

BOOK OF ABSTRACTS

This Book of Abstracts provides a comprehensive overview of the session content and is structured into three main sections:

- I. **Session Description** – an introduction to each session, including its objectives and expected outputs
- II. **Session Program** – a detailed schedule for each session, including speakers and timing
- III. **List of Abstracts** – a complete compilation of all accepted abstracts

I. SESSION DESCRIPTION

ID: T8b

Exploring cultural ecosystem services by Nature-based interventions from an equity perspective: integrated approaches to enhancing nature's contribution to wellbeing for all

Hosts:

	Name	Organisation	E-mail
Host (s):	Eirini Gallou	University of Kent	e.gallou@kent.ac.uk
Co-host(s):	Richard Belcher	University of Kent	R.Belcher@kent.ac.uk
	Silvio Caputo	University of Kent	Silvio.caputo@kent.ac.uk
	Kathrin Specht	Institut für Landes- und Stadtentwicklungsforschung gGmbH	Kathrin.Specht@ils-forschung.de
	Noriko Otsuka	Institut für Landes- und Stadtentwicklungsforschung gGmbH	noriko.otsuka@ils-forschung.de

Abstract:

There is a need for integrated approaches that allow for a more nuanced understanding of multiple human health and well-being ecosystem service benefits provided by Nature-based interventions across urban and peri-urban landscapes, coupled with an understanding of who benefits from using those spaces in everyday life and as part of wellness or health-targeted nature-based activities. Some of those nature-based activities have also great capacity to improve nature qualities and conservation objectives, enabling a wider One Health approach in practice together with improving equity and access to nature (particularly in pressured urban settings). The session is inspired by the current work of GreenME Horizon project consortium seeking to understand the wellbeing benefits of engaging with nature (green and blue spaces) across 7 countries and focusing on the experiences of marginalised groups, while developing new tools for assessing qualities of green spaces in relation to equity and biodiversity features.

Existing work by IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) promotes a broad set of values for assessing the potential of nature to support human health and wellbeing. CICES classification identifies recreation services as 'nature enabling activities promoting health, recuperation or enjoyment', while recent research identifies diverse pathways through which wellbeing benefits can be harnessed and shared more equitably. This suggests that diverse groups may fulfil their needs in different ways by accessing and 'using' nature for their health benefits while respecting natural resources. Yet, as many studies focus on benefits for general public there is less evidence on the links between use of urban and peri-urban green and blues spaces for mental health and wider quality of life

specifically for marginalised groups which may cover a wide range of minoritised or special characteristics groups. Those may include as people with disabilities, whose life may benefit more from engaging with nature, people facing financial strains, or ethnically diverse populations that may get less opportunities to engage with nature in urban and peri-urban places across the globe. The session invites papers that explore our understanding of the affordances of green and blue spaces in enabling equal access and use of nature, considering it of primary importance to enhance design and implementation of equitable nature-based solutions that take into account users' needs and voices across places.

Goals and objectives of the session:

Researchers are invited to present their research and findings on as well as novel approaches for integrating equity considerations in designing Nature Based health promotion and related interventions, and improving how ecosystem service benefits may be shared across users of urban and peri-urban landscapes/green and blue areas. This session aims to facilitate an interactive discussion where participants can exchange their diverse experiences about achieving equity, mapping inequalities in use of nature, integrated equity assessment approaches. It invites integration in existing theoretical frameworks and practical existing tools that capture wellbeing and health benefits of engaging with ecosystems in those contexts and include equity considerations.

Planned output / Deliverables:

Special issue on Ecosystem services (will be discussed with accepted participants)

Session format:

The proposal could accept up to 7-8 papers to enable dialogue and contextual evidence on equity from diverse contexts. We estimate 2-3 papers potentially coming from the Horizon GreenME consortium (to be evaluated with the rest of the papers for cohesion of the session), 10 min per speaker at least, ideally for presentations and discussion time in the end would be ideal.

