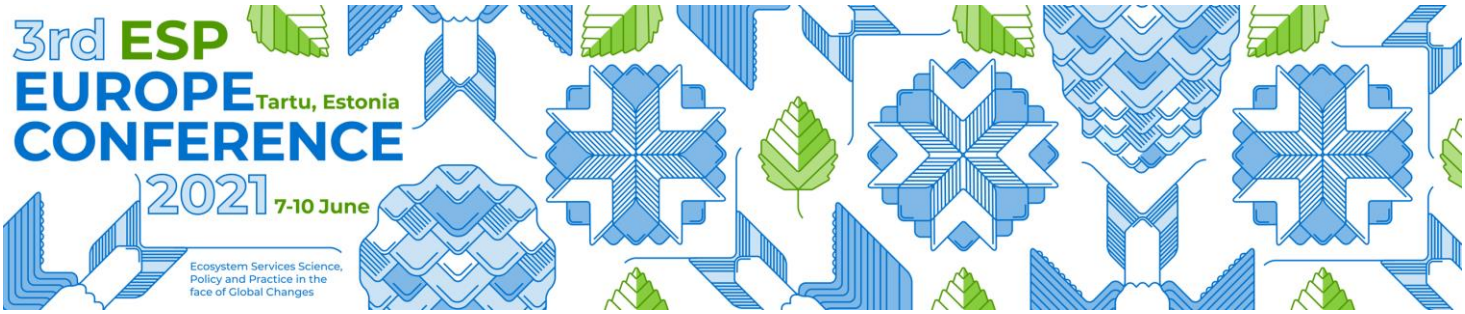


BOOK OF ABSTRACTS

I. SESSION DESCRIPTION

ID: O2

ECR's perspectives: Challenges in the face of global changes (in-person or virtual presentation)

Hosts:

	Name	Organisation	E-mail
Host:	Nina Kaiser	University of Duisburg-Essen	nina.kaiser.aqua@uni-due.de
Co-hosts:	Simone Podschun	Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB)	podschun@igb-berlin.de
	Anna Filyushkina	Vrije Universiteit Amsterdam	anna.filyushkina@vu.nl
	Carla Washbourne	University College London	c.washbourne@ucl.ac.uk
	Sophie Peter	Senckenberg Biodiversity and Climate Research Centre	sophie.peter@senckenberg.de

Abstract:

The ecosystem services research landscape has been growing over the years and is characterised by having links to many fields, and being inter- and transdisciplinary. This complex, social-ecological field of science with a clear reference to policy and practice attracts early career researchers (ECR) with numerous specializations from various disciplines with fresh ideas, methodological approaches and viewpoints. Our session, run by ECRs for ECRs, aims to bring ECRs together to empower and connect them within the Young Ecosystem Services Specialists (YESS) community of ESP.

For many ECRs, the year 2020 was associated with difficulties when it came to presenting their own research / ideas to peers. In order to better network, exchange ideas and put the own research into a larger context, we offer ECRs the opportunity to present themselves and their research in our session. You can choose between in-person or virtual presentation. This format also allows those ECRs who are not able to attend the conference personally due to financial or health restrictions to present and discuss their research.

Since the conference topic is very broad, different contributions can be submitted. In order to have a common thread across all talks we ask presenters to (1) highlight challenges they see in (their) ES research in the light of global change and (2) propose starting points to address them. For a virtual presentation, we prefer a video contribution (short video), so as not to potentially limit server capacities or bandwidth. Questions to the talks will be coordinated by the host team and moderated by interactive participation techniques (e.g. Mentimeter).

Goals and objectives of the session:

The overall objective is to give ECRs from all relevant research areas the opportunity to participate in the scientific discourse, which had been difficult during the year 2020, due to the impacts of the pandemic. Especially for ECRs, the time of peer exchange is crucial, as they have to find their way into the scientific community.

Planned output / Deliverables:

The session will provide an overview of the latest research on ecosystem services carried out by ECRs while focussing on the challenges of (their) ES research and ways to address these challenges, in order to allow for shared learning from experiences. It also has the potential to highlight common challenges that ECRs face in ES research, while underlining the role of YESS as a peer network in which the ECRs are supported in their activities by low-threshold exchange opportunities.

