus in the Department of Community and Environmental Sociology at the University of Wisconsin-Madison (USA) and Professor in the Department of Wildlife, Fish and Environmental Studies at the Swedish University of Agricultural Sciences. In his lecture, Heberlein will focus on how we deal with attitudes and attitude studies in our efforts to understand visitors and advise managers.

The presentation by our keynote speaker Professor Thomas Heberlein will be based on his new book *Navigating Environmental Attitudes* to be released August 27 by Oxford University Press. Copies of the book will be available at the conference.

Values change the world

*Secretary General Bi Puranen, World Values Survey association (WVSA)
Friday, August 24, 16.10–16.40, Main Hall*

The World Values Survey (WVSA) is a worldwide network of social scientists studying changing values and their impact on social and political life. From 1981, the WVS in collaboration with EVS (European Values Study) has executed five waves of representative national surveys in 97 societies containing almost 90 percent of the world's population. These surveys show pervasive changes in what people want out of life and what they believe. At present the WVS is carrying out a sixth wave of surveys, that will cover at least 50 countries. Assoc. Professor Puranen will present results from this new wave.

The presentation will be followed by a panel discussion on outdoor recreation in change and future challenges.



Photo: Staffan Widstrand

SPECIAL GUEST

Staffan Widstrand

*Managing Director, Wild Wonders of Europe / photographer
Wednesday, August 22, 19.15–20.00, Main Hall*

Wild Wonders of Europe is about sharing the amazing natural wonders of our continent with 700 million Europeans and the world!

Many Europeans know much more about nature in Africa or America than about nature on their own doorstep. Wild Wonders of Europe want to change that using amazing images to create a love affair between us (that includes you!) and Europe's variety of life.

Wild Wonders of Europe assigned 69 of the continent's most talented and committed nature photographers on a great Quest, to conduct 125 photographic missions across 48 European countries. Wild Wonders of Europe is the largest photography-based conservation communication initiative in the world.

Staffan Widstrand is a prize-winning photographer and writer. He is a founding member of the Swedish Ecotourism Society, chief consultant behind the development of the Swedish quality label Nature's Best, for nature-based tourism products and the author or co-author of 9 books.



MAP OF SEMINAR ROOMS



Photo: Hanna Liljendahl

PROGRAM OVERVIEW

Tuesday, August 21	
19.00–21.00	Conference appetizer and welcome reception
Wednesday, August 22	
09.30–10.10	Opening session <i>Professor Peter Fredman, Mid Sweden University</i> <i>Professor Marie Stenseke, University of Gothenburg</i> <i>Director Eva Thörnelöf, Swedish Environmental Protection Agency</i>
10.10–10.50	Keynote: Outdoor recreation in change – What about Sweden? <i>Professor Klas Sandell, Karlstad University, Sweden</i>
10.50–11.30	Keynote: Challenges of visitor monitoring and management in protected areas <i>Director Rauno Väisänen, Metsähallitus Natural Heritage Services, Finland</i>
11.30–13.00	Lunch
13.00–15.00	Parallel sessions 1 ●
15.00–16.00	Refreshments + poster session
16.00–18.00	Parallel sessions 2 ●
19.15–20.00	Wild Wonders of Europe <i>Managing Director and photographer Staffan Widstrand, Sweden</i>
20.00	Dinner
Thursday, August 23	
08.30–10.30	Parallel sessions 3 ●
10.30–11.00	Refreshments
11.00–11.45	Keynote: Current and future issues in natural area tourism <i>Associate Professor Susan Moore, Murdoch University, Australia</i>
12.15–21.00	Field trip (incl. lunch, refreshments and dinner)

Friday, August 24	
08.30–10.30	Parallel sessions 4 ●
10.30–11.00	Refreshments
11.00–11.45	Keynote: Managing difference in shared recreational space: understanding the role of the body, movement and emotion <i>Dr Katrina Myrvang Brown, James Hutton Institute, UK and Centre for Rural Research, Norway</i>
11.45–13.00	Lunch
13.00–15.00	Parallel sessions 5 ●
15.00–15.30	Refreshments
15.30–16.10	Keynote: Attitudes, norms and the art of visitor management <i>Professor Thomas A Heberlein, University of Wisconsin, USA and the Swedish University of Agricultural Sciences</i>
16.10–16.40	Keynote: Values change the world <i>Secretary General Bi Puranen, World Values Survey Association</i>
16.40–17.20	Panel discussion: Outdoor recreation in change – Future challenges
17.20–17.40	Closing session
19.15	Conference dinner Awards and entertainment
Saturday, August 25	
	Post conference field trips
Sunday, August 26	
	Post conference field trips

All plenary presentations are in the Main Hall. Venue for parallel sessions, see pages 16–17.

