BOOK OF ABSTRACTS

I. SESSION DESCRIPTION

ID: T8

Understanding Cultural Ecosystem Services

Format: Hybrid

Hosts

	Name	Organisation	E-mail
Host	Johannes Hermes	Leibniz University Hannover, Institute of Environmental Planning	hermes@umwelt.uni-hannover.de

Abstract

Cultural Ecosystem Services (CES) are among the numerous benefits that individuals and societies gain from landscapes and natural environments. Whether it is the ability to hike through a mountain forest, the joy of cycling in a mosaic landscape, a relaxing walk through an urban green space, or the inspirational, symbolic and cultural meanings, nature contributes to our physical and mental health and well-being in diverse ways. Interactions with nature in our day-to-day lives are just as, if not more important than a vacation in world-renown touristic destinations to obtain these benefits. Hence, CES are an important topic for policy, research and society. However, they are often neglected and constantly threatened by urban expansion, infrastructure development, or resource extraction. Such projects often spark strong resistance in the local population because there are usually no real substitutes as the parts of our environment that we associate with CES are also parts of our home, our identity, our culture and heritage. The methodological approaches, specific foci, and spatial scales are as diverse as the services we assess. But they have a common goal. A better understanding of these human-nature interactions and a better consideration in policy, planning and management. This session aims to bring together researchers and practitioners invested in CES to share their knowledge and experiences and stimulate the exchange between them.

Goals & Objectives

The objectives of the session are:

1. To bring together and discuss the best available knowledge concerning CES of landscapes, including spatial and non-spatial assessments of potentials, supply, demand, actual use, and economic and non-material benefits

2. To share experiences with policy implications and successful or unsuccessful policy, planning or management interventions

3. To discuss commonalities and differences among approaches, current bottlenecks and new ideas for further research to advance the theory and practice of CES mapping, assessment and valuation

4. To discuss whether research told in impactful stories may be a way forward to better communicate the importance of CES

5. Fostering a network of researchers and practitioners invested in CES

Planned Output

Depending on the interest of the participants and the number of suitable contributions, we plan to compile stories in a joint publication.

Session Format

For this session, presenters are called to present their research topics in the format of a story that helps them illustrate their work. The idea of the "stories" is that they have characters, themes, and an ending point of the story. The topic of cultural ecosystem services is particularly well suited for this format. However, regular presentations are welcome as well. Stories and presentations should be no more than 15 minutes long, including some time for questions and discussion.

Acceptance of voluntary contributions

Yes, I allow any abstract to be submitted to my session for review.

Relation to ESP Working Groups or National Networks

Thematic Working Groups: TWG 8 – Cultural services & Values

II.   SESSION PROGRAMME

Date of session: Tuesday 7 September
Time of session: 11:00 – 12:30 & 14:00 – 15:30
Timetable speakers

Time	First name	Surname	Organization	Title of presentation
11:00 – 11:10	Johannes	Hermes	Leibniz University Hannover	Session Introduction
11:10 – 11:25	Johannes	Hermes	Leibniz University Hannover	Modelling flows of recreational ecosystem services in Germany

Time	First name	Surname	Organization	Title of presentation
11:25 – 11:40	Joachim	Spangenberg	SERI Germany & FoE Germany	Mapping cultural, regulating and provisioning ESS and their spatial distribution in France
11:40 – 11:55	Carolina	Pozzi	Roma Tre University	The social dimension of afforestation interventions: The case study of the Metropolitan City of Rome
11:55 – 12:10	Christin	Busch	ILS Research gGmbH	Unveiling the Urban Tapestry: Exploring Human-Nature Interweaving in the Co-production of Cultural Ecosystem Services
12:10 – 12:25	Sylwia	Kulczyk	Adam Mickiewicz University in Poznań	One landscape, multiple stories. Cultural ecosystem services as perceived by local people
12:30 – 14:00	Lunch break	Click here to enter text.	Click here to enter text.	Click here to enter text.
14:00 – 14:15	Laura	Bachi	Federal University of Minas Gerais	Governance systems to promote synergies between Cultural Ecosystem Services: experiences from Germany and Brazil
14: 15 – 14:30	Carolina	Hidalgo	Universidad Católica de la Santísima Concepción	Servicios ecosistémicos culturales recreativos en un territorio industrializado: acceso y limitantes de acceso percibidas por habitantes de zonas urbanas
14:30 – 14:45	Martin	Bermudez-Urdaneta	Instituto Distrital de Patrimonio Cultural (IDPC)	Inventarios de patrimonio natural para la comprensión de servicios ecosistémicos culturales en el ordenamiento territorial: el enfoque de patrimonios integrados en Bogotá (Colombia)