Related to ESP Working Group/National Network:

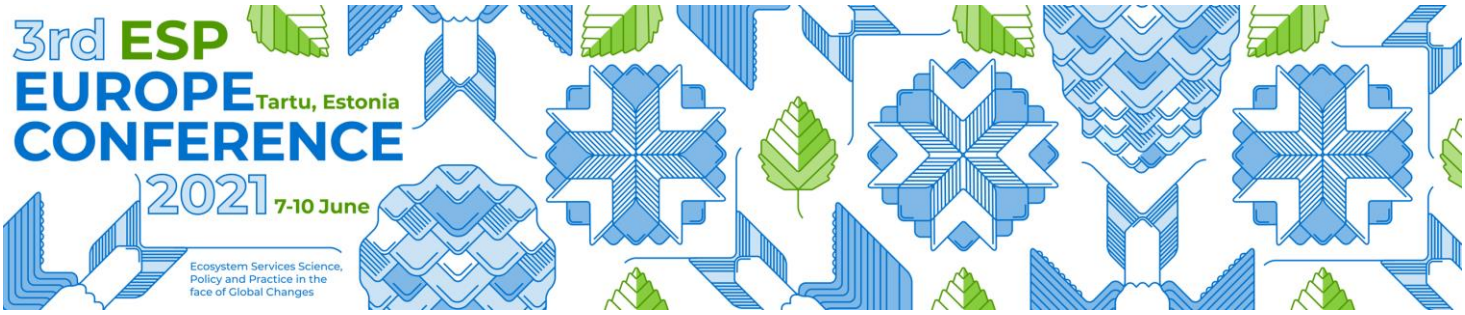
Other

II. SESSION PROGRAM

Date of session: Monday, 7 June 2021
Time of session: 13:30 – 15:00

III. ABSTRACTS

Abstracts are ordered based on the session program. The first author is the presenting author unless indicated otherwise.



1. *Type of submission: Abstract*

O. Open sessions: O2 - Early-career researchers' perspectives: Challenges in the face of global changes

Through the eyes and minds of planners: barriers and opportunities for the integration of ES in spatial planning

Presenting author: Wies Dijkstra
Other author(s): Luis Inostroza
Affiliation: Windesheim Honours College
Contact: wiesannadijkstra@gmail.com

The concepts, models and tools within the Ecosystem Services (ES) science are promising, as they can greatly support decision-making and communication within policy-making towards sustainable development. ES has gained traction within the policy arena, with the EU guidance on integrating ecosystems and their services into decision-making and the EU biodiversity Strategy 2020 as notable steps. Nonetheless, there are still gaps and shortcomings, relating to complexity and ambiguity, which hinder the effective integration of the concept in policy-making. The ES framework possesses high applicability in spatial planning, in terms of modelling development scenarios, illustrating synergies and trade-offs and communicating with stakeholders in participatory processes. While scientific literature has identified numerous ways for the integration of ES into spatial planning, the actual practical application in real-life planning needs to be strengthened. The aim of this study is to assess the current understanding and use that European spatial planners have of the ES concept. Based on an online survey distributed amongst European spatial planners and a set of follow-up in-depth interviews we have identified the obstacles and opportunities they perceive for its implementation. We identified key areas where the application of ES can be strengthened in spatial planning. Our findings contribute to the integration of the ES framework in spatial planning in Europe, as well as more effective communication across the science-policy interface.

3rd ESP EUROPE CONFERENCE Tartu, Estonia 2021 7-10 June
Ecosystem Services Science, Policy and Practice in the face of Global Changes

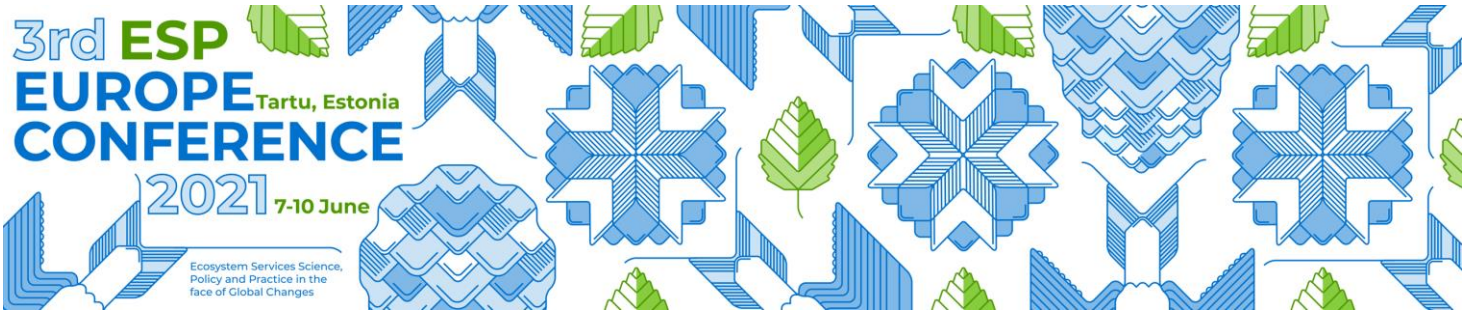
2. *Type of submission: Abstract*

O. Open sessions: O2 - Early-career researchers' perspectives: Challenges in the face of global changes

Room for better urban environment: the diversity and structure of woody vegetation in seven European cities

