



BOOK OF ABSTRACTS

1. SESSION DESCRIPTION

ID: S7

Title of session:

Tourism and ecosystem services – searching for sustainability

Hosts:

	Title	Name	Organisation	E-mail
Host:	Prof.	Salma Talhouk	American University of Beirut Department of Landscape Design and Ecosystem Management	ntsalma@aub.edu.lb
Host:		Sylwia Kulczyk	University of Warsaw Faculty of Geography and Regional Studies Department of Tourism Geography and Recreation,	skulczyk@uw.edu.pl
Co-host:		Jan Philipp Schägner	European Commission Joint Research Centre	Philipp.SCHAEGNER@ec.europa.eu

Session description:

The tourism sector contributes about 10% to global GDP and tourist arrivals are expected to grow by an annual rate of 3.3% for the coming decades. One important motivation for tourism is experiencing nature and



wildlife and thus an ecosystem service. Global PAs for example receive about 8 billion visits a year generating about US \$600 billion/y in direct in-country expenditure.

On the other hand, nature-based tourism itself may present a pressure and a threat to natural ecosystem. The development of tourist sector infrastructure (accommodation, roads etc.) may increase pressure on local resources such as water and energy and may stir further economic developments resulting in additional ecosystem degradation. Growing visitor flows may threaten wildlife and degrade formerly untouched nature. Services retrieved from the natural environment by the tourism sector is a double edge sword that can help flourish local economies and conserve nature or exploit locals and their natural heritage. Addressing the sustainability of tourism within the context of ecosystem services will help ensure a continuous development of this sector as part of resilient natural and cultural heritage. The purpose of this session is to consider sustainable tourism through an ecosystem services approach. The session will include researchers and practitioners and serve as an interdisciplinary platform that will seek to integrate knowledge and experience across disciplines and cultures.

Goals and objectives of the session:

The natural environment is without any doubts crucial to tourism, yet although the application of the ES concept proved useful in managing a wide spectrum of human-nature relations, it still receives surprisingly low attention in tourism research and practice. The goal is to explore and identify integrated solutions for synergizing tourism and ES in a way that benefits society and environment and supports local economies



Planned output / Deliverables:

- Consolidate a multidisciplinary community of researchers and practitioners in ecotourism, ecosystem services, and related fields
- Launch the initiative to write a joint review article based on the title of the session
- Launch the initiative to prepare a joint research proposal
- Strengthen ties with tourism stakeholders

Related to ESP Working Group or National Network:

SWG 7 – ES in (eco) Tourism

2. SESSION PROGRAM

Date of session: 12 December 2017

Time of session: 14:00 – 17:30

Timetable speakers

Time	First name	Name	Organization	Title of presentation
14:00	Salma	Talhok	American University of Beirut	Introduction of participants and session objectives
14:15	Sylwia	Kulczyk	University of Warsaw	Tourism and ecosystem services – opportunities and challenges



ESP 9

WORLD CONFERENCE

● Shenzhen, China ● 11-15 Dec 2017

Ecosystem Services for Eco-civilization

Restoring connections between people & landscapes through nature-based solutions

Time	First name	Name	Organization	Title of presentation
14:30	Sonali	Ghosh	Wildlife Institute of India	Mass tourism as an ecosystem disservice—a case study from India
14:45	Anna (Any)	Phelan	University of Queensland	Enhancing community-based tourism to combat Illegal, Unreported and Unregulated (IUU) fishing; South Sulawesi Indonesia
15:00	Jan Philipp	Schägner	European Commission, JRC	Nature tourism & recreation in protected areas: from global visitor data to economic impact analysis
15:15	Short break			
15:20	Marta	Derek	University of Warsaw	Do tourists need nature in a nature-based destination? The example of the Great Masurian Lakes, Poland



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Ecosystem Services for Eco-civilization