Related to ESP Working Group:

TWG 8 – Cultural services & Values

II. SESSION PROGRAM

Room: B1

Date of session: Friday 22, May 2026

Time of session: 09:00 – 10:30

Timetable speakers:

Time	First name	Surname	Organization	Title of presentation
9:05-9.15	Dr. Kathrin	Specht	Institute for Urban and Regional Development Research (ILS)	Equity-driven nature-based interventions and cultural ecosystem services – Session introduction
09:15- 9.25	Dr Margot	Neyret	INRAE, (Univ. Grenoble Alpes, LESSEM)	Unequal access to Nature's Contributions: barriers, nature disconnection, and impacts on quality of life
09:25-09.35	Chiara-Charlotte	Iodice-Kraft	Institute for Urban and Regional Development Research (ILS)	Promoting equity in the access to green care: A stakeholders co-creation approach in seven countries
09:35-09.45	Dr Richard	Belcher	University of Kent	An Integrated Explanation of Time Spent in Nature and Inequalities in Use: A Multi-Country, Visit-Level Study of

				People, Places, Context, and Place Quality
09:45-09.55	Simone	Marchetti	Stefano Boeri Architects	Global perspectives on tree equity
10.00-10.10	Andrzej	Affek	Institute of Geography and Spatial Organization Polish Academy of Sciences	Usage patterns of cultural ecosystem services along an urban-rural gradient in a protected area
10.10-10.20	Viktoria	Blaschek	The University of Tokyo	Motivation Is Not Enough: Access Conditions and the Intention-Behavior Gap in Urban Foraging participation
10.20-10.30	Dr. Kathrin Dr. Eirini	Specht Gallou	Session moderators (ILS and University of Kent)	Questions and final discussion points

III. LIST OF ABSTRACTS

The first author is the presenting author unless indicated otherwise

1. Equity-driven nature-based interventions and cultural ecosystem services – Session introduction

First author: Kathrin Specht

Other author(s): Eirini Gallou, Richard Belcher

Affiliation: ILS Germany

Contact: kathrin.specht@ils-forschung.de

There is a need for integrated approaches that allow for a more nuanced understanding of multiple human health and well-being ecosystem service benefits provided by Nature-based interventions across urban and peri-urban landscapes, coupled with an understanding of who benefits from using those spaces in everyday life and as part of wellness or health-targeted nature-based activities. Some of those nature-based activities have also great capacity to improve nature qualities and conservation objectives, enabling a wider One Health approach in practice together with improving equity and access to nature (particularly in pressured urban settings). The session is inspired by the current work of GreenME Horizon project consortium seeking to understand the wellbeing benefits of engaging with nature (green and blue spaces) across 7 countries and focusing on the experiences of marginalised groups, while developing new tools for assessing qualities of green spaces in relation to equity and biodiversity features.

Existing work by IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) promotes a broad set of values for assessing the potential of nature to support human health and wellbeing. CICES classification identifies recreation services as 'nature enabling activities promoting health, recuperation or enjoyment', while recent research identifies diverse pathways through which wellbeing benefits can be harnessed and shared more equitably. This suggests that diverse groups may fulfil their needs in different ways by accessing and 'using' nature for their health benefits while respecting natural resources. Yet, as many studies focus on benefits for general public there is less evidence on the links between use of urban and peri-urban green and blues spaces for mental health and wider quality of life specifically for marginalised groups which may cover a wide range of minoritised or special characteristics groups. Those may include as people with disabilities, whose life may benefit more from engaging with nature, people facing financial strains, or ethnically diverse populations that may get less opportunities to engage with nature in urban and peri-urban places across the globe.