Presenting author: Marta Alós Ortí
Other author(s): Lauri Laanisto
Affiliation: Estonian University of Life Sciences
Contact: marta.alos@student.emu.ee

Urban environment causes great impact on urban ecosystem functions and processes. As a consequence, species composition and their interactions are different in urban green areas (UGAs) compared to natural systems. Woody vegetation, an important element of UGAs, has been shown to provide many ecosystem services (ESs) to city dwellers. Therefore, understanding woody plant taxonomic and structural diversity in UGAs is crucial for developing better ESs in urban areas. In this study, we describe woody vegetation in terms of taxonomic and structural diversity in 225 UGAs from seven European cities across a NE-SW gradient, from Tartu (Estonia) to Lisbon (Portugal). We systematically sampled UGAs with different size and isolation from other green elements in every city. We identified 419 woody taxa with a high proportion of alien species among cities (from 40% of all species recorded in Antwerp to 64% in Lisbon and Zürich). Native Pinus species were predominant in southern cities such as Lisbon and Almada, while native Acer species were more abundant in medium and higher latitudes. The size of UGAs was positively – but weakly – related to woody species richness. However the relationship with UGA size and woody species density was strongly negative. Tree canopy covered on average 56% of UGAs extent, and vegetation structure did not show major differences among cities. Our results provide knowledge on woody species richness and vegetation composition in UGAs that are heterogeneous in terms of size, connectivity, climate and urbanization background. Despite the variability of UGA conditions, the diversity and structure of their woody vegetation, and thereby also the diversity of ESs they provide, is rather contrastingly homogeneous. Our results indicate that UGAs can be managed much more efficiently, which could be useful information for stakeholders involved in urban planning processes and park management practices.



3. *Type of submission: Abstract*

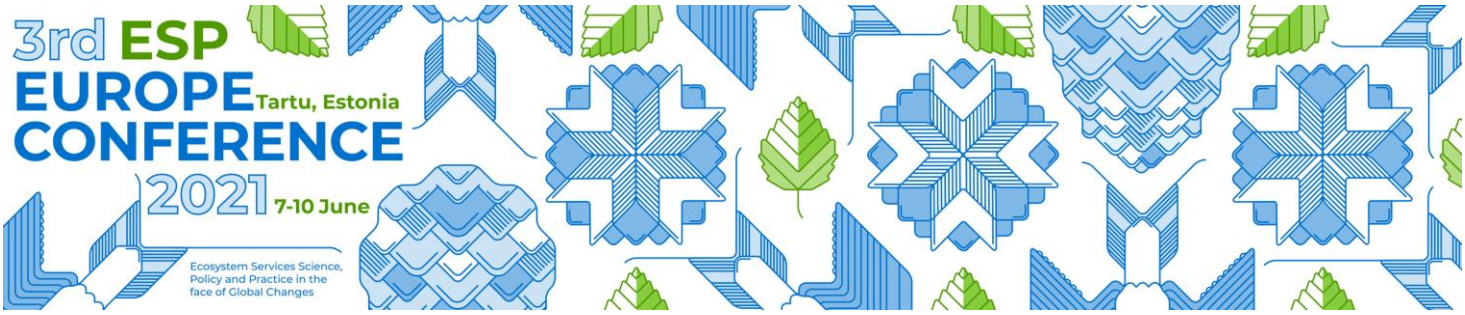
O. Open sessions: O2 - Early-career researchers' perspectives: Challenges in the face of global changes

Ecosystem services – exploring the scientific and political discourses

Presenting author: Ilona Rac
Other author(s): Matej Martinc
Affiliation: University of Ljubljana Biotechnical faculty
Contact: ilona.rac@bf.uni-lj.si

The term 'ecosystem services' is one with a rich history in use both in science and politics; in science, it has been appropriated by different disciplinary fields, for different intentions and with different ends in mind; likewise, the term has been adopted by different policy actors who use it in different contexts and actually ascribe it different meanings. These different meanings and applications of the term affect the way ecosystem service science is framed, and vice versa.

This paper aims to increase clarity in the field somewhat by exploring, using a combination of qualitative and machine-based discourse analysis, how the term has developed in different research and policy uses over time. Analysis is applied to scientific papers, as well as to policy statements by agricultural and environmental interest groups and official governmental and para-governmental bodies. Preliminary results based on qualitative analysis indicate that the term was originally intended as a tool for raising the awareness regarding the importance of preserving nature for humanity's own sake; a substantial body of knowledge still maintains that this should be the concept's main application, and adherents object to so-called 'commodification' of nature through valuation of ecosystem services. On the other hand, there is now a well-established and growing body of knowledge on economic valuation of ecosystem services; this conceptualisation is also gaining traction in policy documents. The term is also increasingly being used, with markedly different meanings, by interest groups to further their respective causes.