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Time	First name	Name	Organization	Title of presentation
15:35	Kremina	Gocheva	Bulgarian Academy of Sciences	Disruptive technologies – a way towards sustainable use of cultural ecosystem services?
15:50	Asma	El Hajal	American University of Beirut	How can ecotourism in cities teach about nature and ecosystem services?
16:05	Amelie	Robert	CITERES Research laboratory (CNRS/Tours University, France), RURALITES Research laboratory (Poitiers University, France)	Cultural ecosystem services and nature tourism. Case study in some rural areas in France
16:20	Salma	Talhok	American University of Beirut	Highlights of contributions
16:30	Salma Talhok, Sylwia Kulczyk, and Philipp Schägner: Moderators		Workshop: Road map to strengthening ties with tourism stakeholders and building a multidisciplinary community of researchers and practitioners in ecotourism, ecosystem services, and related fields	



Time	First name	Name	Organization	Title of presentation
17:00	Salma Talhouk, Sylwia Kulczyk, and Philipp Schägner:			
	Moderators		Workshop: Initiative for future collaborations: 1- to write a joint review article based on the title of the session 2- prepare a joint research proposal	

3. ABSTRACTS

Type of submission: Abstract

S. Sectoral Working Group sessions: S7 Tourism and ecosystem services – searching for sustainability

Do tourists need nature in a nature-based destination? The example of the Great Masurian Lakes, Poland

Author(s): Marta Derek

Affiliation(s): University of Warsaw

Other author(s): Sylwia Kulczyk, Edyta Woźniak

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The concept of ecosystem services aims at seeking for



balance between natural supply and social demand. In the case of tourism, this means the relationship between nature and tourists. The aim of this paper is to verify tourists' attitude to nature in a nature-based destination. How much nature is important for them? What elements are appreciated by them? How does it depend on an activity tourists undertake in nature?

These questions will be answered basing on the research conducted in the Great Masurian Lakes, Poland. The region is one of the most visited nature-based destinations in Poland. 516 questionnaires with tourists were conducted in the summer of 2014. Tourists were asked, among others, about activities they had performed during their stay in the region, as well as about their attitude to several elements of nature, such as water, forest, hilliness of the area, etc. Cluster analysis was used in order to typology tourists by activities undertaken by them, and, as a result, six clusters were identified: angling sailors, non-angling sailors, cyclists, anglers, water recreationists and passive tourists. Then, the attitude to nature declared by each of these groups was analysed and compared to others.

Keywords: nature, tourists, ecosystem services, cluster



analysis, Poland





Type of submission: Abstract

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How can ecotourism in cities teach about nature and ecosystem services?

Author(s): Asma El Hajal, Salma Talhouk

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Ecotourism engages people in nature travel and nature activities offering them a combined opportunity for leisure time and education (Lindberg et al, 1997; Adamson et al, 2016). Personal ecotourism experiences may influence ecofriendly attitudes and intents to reduce the human impact on the environment thus promoting environmental conservation (Androin et al, 2015, Chiu, 2014 & Zhang, 2014). Normally ecotourism opportunities are outside cities and require the intention invest time and to travel to sites. Recent practices have considered ‘urban ecotourism’



defined as nature travel and conservation in a city setting modified by humans (Toronto's Green Tourism Association, 2016). Considering the large number of people living in cities, urban ecotourism may be an efficient venue to showcase the value of nature and ecosystem services (Jegdic and Gradinac, 2016; Hausmann, 2015; Nahuelhuan, 2013). Addressing sustainability of ecotourism in cities within the context of ecosystem services may help ensure a continuous development of this sector as part of novel natural assets and resilient cultural heritage. This study is conducted in Beirut a densely populated Mediterranean city. The objectives of the study are to (1) identify and map semi natural and manmade natural landmarks and potential nature activities in the city of Beirut, (2) evaluate the potential of urban ecotourism in mainstreaming ecosystem services. The study uses GIS mapping, expert participation for the identification of nature activities in the city, and stakeholder perceptions of nature and ecosystem services.