Keywords: CES, equity, nature-based interventions

2. Unequal access to Nature's Contributions: barriers, nature disconnection, and impacts on quality of life

First author: Margot Neyret

Other author(s): Sandra Lavorel, Bruno Locatelli, Berta Martín-López
Affiliation: LESSEM, Univ. Grenoble Alpes, INRAE, St-Martin-d'Hères, France
Contact: margot.neyret-fraux@inrae.fr

While contact with nature contributes to multiple dimensions of human quality of life, access to nature and its benefits is unequally distributed. Yet, few studies compare barriers across diverse Nature's Contributions to People (NCP) and socio-demographic groups, or examine how such barriers interact with nature connectedness and ultimately affect quality of life. We surveyed residents of a metropolitan area in Southeastern France to evaluate: (i) the most common barriers to accessing regulating, non-material, and material NCP; (ii) how these barriers vary across groups; (iii) their relationship to nature connectedness and consequences for quality of life. Barriers differed across NCP categories, with lack of time, crowding, and low availability or quality of green and natural spaces being the most frequently reported. Individuals with lower income, limited physical mobility, those living in urban areas, and women reported substantially more barriers, particularly to cultural and regulating NCP. Higher numbers of barriers reduced satisfaction with NCP and indirectly diminished quality of life, while nature connectedness had an independent positive effect. Our findings show that barriers tend to accumulate for already disadvantaged groups and may reinforce social inequities through reduced access to nature and its benefits. Addressing these disparities requires policies that explicitly target multiple dimensions of access to promote more equitable relationships with nature.

Keywords: Access; environmental justice; Nature's contributions to people; Nature connectedness; quality of life

3. Promoting equity in the access to green care: A stakeholders co-creation approach in seven countries

First author: Chiara-Charlotte Iodice-Kraft
Other author(s): Lizzy Moonga, Kathrin Specht, Moritz Gutjahr, Noriko Otsuka, Helen V.S. Cole, Margarita Triguero-Mas, Renata Giedych, Beata Gawryszewska
Affiliation: Institute for Urban and Regional Development Research (ILS)
Contact: chiara.iodice-kraft@ils-forschung.de

Persistent inequities in availability and access to quality green and blue spaces continue to produce uneven health and wellbeing outcomes across populations. The GreenME project, a Horizon Europe funded project, responds to this challenge by advancing an integrated, equity-oriented approach of green care. The approach recognises and promotes nature-based solutions as essential components for improving mental health, human well-being and wider social ecological functions. It also addresses structural and social barriers that limit nature's benefits towards mental health and well-being especially for marginalised groups.

To support this, GreenME employs a co-creation stakeholder approach through which, a co-creation method for workshops was developed and implemented across six EU project countries and the US. Workshops engage policy makers, green care implementers and promoters as well as other community members from diverse sectors such as public health, spatial planning, urban governance, and civil society organisations. This process helps bridge structural inequalities in green care co-creation.

During workshops, stakeholders identified key pre-conditions and necessary actionable measures for enhancing nature's ability to provide relevant human well-being benefits. Among the pre-conditions, are those for promoting equity to nature across urban and peri-urban landscapes. These include:

- Integrating gender and equity perspectives into all decisions, projects, and interventions
- Ensuring green care is accessible for all
- Partnering with local government initiatives working on increasing public green spaces equity access

Preliminary findings indicate that, meeting these pre-conditions will enhance the availability and accessibility to green and blue spaces as well as promote equitable green care. By embedding equity in both co-creation process and practice, GreenME demonstrates and advances the approaches to equitable green care that can reduce inequalities across communities, by improving access to the health benefits that nature provides.

Keywords: Equity, Green & Blue Spaces, Well-being

4. An Integrated Explanation of Time Spent in Nature and Inequalities in Use: A Multi-Country, Visit-Level Study of People, Places, Context, and Place Quality

First author: Richard Belcher

Other author(s): Sarah Knight, Eirini Gallou, Mike Hardman, Marcus Hedblom, Carola Domènech-Panicello, Helen Cole, Margarita Triguero-Mas, Silvio Caputo

Affiliation: University of Kent

Contact: r.belcher@kent.ac.uk

Evidence is needed that assesses the relative importance of individual characteristics, residential context, short-term weather/season conditions, and place quality for explaining participation and duration in nature across groups and settings. Without this, it remains unclear which constraints matter most for policy and planning efforts to support equitable use of nature for wellbeing and health, recreation, and wider nature engagement. Yet existing evidence is often limited by coarse or indirect exposure measures, narrow geographic scope, uncertainty over what “quality” is important for natural space engagement, and a tendency to examine only a few determinants together.