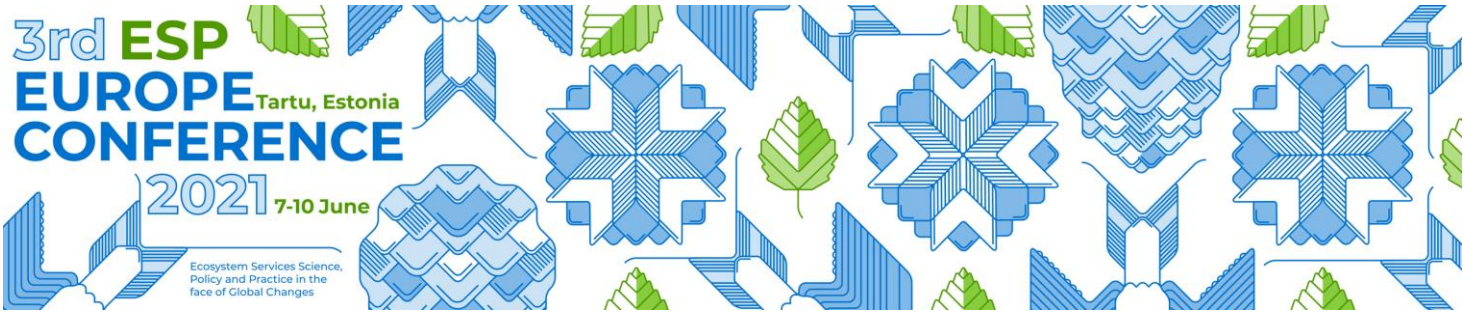
4. *Type of submission: Abstract*

O. Open sessions: O2 - Early-career researchers' perspectives: Challenges in the face of global changes

Analyzing how conservation connects knowledge: a study of eco-compensations in South Western China

Presenting author: Niklas Werner Weins
Affiliation: University of Campinas, Brazil
Contact: weinsniklas@gmail.com

Approaching ecosystem services from social sciences perspectives brings not only challenges in terms of language, but also of methodologies. While interdisciplinary research on socio-ecological systems has brought new insights to both natural and social sciences, there is still a lot of work to do. Payments for Ecosystem Services (PES) have become one popular tool, among many, to put the valuation of nature's contributions to people into practice in line with what national governments agreed on in the SDGs and the CBD. However, how these arrangements are put into place and how power issues have implication for equitable outcomes, is still an area of too little exploration. Social Network Analysis (SNA) can help to shed light on the connections of actors and their positive (and negative, hindering) influence on conservation policies and their outcomes (CARLSSON; SANDSTRÖM, 2007). Following an analysis by Li and Yarime (2017) and Li et al. (2020), we are mapping public documents and scientific publications to trace how the actors configuration is reflected in the construction of knowledge on PES or "eco-compensations" in a case study in Chongqing, Southwestern China. We are interested in how local conflicts between rapid urban expansion and the need for conservation are benefitted or distorted by the country's overarching Ecological Civilization framework and Red Lines of Conservation policies, and how institutional arrangements help to mediate or amplify disputes about underlying knowledge and power relations. The results expected from this approach may point to the predominance of natural sciences in the explanation of environmental change, overlooking important issues concerning social organization, cultural factors and traditional knowledge in the radical "ecological modernization" process China has recently embarked on.



5. *Type of submission: Abstract*

O. Open sessions: O2 - Early-career researchers' perspectives: Challenges in the face of global changes

Valuing nature's invisible contribution to human well-being through ecosystem services. An introduction to the ES agenda for young scholars.

Presenting author: Luis Inostroza
Affiliation: Ruhr university Bochum
Contact: luis.inostroza@rub.de

The contribution of natural processes to human well-being is paramount. However, despite this high relevance, the loss of ecosystems and biodiversity continues at a fast pace. The depletion of natural capital has been supported by obsolete ideas that attempting to economize ecology, have supported harmful policies that have largely failed in the protection of ecosystems and biodiversity. To advance in the protection of ecosystems and biodiversity, policymaking requires answers supported by scientific evidence. Ecosystem Services (ES) science can provide measurement and quantification of the tremendous contribution that nature brings to our well-being. When society ignores this hidden value in decision-making, underpins the deterioration of ecosystems, eventually losing the benefits and damaging the well-being of communities. ES science is built on ecological economics and seeks to bring the economy back to nature. This means to integrate ecological processes as fundamental components of the socio-economic system. This presentation aims to discuss the epistemological framework and the scientific foundations of ES science. The presentation introduces the current most validated ES classification systems that support their systematic identification, analyzes the relevance of the biophysical measurement of benefits and quantification methods and the synergies and contradictions that arise from their management. Finally, aspects related to valuation are discussed, where value is not equal to price.