Keywords: ecosystem services, urban tourism, ecotourism, environmentally responsible behavior, sustainability



Type of submission: Abstract

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Mass tourism as an ecosystem disservice– a case study from India

Author(s): Sonali Ghosh, Anil Anjankar

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Ecotourism has largely benefited natural heritage sites as they provide alternative livelihood support to forest fringe communities' thereby providing incentive for protection of such sites. However, public perception and media-hyped popularity of a natural site among masses may lead to detrimental impacts including negative impacts on the flora and fauna for which the site has been designated. In this case study, we examine the impact of tourism that



increased manifold since the inscription of Kas Plateau (Western Ghats) as a UNESCO World Heritage Site in 2014. The lateritic plateau is known as an in-situ repository of over 850 species of flowering plants, out of which 39 species are also listed under IUCN Red Data list of threatened or near threatened plant species. Negative impacts such as increased trampling and destruction of habitat, increased pollution were observed as day tourists thronged the site. We argue that unregulated tourism contributes to ecosystem disservices and may be overall detrimental to the natural elements for which the site was protected in the first place. The role of popular media and branding (as in case of World Heritage Site) is also discussed as they may inadvertently add to the mass popularity of such sites. A planned management approach that pre-empts such impacts at the time of inscription can be incorporated in the Operational Guidelines.

Keywords: world heritage, western Ghats, mass tourism, ecosystem disservice, operational guidelines



Type of submission: Abstract

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Disruptive technologies – a way towards sustainable use of cultural ecosystem services?

Author(s): Kremena Gocheva

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In 2016 the number of tourists exceeded Bulgaria's population. Low-cost mass offerings at the seaside or in the mountain winter resorts prevail and cause seasonal over-population. Road, waste and wastewater infrastructure are overdimensioned; litter, light and noise pollution spark tensions between tourism businesses, population and environmental protection organizations.



Sparsely vegetated ecosystems (SVE) are subject to the highest rate of destruction to build facilities, direct and indirect pressures from the overuse of cultural ecosystem services. Botanical tourism is practiced at a small scale in SVE but they remain largely invisible or are perceived as nuisance by mass tourism.

In 2015–2016, Bulgaria conducted national mapping and biophysical assessment of the territory outside NATURA 2000 (66% of the country). The resulting maps combine data from fieldwork, earth observation data and official data such as land use, cadastre.

One of the most rewarding mapping projects was devoted to SVE. It identified and mapped key pressures, had wide public outreach and piloted the routine use of drones in fieldwork. During mapping we obtained a clear picture of disruptive new technologies as possible avenue for win-win local solutions that could alleviate pressures while promoting higher value added tourist products to new user groups.

We present the mapping results with emphasis on cultural ecosystem services and argue that new tourist segments must rely to a greater extent on:



- New technologies (drones, augmented and virtual reality) to explore in new ways the experiential interactions and make them accessible to wider audiences, including disabled people. They can also serve for citizen science and monitoring
- Ride-sharing in autonomous electric vehicles as a way to reduce pollution and noise in sensitive habitats.
- Greening the wastewater infrastructure for cost-effective and nature based urban solutions to reduce pressures on ecosystems

We detail the socio-ecologic background for such use of technology.

Keywords: augmented and virtual reality, autonomous electric vehicles, drones and autonomous underwater vehicles for exploration and tourism, citizen science, cultural ecosystem services



Type of submission: Abstract

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Tourism and ecosystem services – opportunities and challenges

Author(s): Sylwia Kulczyk

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This paper aims to identify and discuss opportunities and challenges for implementing ecosystem services (ES) concept in tourism research.

Tourism is widely recognized as an important element of human well-being and natural values are one of the crucial tourism attractions. At the same time, significant environmental threats arise as a consequence of tourism development. Therefore, there is an urgent need of an approach that integrates both ecological and social aspects



and could help to plan and manage tourism in a sustainable way. These opportunities are offered by ES concept.

To implement the ES concept in tourism research possesses also some challenges. These are:

- The ambiguity of the term “tourism”, which has no clear limits and can be interpreted in various ways. In ecological research, only the forms that are strictly based on nature (eg. ecotourism) are included;
- The variety of approaches to tourism within ES concept – tourism can be researched as material or non-material phenomenon, from social or ecological perspective, and in variety of spatial and temporal scales.
- The complexity of tourism system that includes different types of users – both tourism enterprises and tourists themselves;
- The internal diversity of tourism that covers variety of activities for which different combinations of natural elements are needed;
- The diversity of tourists attitudes to nature.