PARALLEL SESSIONS OVERVIEW AND CHAIR PERSONS

	Date / Time	A Main Hall	B Room 7a	C Room 5a	
Parallel Sessions 1	Wednesday August 22 13.00–15.00	1A On-site visitor monitoring <i>Robert Burns</i>	1B Managing visitor impacts <i>Don English</i>	1C Outdoor recreation and ethnicity <i>Andreas Muhar</i>	
Parallel Sessions 2	Wednesday August 22 16.00–18.00	2A Visitor monitoring systems <i>Arne Arnberger</i>	2B Integrating outdoor recreation and nature conservation <i>Odd Inge Vistad</i>	2C Segmenting outdoor recreation participation <i>Wolfgang Haider</i>	
Parallel Sessions 3	Thursday August 23 08.30–10.30	3A Theoretical developments in outdoor recreation research <i>Kreg Lindberg</i>	3B Spatial planning, resolving conflicts and safeguarding access <i>Lars Emmelin</i>	3C Children and nature: experiences, learning and health <i>Karin Andersson</i>	
Parallel Sessions 4	Friday August 24 08.30–10.30	4A Management strategies in outdoor recreation <i>Ingrid Schneider</i>	4B Recreation "betwixt and between" * <i>Katherine King</i>	4C Education, outdoor learning and communicating nature <i>Klas Sandell</i>	
Parallel Sessions 5	Friday August 24 13.00–15.00	5A Managing visitor experiences <i>Patricia Stokowski</i>	5B Nature and health * <i>Lisa Bergström</i>	5C Nature experiences, environmental awareness and attitudes <i>Johan Öhman</i>	

* Organized paper session

** Organized panel or round table session

*** Outdoor workshop, meet outside main entrance

	D Room 3a	E Room 2a	F Room 1a	G Room 6a	H Start: Outside main entrance
	1D Managing nature-based tourism <i>Linda Lundmark</i>	1E Management and visitor experience in Europe's wilderness areas ** <i>Zoltan Kun</i>	1F Outdoor recreation demand trends and prognosis in the Nordic Countries * <i>Tuija Sievänen</i>		1H Outdoor learning in the context of landscape – Reflect, rethink and reform *** <i>Anders Szczepanski</i>
	2D The economics of outdoor recreation <i>Mattias Boman</i>	2E Interpretation as strategic communication in protected area management * <i>Eva Sandberg</i>	2F Risk, safety and conflict in a changing outdoor arena * <i>Rebecca Stenberg</i>		
	3D Financing of nature and landscape protection through tourism * <i>Dominik Siegrist</i>	3E Tourism, hiking trails and local development * <i>Filipa Fernandes</i>	3F Visitor monitoring in a landscape context * <i>Daniel Laven</i>	3G Applied outdoor recreation management <i>Liisa Kajala</i>	
	4D Communities in change: Managing local tourism impacts * <i>Linda Lundmark</i>	4E Recent advances in visitor monitoring: GPS tracking and GIS technology * <i>Isabelle Wolf</i>	4F Sustainable tourism in Sweden's protected areas** <i>Ulrika Karlsson, Ingvar Jundén</i>	4G Crowding and recreation carrying capacity <i>Robert Manning</i>	
	5D Values of outdoor recreation – Economics, perceptions, attitudes and beyond * <i>Mattias Boman</i>	5E Use of GIS and GPS technology <i>Hans Skov-Petersen</i>	5F Addressing challenges in managing recreation in protected areas: A cross-cultural approach ** <i>Eick von Ruschkowski</i>	5G Current research on informal trails: Effects on ecology and landscape fragmentation * <i>Yu-Fai Leung</i>	

PARALLEL SESSIONS I – Wednesday August 22, 13.00–15.00

IA On-site visitor monitoring

Chair: Robert Burns
Main Hall

Visitor monitoring from a management perspective – Experiences from Sweden
Rosemarie Ankre, Peter Fredman, Anders Lindhagen

Tourist distribution in time and space: A case from the Icelandic Highlands
Rögvaldur Ólafsson

Counting visitors in alpine areas: how sensor range, clothing, air temperature and visitor volume affects passive infrared counter accuracy
Oddgeir Andersen, Vegard Gundersen, Line Camilla Wold, Erik Stange

MTB monitoring in Arrábida Natural Park, Portugal
Ricardo M. Nogueira Mendes, Alexandra Silva, Clara Grilo, Luís M. Rosalino, Carlos P. Silva

Monitoring coastal uses of the Marine Reserve of La Reunion using aerial surveys, Reunion Island, France, West Indian Ocean
Anne Lemahieu, Gwenaëlle Pennober, Gilbert David, Franck Lavigne, Karine Pothin

Recreational use and visitor motivations at Torfhaus visitor area in Harz National Park, Germany
Eick von Ruschkowski, Arne Aramberger, Robert Burns

IB Managing visitor impacts

Chair: Don English
Room 7a

Welsh seasonal habitat vulnerability mapping
Joe Roberts, Durwyn Liley

Monitoring and management of bush camp grounds in an Australian national park
Kelly Hunt de Bie, Peter Vesk

A conceptual model for assessing wildlife vulnerability to human activity at visitor sites in Svalbard
Kirstin Fangel, Nina E. Eide, Dagmar Hagen, Anne Cathrine Flyen, Odd Inge Vistad

How effective are planned buffer zones in reducing recreation impacts on an urban national park? – A combined visual discrete choice and agent-based modeling approach
Arne Aramberger, R. Eder, K. Taczanowska, R. Deussner, G. Stanzer, T. Hein, S. Preiner, I. Kempter, U. Nopp-Mayr, K. Reiter, I. Wagner, R. Jochem