Time	First name	Surname	Organization	Title of presentation
14:45 – 15:00	Sonia	Uribe	University of Warsaw	Cultural Ecosystem Services and Tourism: The Coffee Cultural Landscape of Colombia
15:00 – 15:30	Johannes	Hermes	Leibniz University Hannover	Wrap-up and discussion

III.   ABSTRACTS

1. *Type of submission*: Abstract / Resumen

T. Thematic Working Group sessions / Sesiones del Grupo de trabajo Temáticas: T8 – Understanding Cultural Ecosystem Services

Modelling flows of recreational ecosystem services in Germany

First author(s): Johannes Hermes

Presenting author: Johannes Hermes

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While policy interest and research on recreational ecosystem services (RES) has increased substantially, insights into the spatial relationships between RES demand and supply, into flows and benefits to people and their interrelations have remained scarce, especially at levels beyond local communities. However, a better understanding of them is crucial to usefully inform planning and decision making on a variety of issues. We aim to fill this gap by presenting a consistent assessment approach that incorporates demand and supply based on user preferences to model RES Flow with regard to different planning problems. We use Germany as a case study due its diversity of landscapes and availability of harmonious spatial data and results from previous studies on RES Supply and respective preferences. We first modelled the potential demand at RES supplying areas to then determine matches and mismatches between demand and supply incorporating the aforementioned data. We then present a quantitative spatially explicit indicator for the flow of RES, and a spatially aggregated indicator for the flow of benefits between regions. Our results show distinct demand-supply matches and mismatches, for example in south-west Germany, and highest

flows near population centres. Monetary benefits are highest in counties with high RES Supply that are close to densely populated areas. They identify areas most relevant for RES provision around the population centres and along the road network and quantify the benefit flows from counties with under-supply to their neighbours. Our results can usefully inform planning and decision making, for example to improve and further justify destination management, landscape development and investments in RES at local, regional and national levels.

2. *Type of submission*: Abstract / Resumen

One landscape, multiple stories. Cultural ecosystem services as perceived by local people

First author(s): Sylwia Kulczyk

Presenting author: Sylwia Kulczyk

Other author(s): Marta Derek, Piotr Matczak, Krzysztof Mączka, Alina Gerleé

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I was coming back here in late autumn. It was raining, dark, I just got off the bus and

I felt that I took a breath with full lungs... (...) it seemed to me that over there... my family, Hamburg, Hannover... I was visiting something amazing, great, elegant... And it turned out that I breathed there kind of half, I was not quite myself...

The social and cultural values associated with nature, and specifically the satisfaction of people's needs in this regard, is an important component of quality of life. These values are relational – whether or not, and to what extent, people value nature, is determined by cultural norms, traditions and patterns. Moreover, they are highly variable both in time and in space. This variability is noticeable even at the individual level – two people living next door can have completely different attitudes towards nature resulting from, for example, their family history or the work they do.

The fact that different people evaluate nature differently, and that their attitudes can change, is a great challenge for spatial planning and management. At the same time, the socio-cultural benefits derived from contact with nature constitute only one of the factors that shape subjective quality of life. In this presentation we will discuss these challenges showing an empirical example of the research undertaken in two municipalities located in the postglacial landscape of northern Poland. Over 30 in-depth interviews with different stakeholders were undertaken, and text analysis was later made in order to structure the perception on nature and its elements. The results show that stories told by our respondents are not only very subjective and relational, but also very emotional. Including them into policy making and planning is challenging but essential to make these processes effective.