Keywords: tourism, nature, research framework, supply, demand



Type of submission: Abstract

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Enhancing community-based tourism to combat Illegal, Unreported and Unregulated (IUU) fishing; South Sulawesi Indonesia

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Many of Indonesia's coral reef areas are heavily exploited and the sustainability of the coastal ecosystems is threatened by overfishing and destructive fishing practices, such as cyanide and bomb fishing. For coastal communities in the region, economic development must include a delicate balance between protecting marine biodiversity and maintaining a sustainable and direct access to ecosystem services. This article outlines the results of a



study in the Selayar Regency of South Sulawesi Province in eastern Indonesia analysing the socio-economic challenge of coral reef fisheries decline. We examine three complementary pathways of sustainable small-scale fisheries, responsible tourism and small-scale home industry to enhance primary income and support local livelihoods through value capture and sustainable enterprise development. Community-based tourism emerges as a key link between ecosystem protection, diversification into alternative livelihoods, and local culture and heritage.

Keywords: coastal communities, alternative livelihoods, responsible tourism, small-scale fisheries, community-based tourism



Type of submission: Abstract

S. Sectoral Working Group sessions: S7 Tourism and ecosystem services – searching for sustainability

Cultural ecosystem services and nature tourism. Case study in some rural areas in France

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In France, like other occidental countries, we can observe a “greening” of the society and tourism is particularly concerned. Tourists are especially in search of nature. But what they search? What kind of nature? We took an interest in these questions in the framework of a research program about nature tourism in rural areas of the French Region Centre-Val de Loire. We consider nature in the broad sense, including agrosystems as sylvosystems, because all



can offer ecosystem services (ES) and they are regarded like this by tourists. Here three case studies will be given as examples: the forest park of a famous castle (Chambord), a vacation village, which is located in a forest and is oriented towards nature, and a vineyard, where tourism is growing. The use of ES concept allows to increase knowledge about nature tourism and question the reasons of the growing importance of this kind of tourism. The majority of tourists are city dwellers and being in the nature provides them with well-being (quiet, nice landscape, etc.). It can also be an opportunity to learn about nature. This kind of tourism is thus a matter for cultural ES. But we have to note that most of tourists prefer a managed nature and the tourism growing is paralleled with planning, especially infrastructures building. Consequently, only a part of the territory, the managed one, is dedicated to tourism. It is particularly true for protected areas, like the forest park of Chambord, where the other part is saved for nature preservation. But it is more generally necessary to avoid use conflicts, because these ecosystems also provide other users with other ES, which can be in contradiction with tourism (especially provisioning services). Thus, cultural ES localization cannot be based only on land use map and



their knowledge implies to add other information, not only about ecosystems. The task is complex and the use of models is compromised.

Keywords: cultural ecosystem services, nature tourism, sylvosystem, agrosystem, managed nature, preservation, model



Type of submission: Abstract

[S. Sectoral Working Group sessions: S7 Tourism and ecosystem services – searching for sustainability](#)

Nature tourism & recreation in protected areas: from global visitor data to economic impact analysis

Author(s): Jan Philipp Schägner

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As part of the BIOPAMA.org program (Biodiversity and Protected Area Management Program) and DOPA (Digital Observatory of the Protected Areas) we aim at supporting nature conservation, biodiversity protection and protected area management worldwide.

Nature tourism and recreation is an important ecosystem service provided by protected areas (PA).



Globally, PAs receive approximately 8 billion visits per year that generate about US \$600 billion in direct in-country expenditure. The global tourism sector is expected to grow substantially for the coming years.

However, nature tourism in PAs is a double-edged sword. On the one hand, nature tourism constitutes a substantial recreational value and a significant source of income and employment for local communities. 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.

At the starting point of all nature tourism impact analyses, we put the number of visits received by PAs. Therefore, we construct a global open-access geo-database on PAs' visitor statistics, in collaboration with the TAPAS (Tourism and Protected Areas Specialist) group and WCMC (World Conservation Monitoring Centre). Thereafter, we extend the database stepwise to include economic, social and



environmental impact assessments. For evaluating the quality of the case studies and the different data-collection methods, we set a focus on comprehensive methodological reporting. The database allows synthesising research findings, exploring spatial and temporal trends, conducting meta-analysis and evaluating data collection methods.

Keywords: tourism, recreation, protected area, economic impact, visitor statistics