Horse riding in protected areas: And the dung?
Teresa Cristina Magro, Fabiola Saporiti Angerami de Andrade

A research agenda for adventure racing events that take place in natural settings and protected areas
David Newsome, Carol Lacroix

IC Outdoor recreation and ethnicity

Chair: Andreas Muhar
Room 5a

Colourful recreation in green: Review of research on immigrants, greenspace and society
Marjolein E. Kloek, Arjen E. Buijs, Jan J. Boersema, Matthijs G.C. Schouten

Exploring recreation pattern differences among Taiwanese Hoklos and Hakkas and Anglo-Americans
Chieh-Lu Li, Robert C. Burns, Garry E. Chick

Race, ethnicity, and outdoor recreation in the United States: Tests of the marginality, ethnicity, and discrimination hypotheses with national-level survey data
Daniel H. Krymkowski, Robert E. Manning, William Valliere

Fear and loathing in the forest: Immigrant perceptions and experiences of natural area recreation in New Zealand
Brent Lovelock, Kirsten Lovelock, Carla Jellum, Anna Thompson

ID Managing nature-based tourism

Chair: Linda Lundmark
Room 3a

Governance and sustainable tourism in World Heritage sites – Can sustainable tourism serve as a tool for improved protection of UNESCO World Heritage sites?
Lea Ketterer Bonnelame, Dominik Siegrist

A supply-side perspective on tourism enterprises in biosphere reserves – case study of Biosphere Reserve Rhön
Felix Kraus, Cornelius Merlin

Hoge Kempen National Park (Belgium) – The economic impact of visitors as a crowbar for nature conservation
Johan Van Den Bosch

Tourism destination brand image of Beypazari as perceived by hikers in Ankara
Eray Çağlayan

Tourism trade-offs: An analytical framework for visitor management in fresh water systems
May Carter, Pierre Horwitz

Certification as a tool for sustainable development in winter sport destinations – challenges for “old” and “new” European skiing areas
Ulrike Pröbstl

IE Management and visitor experience in Europe's wilderness areas

Chair: Zoltan Kun
Room 2a

The goal of this session is to link visitor management and experience in wilderness areas to ecosystem services. A series of presentations create a congruent view on implementation of protected area management and research. The concept of destination development and management is approached from different perspectives: the park, visitors, local communities, tourism stakeholders and biodiversity itself.

See the Proceedings page 71 for more information.

The economics of wilderness – Role of policy and tourism for enhancing the protection of Europe's wilderness
Zoltán Kun

IF Outdoor recreation demand trends and prognosis in the Nordic Countries

Chair: Tuija Sievänen
Room 1a

Monitoring outdoor recreation trends in Finland
Tuija Sievänen

Monitoring outdoor recreation trends in Denmark
Frank Søndergaard Jensen

Monitoring outdoor recreation trends in Sweden
Peter Fredman, Anders Lindhagen, Göran Nordström

Trends in picking of wild berries and mushrooms in Sweden 1977–2011
Anders Lindhagen, Gabriel Bladh

IH Outdoor learning in the context of landscape – Reflect, rethink and reform

Chair: Anders Szczepanski
Start: Outside main entrance

In this outdoor workshop you will try to read the landscape – its forms, patterns, colours and learning objects.

If we talk about learning for a sustainable world one part of it is not to separate text based- and non-text based learning. We argue that in the authentic encounter with the outdoor environment there exists an important source of motivation for meaningful and creative learning processes.

See the Proceedings page 85 for more information.



Photo: Peter Fredman

PARALLEL SESSIONS 2 – Wednesday August 22, 16.00–18.00

2A Visitor monitoring systems

Chair: *Arne Arnberger*
Main Hall

Balancing conservation and visitation through a comprehensive monitoring system of nature protection in Estonia
Antti Roose, Kalev Sepp

Total annual visitor monitoring: A meta-analysis
Philipp Schägner, Joachim Maes, Luisa Paracchini, Volkmar Hartje

A method of correcting over-reporting and under-reporting bias in monitoring state park visitation among the general population
Alan Graefe, Andrew Mowen, Deborah Kerstetter

Joined and online-based visitor monitoring and benchmarking
Hartmut Rein, Katharina Meifert

Monitoring human use on trails in Canada's mountain national parks
Kathy Rettie

An overview of national parks, recreational activities and visitor flows in Turkey
Eray Çağlayan, Kübra Aşan, Murat Emeksiz, Yildray Lise, Mustafa Yılmaz

2B Integrating outdoor recreation and nature conservation

Chair: *Odd Inge Vistad*
Room 7a

A method of carrying capacity for alternative recreation areas: Towards conservation thresholds and recreational potential
Alev P. Bekdemir, T. Hakan Altunçekiç

Positioning parks to meet the needs of 21st century society
Brent Moyle, Betty Weiler, Sue Moore

Norwegian protected area policy, tourism and recreation: A comparative analysis of the international context with reference to New Zealand
James Higham, Jan Vidar Haukeland, Kreg Lindberg, Odd Inge Vistad, Åshild Amundsen, Heidi Degnes-Ødemark, Debbie Hopkins