Keywords:

3. *Type of submission*: Abstract / Resumen

Inventarios de patrimonio natural para la comprensión de servicios ecosistémicos culturales en el ordenamiento territorial: el enfoque de patrimonios integrados en Bogotá (Colombia)

First author(s): Martin Bermudez-Urdaneta

Presenting author: Martin Bermudez-Urdaneta

Other author(s): Camilo Escallon-Herkrath, Ricardo Arias-Forero, Catalina Gomez-Oviedo, Sol Gaitan-Martinez

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Si bien los servicios ecosistémicos culturales (SES_Cult) han sido parte de la conceptualización tradicional de los servicios ecosistémicos en general, uno de los mayores inconvenientes metodológicos es la falta de información oficial de interacciones y relaciones sociedad naturaleza en escalas vecinales y cotidianas que puedan ser agregadas a escalas mayores de planeación territorial. Desde el IDPC de Bogotá (2020-2023) hemos logrado incluir la cultura como dimensión ordenadora del territorio en el Plan de Ordenamiento Territorial de Bogotá (2022-2034). Desde 1980 el IDPC ha protegido el patrimonio cultural en sus versiones materiales arquitectónica, urbanística y monumental. En 2020 abrió un programa de patrimonio natural para incorporar la dimensión ambiental a la gestión territorial del patrimonio. Por medio de inventarios de patrimonio natural que incluyen 20 variables espacializables, y trabajo de campo socioecológico durante 4 años, hemos integrado información técnica de ecosistemas con la experiencia cotidiana de 300 personas entrevistadas en 10 áreas de estudio representativas de los paisajes bogotanos. La síntesis de información constituye la Estructura integradora de Patrimonios (EiP) de Bogotá, que reúne información primaria y secundaria de instituciones oficiales del sector ambiental, con información primaria y secundaria del sector cultura.

La combinación de información cualitativa y cuantitativa de ambos sectores, permite cuantificar prácticas culturales como la apreciación de la naturaleza desde la ciencia ciudadana, así como la construcción de espacios naturales de conservación en huertas privadas y comunitarias urbanos o paisajes rurales del Distrito. Hemos cartografiado 100 polígonos de mayor concentración de 250.000 observaciones ciudadanas de naturaleza, así como el dinamismo de redes de intercambio de semillas, frutos y conocimiento en 4.000 huertas privadas y comunitarias que funcionan como espacios de SES_Cult en viviendas

bogotanas y espacios públicos de la ciudad. Gracias a esto, logramos tener una aproximación a los SES_Cult de 80% del territorio de Bogotá.

4. *Type of submission*: Abstract / Resumen

Servicios ecosistémicos culturales recreativos en un territorio industrializado: acceso y limitantes de acceso percibidas por habitantes de zonas urbanas

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Múltiples publicaciones científicas a nivel internacional argumentan que la "extinción de la experiencia" podría ser un factor que afectaría gravemente la relación de las personas y el mundo natural que los rodea. Nos preguntamos si esta situación podría estar afectando la relación de los habitantes de zonas urbanas y la naturaleza, desde un punto de vista de acceso recreativo, en la provincia de Concepción, cuyo territorio posee grandes superficies cubiertas por plantaciones forestales y zonas costeras industrializadas. Para lograr este fin consultamos a instituciones como municipios, entre otras, por espacios naturales de uso recreativo que no fueran lugares turísticos pagados, ni áreas verdes como plazoletas, parques de juegos, etc. Los espacios naturales disponibles indicados se clasificaron en 5 ecosistemas: ríos, humedales, bosques, playas y lagunas. Para contrastar esta información y conocer aspectos de su acceso a la naturaleza se invitó a residentes de zonas urbanas a participar en un cuestionario presencial. Los resultados preliminares (n:120) indican que las personas en general conocen sólo un 21% de los lugares disponibles en la provincia, y que las playas son el ecosistema más visitado, mientras que los humedales y los ríos son los menos visitados. En cuanto a la frecuencia de visitas, el 92% de los participantes accede más de 2 veces/año a recrearse en espacios naturales de la provincia. Las visitas recreativas declaradas están concentradas (89%) en comunas costeras y hacia el territorio interior casi no hay visitas, considerando que allí se encuentran las comunas que tienen mayor superficie de la provincia. Por último, los participantes indicaron que las limitantes de acceso a la naturaleza que más los han afectado además de la pandemia de COVID-19, son la falta de tiempo y falta de información sobre alternativas de espacios naturales para visitar.