This multi-country study addresses these gaps using fine-grained, visit-level data from ~6,000 GreenME survey responses across 10 districts in 8 countries (Europe and the USA), collected over eight months (spring to early winter). Respondents geocoded all outdoor nature visits over a 14-day recall period using an interactive mapping module and reported visit frequency and typical duration for nature at home, NEL (self-/informal activities alone or with friends/family), and NBP (group-organised nature-based health promotion). ESA WorldCover was used to characterise green cover, blue cover, and within-green land-cover diversity at visit points and near home. Short-term context aligned to each recall window included rainfall and thermal conditions (ERA5 reanalysis), weekend availability, and early sunset. Time in nature was modelled with activity-specific hurdle (zero-inflated) mixed-effects models separating participation from duration, with random effects by macro-area, activity-specific slopes (NEL, NBP, home), and modification by cumulative marginalisation burden. Demographics, nature connectedness, health limitations, and dog walking were included alongside audited quality terms for NEL and NBP.

Approximately 450 visited sites were audited. Competing audited-quality definitions were compared in an AIC-based tournament against a no-quality baseline, including NEST overall quality, a time-weighted wants-needs match score derived from a pre-designed survey question mapped to audited indicators, and a data-driven typology.

Keywords: Participatory GIS (PGIS), Visit-level exposure assessment, Green space quality audit (NEST), Environmental inequality, Weather and thermal comfort (UTCI)

5. Global perspectives on tree equity

First author: Livia Shamir


Other author(s): Adam Cormack, Kenton Rogers, Paul Armstrong, Simone Marchetti, Luis Pimentel, Sofia Paoli, Andrew Allen,

Affiliation: Stefano Boeri Architetti

Contact: l.shamir@stefano-boeri-architetti.net

Towns and cities around the world are aiming to increase tree cover in response to challenges facing urban populations, including heat risk from climate change and other public health concerns. There is now an opportunity to support countries in developing best practices for tree equity initiatives by establishing a shared international definition, exploring cross-country similarities and differences, and establishing a set of ethical principles to guide such efforts. This contribution will examine existing policies on tree equity to identify methodologies for comparing how different principles to urban forestry and tree equity have been applied across various continents. The goal is to provide a clear and comparative overview of current approaches.

This analysis aims to support national governments, public administrations and technical partners in identifying the most suitable approach based on local urban morphologies, environmental conditions, and operational capacity. It will also offer guidance on tools, actions, and strategies that could lead



policymakers to promote a more equitable distribution of gardens, parks, and trees in cities. Currently, no global policy review focuses exclusively on tree equity. This contribution will fill that gap by presenting case studies and a guideline to invest on trans-disciplinary policies with the potential for multi-level impact across health, urban planning, and green infrastructure – ultimately offering a practical, actionable resource for policymakers.

Keywords: Tree equity, policies, urban forestry, case studies, environmental justice

6. Motivation Is Not Enough: Access Conditions and the Intention–Behavior Gap in Urban Foraging. Explaining Participation in Edible Urban Landscapes: Testing an Access-Based Analytical Framework

First author: Viktoria Blaschek

Other author(s): Ryo Kohsaka

Affiliation: The University of Tokyo

Contact: blaschek.v@gmail.com

Edible urban landscapes are increasingly discussed as multifunctional green infrastructure supporting biodiversity, food awareness, and social cohesion. Existing research emphasizes policies and benefits while underestimating the role of access conditions, legitimacy, and governance. This paper empirically tests an analytical framework for identifying enabling and constraining factors of participation in edible urban landscapes, grounded in edible city research, access theory, social practice theory, and pro-environmental behavior.