Assessing carrying capacity in protected areas trails: The Formosinho Trail – Arrábida Natural Park (Portugal)
Luis Monteiro, Carlos Pereira da Silva

The use of wildlife overpasses for outdoor recreation
Rogier Pouwels, Edgar A. van der Grift, Jolanda Dirksen, Fabrice Ottburg

On the integration of nature conservation and outdoor recreation in the rural landscape
Marie Stenseke

2C Segmenting outdoor recreation participation

Chair: *Wolfgang Haider*
Room 5a

An analysis of the visitors at the ASP World Tour Billabong Surfing Festival in Jeffrey's Bay, South Africa
Hugh Bartis, Junayne Baatjes

Outdoor recreation in times of change
Johan Arnegård, Klas Sandell

Outdoor recreation and physical activity: population segmentation of participation
Sue Williams

Segmentation of salmon anglers and analysis of their motivation to fish in the Lakselva River, Finnmark, Norway
Esten Sødal Skullerud, Stian Stensland

More than the motor: Differentiating motorized recreationists
Ingrid E. Schneider, Hyoungkil Kang

2D The economics of outdoor recreation

Chair: *Mattias Boman*
Room 3a

Mapping outdoor recreation benefits in Finland using national inventory data
Tuija Lankia, Leena Kopperoinen, Eija Pouta, Marjo Neuvonen

Combining indicators for recreational beach assessment: the case of the "Beach Plan Scheme" in South West France
Jeffrey Dehez, Sandrine Lyser

Protected areas, the tourist bubble and regional economic development
Julius Arnegger

Uncertainty in the contribution of outdoor recreation to local and national economies
Kreg Lindberg, Peter Fredman

Effects of water quality changes on recreation benefits in Finland: Combined travel cost and contingent behavior model
Tuija Lankia, Eija Pouta

Recreation travelers' carbon footprint
Donald B.K. English, Ashley Askew, J.M. Bowker

2E Interpretation as strategic communication in protected area management

Chair: Eva Sandberg
Room 2a

Interpretation as strategic communication in protected area management
Sam H. Ham, Eva K. Sandberg

Environmental messages, diver attitudes and depreciative behaviours: Does how we communicate environmental messages to recreational divers and dive tourists really matter?
Kelsey Johansen, Rhonda Koster, Len Hunt

Building a proactive conservation strategy for Mt Fuji's foreign climbers
Tom Jones, Kiyotatsu Yamamoto, Shigeo Aramaki

Landscape interpretation based on the example of the Ljubljansko barje nature park (Slovenia)
Ales Smrekar, Bojan Erhartic, Mateja Smid Hribar, Jernej Tiran

2F Risk, safety and conflict in a changing outdoor arena

Chair: Rebecca Stenberg
Room 1a

Daring Dan and Mrs Dull – The reciprocal construction of heroic risk and dull safety in organized outdoor activities
Rebecca Stenberg, Jan Insulander

Model of high-mountain hiking trails (via ferrata type) in Tatra National Park – A comparison between Poland and Slovakia in the context of the Alps
Miłosz Jodłowski, Marcin Rechciński

Car traffic in a national park: visitors' perceptions and attitudes
Dennis Kalisch

Ski touring on ski slopes – Problem or opportunity?
Elisabeth Haberfellner, Ulrike Pröbstl, Veronika Wirth

“TRYG i naturen” – research in risk and safety related to outdoor recreation and education (friluftsliv) in the coastal regions of Denmark
Søren Andkjær, Jan Arvidsen



Photos: Peter Fredman

PARALLEL SESSIONS 3 – Thursday August 23, 08.30–10.30

3A Theoretical developments in outdoor recreation research

Chair: Kreg Lindberg
Main Hall

Myplacetobe.eu – A smart way to collect landscape preferences
Martin Goossen, Jappe Franke, Henk Meeuwssen, Arjan de Jong

Rhetoric and sense of place: Implications for tourist destination management
Patricia A. Stokowski

The influence of norms on catch & release behavior in salmon angling
Stian Stensland, Øystein Aas

Context matters in behavioural recreation research
Wolfgang Haider

Methods for forecasting recreational use of natural environment
Marjo Neuvonen, Tuija Sievänen

3B Spatial planning, resolving conflicts and safeguarding access

Chair: Lars Emmelin
Room 7a

The 'Alpenplan' as spatial planning tool: a critical appraisal
Marius Mayer, Felix Kraus, Hubert Job

Outdoor recreation – an important public interest that current municipal spatial planning in Sweden cannot protect?
Lena Petersson Forsberg

Privacy concerns and common access along the Norwegian shoreline: tensions and possibilities
Margrete Skår, Odd Inge Vistad

Protected area governance conflicts in Ireland – mending poor relations and new modes of governance
Noel Healy

Balancing public access and privacy concerns along developed coastal zones: Stakeholders' preferences for management actions.
Odd Inge Vistad, Margrete Skår, Line C. Wold

Differences among hikers, runners and mountain bikers in a peri-urban park
Sebastian Rossi, Catherine Marina Pickering, Jason Byrne