5. *Type of submission*: Abstract / Resumen

Unveiling the Urban Tapestry: Exploring Human-Nature Interweaving in the Co-production of Cultural Ecosystem Services

First author(s): Christin Busch

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Given the dominant presence of the built environment, the management of cultural ecosystem services (CES) in urban environments necessitates a comprehensive understanding of their creation and measurement. CES are co-produced through the dynamic interactions between humans and the environment: Their interplay can be understood as a tapestry, where the natural environment represents the warp, and the human activities represent the weft, interweaving with the natural characteristics that contribute to the provision of CES. When assessing CES, it is therefore essential to prioritize people's perceptions to comprehend the intricate interrelationships between humans and nature. Despite increasing research in the field of CES, research gaps surrounding the co-production of CES through human-environment relationships remain. Particularly, further exploration is needed to determine the specific natural characteristics and qualities that contribute to the provision of CES in the urban context. Therefore, we examined the relationships between human green space activities and green space characteristics based on 15,450 Google Maps reviews in the cities of Bochum and Gelsenkirchen, Germany. The mentioned activities were grouped according to different functional land-use requirements as well as their energy consumption and analyzed using a proximity analysis to explore their connections with the natural and built environment. The results reveal the perceptional space of the urban population regarding the co-production of CES, enhancing our understanding of the complex human-nature relationships in the urban context. They provide valuable insights into the requirements of urban green spaces for different user groups and offer guidance on how green spaces should be designed to cater to various activities while considering the needs of the local population. By understanding the human perception of the delivered CES and the demands placed on urban green spaces, these findings contribute to enhancing the management of green spaces, ultimately promoting the well-being of the urban population.

6. *Type of submission*: Abstract / Resumen

Cultural Ecosystem Services and Tourism:

The Coffee Cultural Landscape of Colombia

First author(s): Sonia Uribe

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Once upon a time there was a fairytale village where the local population was engaged in agricultural, livestock and commercial activities. As time went by, this small village is transformed. Now, it seems that the language and culture are mixed, as well as its identification. What happens to the local culture?

Ecosystem Services (ES) comprise the diverse benefits which people receive from nature. Cultural Ecosystem Services (CES) are the non-material benefits that contribute to peoples' well-being, such as recreation, education, and creative and aesthetic experiences. Cultural Landscapes represent a deep and intimate link between humans and their natural surroundings. The concept of ES facilitates the assessment of cultural landscape values, the identification of land-use trade-offs, and also informs decision-making in land-use planning. In other words, CES are the benefits individuals obtain through their interactions with various ecosystems such as Cultural Landscapes, and the activities they carry out within these spaces, such as tourism and recreation.

Through a story, I will tell you about the situation of the Coffee Cultural Landscape of Colombia (CCLC), the methodology I will use to identify the CES in the area, which was included in the UNESCO World Heritage List in 2011, as symbolic of a tradition that serves as a powerful emblem for coffee regions around the world. We assessed CES such as recreation, tourism, aesthetic appreciation, and sense of place using participatory mapping with visitors and local residents of the CCLC, particularly those in Salento. Our results aim to inform visitor management by addressing actual use of CES and thus provide data that will inform cultural landscape management and conservation.

... and this story will continue.

Keywords: Cultural Landscape, Cultural Ecosystem Services, world heritage

7. *Type of submission*: Abstract / Resumen

Mapping cultural, regulating and provisioning ESS and their spatial distribution in France

First author(s): Joachim Spangenberg

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In this paper, we conduct a mapping exercise illustrating the ESS/NCP provision for the whole of France in a spatially-explicit form based on an 1x1 km scale, showing the distribution of provisioning, regulating and cultural ecosystem services. We generate integrated maps depicting distribution patterns of different services and contributions across the landscapes of France, indicating that a non-monetary assessment of the complexity and diversity of NCP is feasible and presents tangible advantages as compared to monetary frameworks, which tend to underestimate the importance of cultural ecosystem services.