The framework is applied to a community-based garden club in Tokyo, Japan, using a mixed-methods design. Quantitative survey data ($N = 33$) were analyzed using ordinal logistic regression and descriptive statistics, complemented by qualitative comments. The dependent variables were (1) urban foraging participation (occurrence and frequency) and (2) individual intention to engage in urban foraging. Key independent variables included perceived ownership clarity, perceived legitimacy of foraging, social comfort, human–nature connection, time constraints, and sociodemographic controls.

Intention to forage was consistently high (means = 4.67–5.22 on a six-point scale; Cronbach's $\alpha = 0.85$), indicating strong motivational readiness. However, individual-level intention did not significantly predict participation ($OR = 0.91$), revealing a pronounced intention–behavior gap. Access conditions strongly shaped actual participation: foraging occurred predominantly within the socially legitimized and organizationally structured Engeibu context (86.1%), compared to lower participation outside the project (51.4%) and in other edible landscape initiatives (37.8%). While perceived legitimacy of foraging ($OR = 7.78$) and human–nature connection ($OR = 6.38$) significantly increased intention, regulatory ambiguity regarding ownership and legality emerged as the most salient constraint on participation, with time constraints further limiting behavior.

Initial comparative insights from Japan and Austria support the framework's explanatory value. Overall, the findings demonstrate that participation is constrained less by motivation than by structural, regulatory, and normative access conditions. Scaling participation requires extending legitimacy and governance beyond project boundaries rather than increasing awareness alone.

Keywords: Edible landscape, Urban foraging, Participation barriers, Japan, Austria

7. Usage patterns of cultural ecosystem services along an urban–rural gradient in a protected area


First author: Andrzej Affek

Other author(s): Marta Derek, Edyta Regulska, Anna Kowalska, Sylwia Kulczyk, Jerzy Solon, Katarzyna Szmigiel-Rawska, Wirginia Aksztejn, Joanna Krukowska

Affiliation: Institute of Geography and Spatial Organization Polish Academy of Sciences

Contact: a.affek@twarda.pan.pl

Protected areas located near large cities function as key interfaces between society and nature, delivering cultural ecosystem services (CES) such as recreation, aesthetic enjoyment, tranquility, learning, and cultural identity. Increasing visitation pressure in peri-urban landscapes makes it essential to understand how different social groups use and perceive these services. In this study, we introduce the concept of



ecosystem service usage patterns to describe regularities in how diverse user groups engage with multiple CES through nature-based activities.

We investigated CES usage patterns in the Kampinos National Park and its buffer zone - a large protected area adjacent to Warsaw, a major metropolitan area in central Europe, spanning an urban-rural gradient. Based on 451 questionnaire interviews conducted in summer 2024, we compared four groups of users: residents and visitors living/visiting closer to, and further from, the urban center. Respondents spontaneously identified benefits derived from nature and then reported frequencies of 19 nature-based activities over the previous year, allowing us to contrast unprompted awareness of ecosystem services with actual use.

Walking, enjoying natural sounds and silence, cycling, and admiring views emerged as the most frequent activities across all groups, confirming the dominance of accessible, sensory CES. Clear group-specific differences were observed. Residents further from the urban center engaged significantly more in provisioning and reflective activities such as mushroom picking, fishing, and prayer/meditation, while visitors—especially those from further away—showed more selective, recreation-oriented use. Residents and visitors closer to the city favored low-effort, routine activities embedded in everyday life. Despite high engagement, spontaneous awareness of many CES—particularly provisioning services, learning, place attachment, and heritage—was markedly lower than reported activity levels, indicating substantial perception gaps.

Principal Component Analysis revealed five recurring CES usage patterns: integrative nature connection, foraging, passive relaxation, physical activity, and creative-educational engagement. Together, the results highlight how proximity and residency shape both behavior and awareness of CES in a protected area. The ecosystem service usage patterns framework offers a practical tool for managing peri-urban protected areas, supporting strategies that balance conservation with diverse social demands.

Keywords: cultural ecosystem services; usage patterns; nature-based activities; urban-rural gradient, Kampinos National Park