3C Children and nature: experiences, learning and health

Chair: Karin Andersson
Room 5a

Being in nature and the development of personal values
Gunnar Liedtke, Katrin Hack

'Friluftsliv' and teaching methods – classroom management and relational thinking
Karl-August Haslestad

The need for sustainable management of nature play areas: A survey of environmental impacts caused by children's play
Matthew H.E.M. Browning

Parents, housing and children's contact with nature in the city – presenting four "outdoor perspectives"
Mattias Sandberg

I AM HERE! Participatory exploration of the recreational behavior of adolescents using a multiple media approach
Thomas Schuppenlehner, Andreas Muhar, Anna Höglhammer, Renate Eder, Karolina Taczanowska

3D Financing of nature and landscape protection through tourism

Chair: Dominik Siegrist
Room 3a

Maintaining high biodiversity and landscape diversity for and through tourism – approaches for co-financing models
Christina Renner, Gerd Lupp, Christian Stein, Dominik Siegrist, Olaf Bastian

Financing natural areas in Spain, a weak point of sustainable development: the case of Castilla y León
Sara Hidalgo Morán

Biodiversity and tourism: nature conservation in private protected areas in Italy
Sonia Trampetti, Sara Di Lonardo, Ralf Buckley, Antonio Raschi

Financing of nature protection through nature-based tourism – the case of the European Alps
Susanne Gessner, Dominik Siegrist

Selling nature? – Building customer relationship management (CRM) systems for nature areas
Frans J. Sijtsma, Michiel N. Daams, Janny C. Hoekstra, Herman Flohil

3E Tourism, hiking trails and local development

Chair: *Filipa Fernandes*
Room 2a

The footprints of tourism: Environmental sensitivity and impact of tourism on hiking trails in Iceland and Japan
Harald Schaller, Rannveig Ólafsdóttir, Tetsuya Aikoh

Implementing the Trans Canada Trail 2017 connectivity plan in Northern Ontario, Canada: Tourism, hiking trails and rural development
Kelsey Johansen, Kirsten Spence

Megatrend hiking and trekking? – A narrative synopsis of market research data, media reports and further presumable indicators
Luisa Vogt

Theory and reality of the field guide profession in a protected area
Yukie Kabashima, Teresa Cristina Magro, Luisa Almeida Maciel

3F Visitor monitoring in a landscape context

Chair: *Daniel Laven*
Room 1a

The governance strategy of the Dolomites World Heritage Site – From carrying capacity to carrying capability.
Cesare Micheletti, Loredana Ponticelli

Outdoor recreation destinations as model regions for adaption to climate change and protecting biodiversity
Gerd Lupp, Linda Heuchele, Christina Renner, Patrick Pauli, Dominik Siegrist, Werner Konold

The moral landscapes of Dovrefjell – Exploring relationships between morality and landscape in the struggles over a highly valued mountain area in Norway
Frode Flemsæter

New challenges for managing sustainable tourism in protected areas: an exploratory study from a landscape perspective in Sweden
Sandra Wall-Reinius, Daniel Laven, Peter Fredman

The Lavazé pass – Negotiating tourism development and landscape diversity
Loredana Ponticelli, Cesare Micheletti

3G Applied outdoor recreation management

Chair: *Liisa Kajala*
Room 6a

Swedish-Norwegian regional cooperation increases access to outdoor recreation for people with disabilities
Ingrid Karlsson

Making web-based maps accessible for elderly people: Development of an improved information source for recreational visits in natural areas
Sabine Hennig, Fritz Zobl

Managing Vatnajökull National Park
Þorvarður Árnason

Management of visitors in Plitvice Lakes National Park (Croatia) – present situation, nature conservation, challenges
Krešimir Čulinović

Let's count with geocaching
Ondřej Vitek

The roles of hardening and separating sites and planting areas in enhancing the carrying capacity in neighborhood parks
Cong Tao, Chengzhao Wu



Photo: Hanna Liljendahl

PARALLEL SESSIONS 4 – Friday August 24, 08.30–10.30

4A Management strategies in outdoor recreation

Chair: Ingrid Schneider
Main Hall

Managing outdoor recreation: Case studies in the national parks
Robert E. Manning, Laura E. Anderson

Benchmarking for visitor management in parks
Ross Taplin, Susan Moore

A place-based approach to building partnerships with recreational resource users
Po-Hsin Lai, Yi-Chung Hsu

Protecting soundscapes in U.S. national parks: Developing visitor simulation and noise exposure models
Peter Newman, Derrick Taff, Steve Lawson, Kurt Fristrup, Karen Trevino

Fifty years of experiential knowledge: Using oral history to understand wilderness management in Sequoia-Kings Canyon National Parks, USA
Alison M. Steiner, Daniel R. Williams

4B Recreation "betwixt and between"

Chair: Katherine King
Room 7a

Protected area within the city: Monitoring and management of visitors in Landscape park Tivoli, Rožnik and Šišenski Hrib in Ljubljana (Slovenia)
Bojan Erhartic, Ales Smrekar, Mateja Smid Hribar

Urban-proximate nature as a resource for events and festivals: a SWOT analysis
Dorothy Fox