To assess cultural ecosystem services, a number of identity markers is used, i.e. cultural services local communities have described as ecosystem traits or nature-based production forming a core element of their local identities. Trade-offs between these cultural services and their underlying land use patterns and the high productivity (provisioning services) but low cultural value ecosystem services can be visualised and support policy planning for integrated and holistic development plans. This way, policy priorities can be derived going beyond productivist approaches and highlighting cultural services as an equally important kind of services, partly complementary and party at risk by the focus on enhancing provisioning services.

The paper shows that provisioning, regulating and cultural services and contributions are geographically unevenly distributed and concludes that further analysis is required to assess their degree of complementarity, feedback loops and tipping points among different services. Some illustrative maps will be shown to illustrate these points. We hold that graphic illustrations like maps are an effective way of communicating the importance of CES, along with storytelling.

Keywords: Ecosystem services, land use competition, cultural markers, local identities

8. *Type of submission*: Abstract / Resumen

Governance systems to promote synergies between Cultural Ecosystem Services: experiences from Germany and Brazil

First author(s): Laura Bachi

Presenting author: Laura Bachi

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Instilling synergies between recreation/tourism, local identity and cultural heritage can increase resilience of rural livelihoods within and surrounding protected areas, and provide an alternative to land abandonment or a complement to intensive energy and commodity production (soy, mining) land uses. Strengthening such cultural ecosystem services (CES) from standing native vegetation is important for fostering nature and cultural heritage conservation. However, comprehensive studies on management interventions to implement such synergies are lacking. This study examines governance systems (policy, partnership, financing, social capital and marketing mechanisms) to promote synergies between recreation/tourism and other CES using semi-structured interviews with key-stakeholder. We analyze interview results from a nature park with well-established governance structures in Germany and those from a mosaic of protected areas in Cerrado and a state park in Atlantic Forest in Brazil. Our results show that stakeholders in the three case studies agree that recreation/tourism is/can be synergistic with local identity and cultural heritage values. Furthermore, we found that federal laws regulating protected areas are the main policies to implement synergies. Financing sources range from international funds who work alongside local governments to tourism companies, farmers associations and cooperatives. In the three case studies, social media is the main marketing mechanism. We show that examining governance systems to promote synergies between CES in distinct socioecological contexts is challenging, yet promising for informing policy. We also show that although there's a willingness of stakeholders in the Brazilian case studies to forge governance systems similar to those in the Germany case study, concrete bottom-up action is lacking. Therefore, building and supporting local leadership in addition to legal planning frameworks might contribute to transforming potential synergies into reality.

9. *Type of submission*: Abstract / Resumen

The social dimension of afforestation interventions: The case study of the Metropolitan City of Rome

First author(s): carolina pozzi

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Green infrastructure and urban forestation are assuming an increasingly important role in the planning of resilient cities, in response to the growing urgency to address climate change impacts.

This study focuses on the social dimension of urban and peri-urban afforestation intervention. The conceptual approach is based on the definition of cultural ecosystem services as the result of an interaction between environmental spaces and cultural/social practices that are conducted in these spaces and on the need to apply an integrated perspective to afforestation interventions capable of responding not only to the quantitative aspect (quantity of trees planted to offset CO_2) but also, and above all, functional and performance/qualitative aspect, thus also building public relational spaces (community spaces) capable of driving processes of transition and change involving local communities.

From an operational point of view, the methodology proposes a territorial analysis which, through GIS tools, develops a series of overlays of open-source geographic and qualitative data, creating interrelationships between accessible green areas, residential areas, social proximity functions, and landscape systems in order to identify priority areas for intervention.

Furthermore, in order to improve the methodology's ability to inform the planning process, a further scale shift is developed, from the territorial/municipal level to the district level, which contributes to improving the design of public space by supporting small-scale but significant impact from a climatic and social point of view, such as for example micro-forestation interventions (tiny forest and pocket garden).

The methodology is tested on diverse urban and peri-urban afforestation interventions in the territory of the Metropolitan City of Rome.