The role of the cultural background for nearby outdoor recreation behavior
Matthias Buchecker, B. Degenhardt, F. Kienast

Visitor density, recreation motive, crowding and attractiveness
Sjerp de Vries, Martin Goossen, Tineke de Boer

Get off my land! Managing youth leisure in multiple natural environments
Katherine King

4C Education, outdoor learning and communicating nature

Chair: Klas Sandell
Room 5a

Educational needs of South African national parks' tour guides
Haretsebe Manwa, Dudu Boema

Outdoor teaching on the school grounds and in the bush
Emilia Fägerstam

Skill development and our perception of the environment: A phenomenological approach to canoe tripping in Canada
Jonas Mikael

An educational tool for outdoor education and environmental concern
Johan Öhman, Klas Sandell

The importance of place for learning and teaching – an outdoor educational perspective
Anders Szczepanski

4D Communities in change: Managing local tourism impacts

Chair: Linda Lundmark
Room 3a

Connecting nature, culture, and art in the context of socially responsible ecological tourism
Hakan Sezerel, Aysegul Cil

Tradition and innovation in farm-based nature tourism: Lessons for protected area management
Jan Velvin, Kristian Bjørnstad, Erling Krogh

Understanding tourists' choices in a developing tourist community
J. Michael Campbell, Kelly J. MacKay

Managing tourism in a popular wilderness destination
Anna Dóra Sæþórsdóttir

4E Recent advances in visitor monitoring: GPS tracking and GIS technology

Chair: Isabelle Wolf
Room 2a

Integrating geospatial technology with behavior mapping method in monitoring visitor use in open landscapes
Yu-Fai Leung, Chelsey Walden-Schreiner, Anna Miller

Using a mixed-methods approach to explore the human dimension of Willmore Wilderness Park, Alberta, Canada
Debbie Mucha, Elizabeth Halpenny

The implementation of GPS tracking and GIS technology for park visitor monitoring: a key to managing visitor assets and experiences
Isabelle D. Wolf, Heidi K. Stricker, Gerald Hagenloh

GPS-based data collection and analysis methods for better management of recreational areas
Karolina Taczanowska, Christiane Brandenburg, Thomas Schauppenlehner, Renate Eder, Xavier Garcia-Massó, Luis M. González, José Luis Toca-Herrera, Andreas Muhar

Developing parameters for agent-based models using choice experiments
Reto Rumpf, Wolfgang Haider, Matthias Riesen, Hans Skov-Petersen, Ulrike Pröbstl

Revealing recreational behaviour and preferences from GPS recordings
Hans Skov-Petersen, Reto Rumpf, Daniel Köchli, Bernhard Snizek

4F Sustainable tourism in Sweden's protected areas

Chair: Ulrika Karlsson, Ingvar Jundén
Room 1a

This workshop includes a presentation how authorities in Sweden are working with tourism in protected areas, combining the aim to secure environmental values while managing these areas for tourism. The presentation also covers a brief introduction to the bill "Outdoor recreation for the future" which includes the national objectives for outdoor recreation.

The main focus of this workshop is to discuss what Sweden should do to develop a sustainable tourism in protected areas and maintain natural values in further work. How should we manage access and at the same time stimulate visitors to come, enjoy and enrich themselves in the treasures of the protected areas. We are asking for your opinion and your knowledge!

See the Proceedings page 289 for more information.

4G Crowding and recreation carrying capacity

Chair: Robert Manning
Room 6a

The environmental, social, health and economic impacts of recreational use of all terrain vehicles (ATVs) in North America: Lessons for Europe
Glyn Bissix

Recreational carrying capacity in hiking trails. Three case studies in protected areas in Nicaragua
Matilde Somarriba-Chang, Hans-Georg Wallentinus

A comparison of 5 western US Wild and Scenic River users: Trip characteristics, opinions and satisfaction levels
Robert C. Burns

Too many people in the mountains in the winter time?
Martin Wyttenbach, Wolfgang Haider, Ulrike Pröbstl, Reto Rumpf

Perception of crowding in a high-use German national park
Johannes Schamel

Developing the useability index for the Swan Canning Riverpark
May Carter, Pierre Horwitz, Roxane Shadbolt

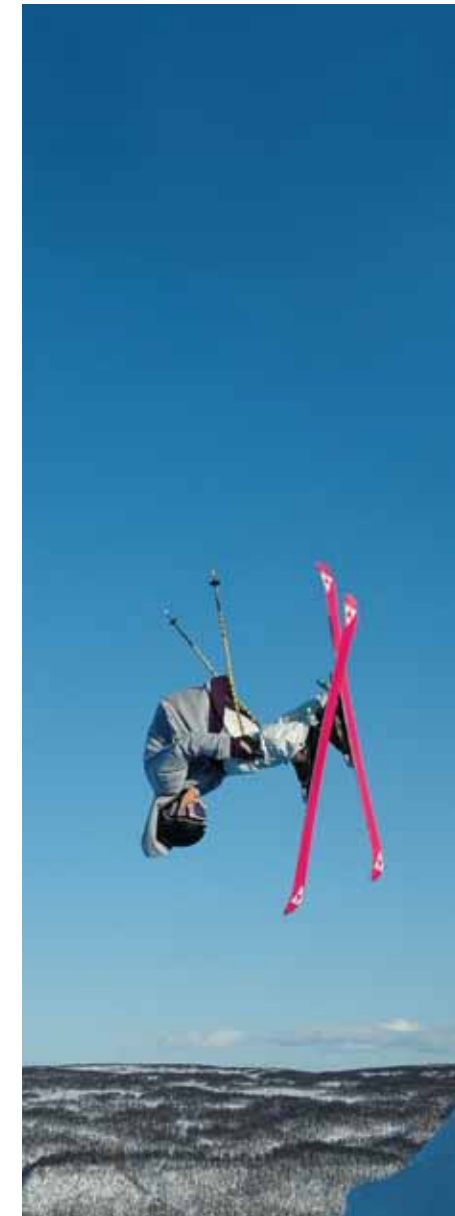


Photo: Peter Fredman

PARALLEL SESSIONS 5 – Friday August 24, 13.00–15.00

5A Managing visitor experiences

Chair: Patricia Stokowski
Main Hall

A study of “The impressive experience” in Japanese national parks
Hiroaki Adachi, Reiko Gokita, Tatsuo Terasaki

Two legs good – two wheels bad? Are mountain bikes really bikes for the mountains? – What does ‘responsible access’ in the uplands mean conceptually and in practice for mountain bikers and land managers in the Cairngorms National Park?
Frances Pothecary

Visitors’ attitudes toward introducing a new visitor management program into a brown bear habitat in Japan
Tetsuya Aikoh, Kazuki Ohba, Yasushi Shoji, Takahiro Kubo

Method for managing visitor experiences
Martin Goossen, Tineke de Boer

An integrated visitor experience opportunities concept for Fundy National Park and partners
Blair Pardy, Kim Whytock

Windpower in a nature-based tourism area – green energy or landscape disturbance?
Liisa Tyrväinen, Jari Järviluoma, Kirsi Nikkola, Harri Silvennoinen

5B Nature and health

Chair: Lisa Bergström
Room 7a

Outdoor Education – the hidden classroom in urban green settings
Anders Szczepanski

Healthy parks healthy people Finland
Matti Tapaninen, Liisa Kajala, Joel Erkkonen, Martti Aarnio

Care farming – using the farm environment for rehabilitation
Camilla Ihlebæk

Understanding the healing function of urban forests in Germany and in Korea
Ju-Hyoung Lee, Renate Buerger-Arndt

5C Nature experiences, environmental awareness and attitudes

Chair: Johan Öhman
Room 5a

The outdoor recreation – environmentalism relationship
Daniel Wolf-Watz

Evolutionary and cultural influences on interactions with nature: a comparison of British and Chinese visitors to the New Forest National Park and Jiuzhaigou National Scenic Area
Dorothy Fox, Feifei Xu

The role of ecological orientation for forest visitors’ visiting motives, environmental preferences and recreation behavior
Eike von Lindern, Marcel Hunziker, Jacqueline Frick, Nicole Bauer

Nature-based outdoor recreation and environmental connectedness
Thomas Beery

Ethical recreation? Applying an ethical decision-making framework to the case of heli-hunting in New Zealand
Brent Lovelock, Viktoria Kahui, Oliver O’Sullivan

5D Values of outdoor recreation – Economics, perceptions, attitudes and beyond

Chair: Mattias Boman
Room 3a

Valuing Estonian shores for outdoor recreation using landscape preferences and contingent valuation methods
Mart Reimann, Üllas Ehrlich, Hannes Tõnisson

Psychological benefits of visiting national parks in Japan
Reiko Gokita, Hiroaki Adachi, Tatsuo Terasaki

The value of nature close to home for outdoor recreation in Sweden
Mattias Boman, Eugene E. Ezebile

Forest-preferences and recreation in Switzerland: Results from a nationwide survey
Marcel Hunziker, Jacqueline Frick, Nicole Bauer, Eike von Lindern

5E Use of GIS and GPS technology

Chair: *Hans Skov-Petersen*
Room 2a

Using automatic counters and GPS technology for recreation monitoring: case of Sonian Forest (Brussels, Belgium)
Laure Doidi, Vincent Colson, Stéphane Vanwijnsberghe

Socioecological tools for the planning of tourist destinations in Kainuu, Finland
Katja Kangas, Anne Tolvanen, Liisa Tyrväinen, Seija Tuulentie, Ari Nikula, Marketta Kyttä

Assessing hiking trails condition in Iceland using GIS – Implication for sustaining visitor use in vulnerable arctic environments
Rannveig Ólafsdóttir, Micael Runnström

Combining Stated Preference techniques and GPS tracking to model the effect of access policies in the Dolomites, Italy
Francesco Orsi, Davide Geneletti

The Use of GIS in Sustainable Tourism Planning – a case study from Katla Geopark, Iceland
Rannveig Ólafsdóttir, Kristín Rut Kristjánsdóttir, Micael Runnström

5F Addressing challenges in managing recreation in protected areas: A cross-cultural approach

Chair: *Eick von Ruschkowski*
Room 1a

The value of “internationalizing” park and protected area management has drawn much discussion over the past decade. Growing challenges like climate change, ecosystem services, biodiversity, landscape fragmentation, renewable energy, demographic change continue to pose new challenges to managers. With many different issues and approaches at stake, mutual learning processes that value the diversity of cultures, seem to be beneficial to academics and practitioners in order to develop alternative solutions. This becomes especially important when looking at adaptive management and collaborative planning strategies.

This round table is aimed at discussing these issues with a special focus on cross-cultural differences in visitor patterns and behavior as well as visitor management approaches.

See the Proceedings page 355 for more information.

5G Current research on informal trails: Effects on ecology and landscape fragmentation

Chair: *Yu-Fai Leung*
Room 6a

Informal trails and fragmentation effects: A conceptual and research overview
Yu-Fai Leung, Catherine Pickering, David N. Cole

Informal trails fragment the landscape in a high conservation area in the Andes
Agustina Barros, Catherine Marina Pickering

Informal trails fragmenting endangered remnant vegetation in Australia
Catherine Pickering, J. Guy Castley, Kieran Richardt

Impacts of trail networks on rare and threatened plant communities in Australia
Mark Ballantyne, Catherine Pickering

Environmental impacts along informal trails and recreation sites at well-established Swedish nature play areas
Matthew H.E.M. Browning



Photo: Hanna Liljendahl



NOTES

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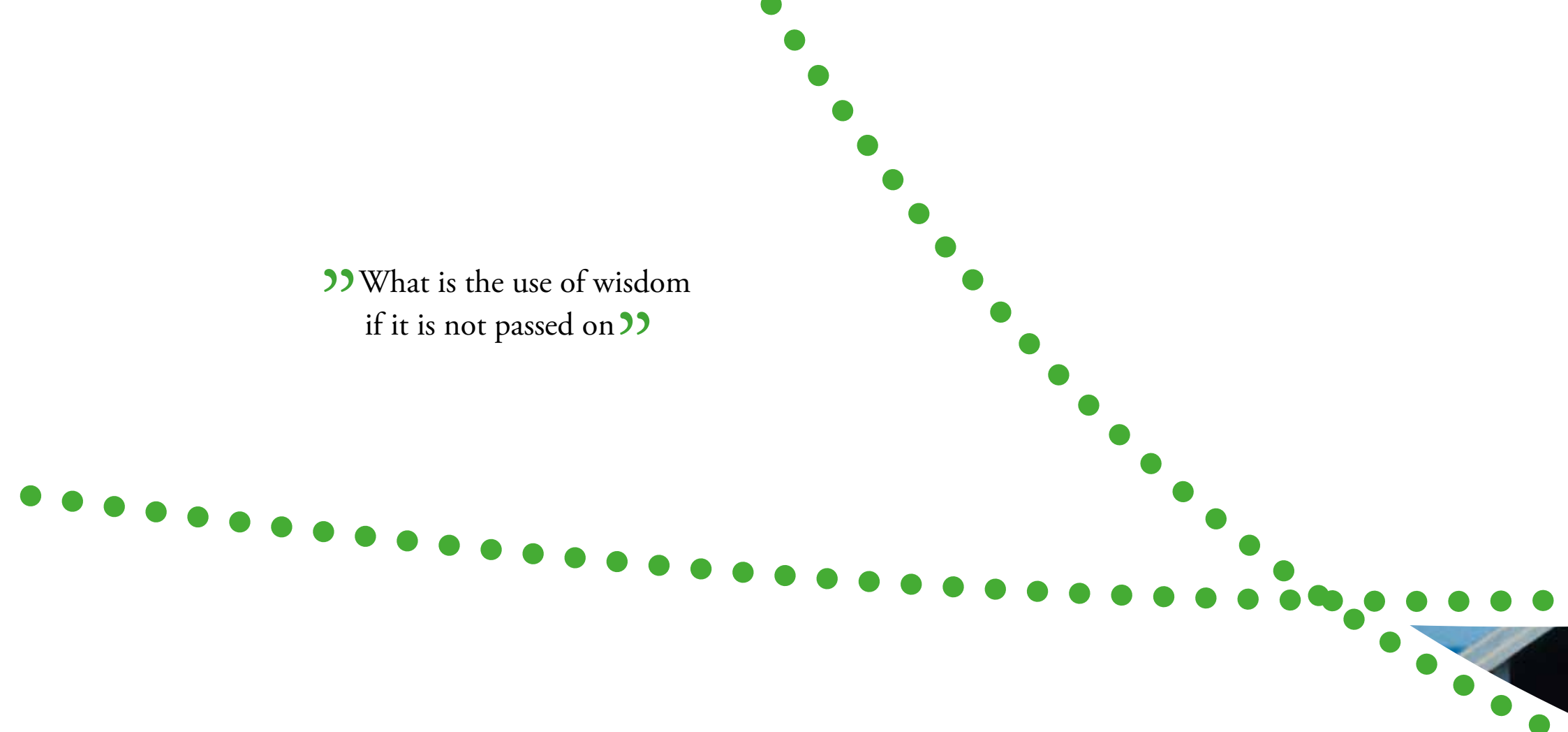
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”What is the use of wisdom
if it is not passed on”