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: T7c

Integrating spatial dimensions into stated preference valuation: advancing methods and applications for nature-positive policies

Hosts:

	Name	Organisation	E-mail
Host (s):	Tomáš Badura	Charles University Environment centre	tomas.badura@czp.cuni.cz
Other organiser(s):	Josef Lamken	Charles University Environment centre	josef.lamken@czp.cuni.cz
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Abstract:
Spatially explicit stated preference methods (SP) are survey based approaches that enable capturing both use and non-use values associated with biodiversity policy change. SP methods are also well placed to make public preferences more pronounced in policy design. This session brings together methodological and applied contributions that advance spatial SP approaches and demonstrate their capacity to deliver decision-relevant evidence. We will particularly discuss how SP studies can be better designed to inform policy processes, including EU nature restoration regulation and biodiversity strategy more broadly. The session aims to highlight methodological innovations, showcase applied studies, and foster dialogue on making spatial SP valuation more impactful for policy-making.

Goals and objectives of the session:
Advance spatial SP methods and applications, highlight their capacity to capture both use and non-use values, and discuss how to design policy-relevant valuation studies.

Planned output / Deliverables:
To be decided, based on participants.

Session format:
90-minute session with 4 contributed talks followed by a short structured discussion to consolidate lessons for improving policy-relevant spatial SP research.

Related to ESP Working Group:
TWG 7 – Economic & Monetary valuation

II. SESSION PROGRAM

Room: Lounge
Date of session: Wednesday 20, May 2026
Time of session: 09:00 – 10:30

Timetable speakers:

Time	First name	Surname	Organization	Title of presentation
9:00-9:15	Noelle	Lasseur	Wageningen University	Yes or Not – In My Backyard? Testing the influence of distance decay modelling choices in discrete choice experiment on spatial planning.
9:15-9:30	Nino	Cavallaro	Leipzig University	A Novel Approach to Determining Spatially Explicit Values of Natural Capital
9:30-9:45	Kennet	Uggeldahl	University of Copenhagen	Putting lakes on the map: A spatially explicit Discrete Choice Experiment to estimate values of lake restoration in Denmark
9:45-10:00	Kaja	Plevnik	Slovenian Forestry Institute	Forest Ecosystem Services in Space: Does Public Demand Match Supply?
10:00-10:15	Tarin	Karzai	Institute for Ecological Economy Research, Berlin	Using spatially explicit preferences for urban green to support policy makers
10:15-10:30	Tomas	Badura	Czech Academy of Sciences (Czechglobe) & Charles University (Environment Center)	From spatial preferences to spatial targeting: using spatially explicit stated preference models to prioritise nature restoration in Czechia

III. LIST OF ABSTRACTS

The first author is the presenting author unless indicated otherwise

1. Yes or Not – In My Backyard? Testing the influence of distance decay modelling choices in discrete choice experiment on spatial planning

***First author*:** Noelle Lasseur
***Other author(s)*:** Georges Farina
***Affiliation*:** Wageningen University and Research
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Insights into how spatial distance to environmental goods shapes public preferences are essential for planning interventions that are efficient and socially acceptable. This study examines how alternative specifications of distance-decay in choice models affects the optimal localization of Circular Nature-Based Solutions (CNBS) aimed at water recovery through constructed wetlands. We use a discrete choice experiment (N=2,026) conducted in the Netherlands. We estimate Mixed Multinomial Logit and Latent Class models, relying on four distance-decay functional forms: linear, quadratic, log-linear, and categorical. We then use these different specifications to predict the utility of CNBS in a Dutch case study

and identify optimal locations. Results suggest preferences for distance follow a non-linear decay pattern: the nearest possible location is not systematically preferred, nor does utility decline monotonically with increasing distance. Instead, respondents exhibit distance decay patterns in which optimal CNBS placement typically lies at an intermediate range. Latent Class analysis also hints at two distinct preference classes. A "Yes In My Backyard" (YIMBY)-leaning group does not view close-by CNBS negatively and derives stable or slightly positive utility from proximity, even if their optimal location lies a bit further away. A "Not In My Backyard" (NIMBY)-inclined group, by contrast, exhibits negative utility for very short distances and favors implementing CNBS at an intermediate range (200-500 meters) rather than at the closest possible point. Overall, the choice of distance specification significantly changes the estimated decay patterns and consequently the spatial optimization outcomes. Compared with standard linear distance-decay assumptions, more flexible functional forms result in different maps of optimal CNBS locations and overall policy recommendations. By demonstrating how methodological choices in modelling spatial attributes propagate into real-world urban planning recommendations, this study highlights the consequences of distance specification in stated preference research.

Keywords: Distance decay, spatial stated preference, circular economy, nature-based solutions, urban planning

2. A Novel Approach to Determining Spatially Explicit Values of Natural Capital

First author: Sagebiel Julian
Other author(s): Martin Quaas
Presenting author: Nino Cavallaro
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Despite the urgent need to preserve natural capital, little is known about the direct benefits people receive from it. Reliable benefit estimates are required to incorporate the complex values of natural capital in national capital accounting, cost-benefit analyses, project appraisal, and international policy agreements. The study employs a spatial-explicit choice experiment approach, which estimates benefits people receive from changes in natural capital conditional on the current endowment in their places of residence. Studying changes in protected areas and high nature value farmland across Germany, we identify significant use and non-use values of natural capital stocks. As expected from economic theory, we find that the marginal values of natural capital are conditional on the spatial endowment and on whether the type of natural capital is use or non-use related. We use our estimates together with geographic information system data to aggregate and map the distribution of the demand for protected areas and high nature value farmland across Germany. The results are easily transferable to other regions and contexts and allow trading off the benefits and costs of restoring natural capital and biodiversity. Our findings enrich the discussion on the loss of natural capital and biodiversity and can significantly contribute to broader policy discussions in the context of the interlinked climate and biodiversity crises.

Keywords: Natural Capital Valuation, Discrete Choice Experiment, Biodiversity Values, Spatial Preference Heterogeneity, Benefit Transfer

3. Putting lakes on the map: A spatially explicit Discrete Choice Experiment to estimate values of lake restoration in Denmark

First author: Kennet Uggeldahl
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Across Europe, surface waters are generally far from on track to meet the Water Framework Directive target to achieve "Good Ecological Status" by 2027. Reducing external nutrient loading is essential for improving the condition in lakes, but many lakes will require additional active restoration measures to initiate ecological recovery. Existing surface water valuation studies in Europe have largely focused on rivers and coastal waters, improvements of large geographic scale, and often only value changes in the overall, categorically measured, ecological status. This leaves the valuation of smaller, individual, lakes susceptible for bias, if values are transferred based on past studies, and means that smaller improvements

in water quality might be unvalued, if they don't result in a change in the ecological status of the lake.

This study presents the first nationally representative stated choice experiment valuing lake water quality improvements in Denmark. The experiment captures improvements in both the categorial ecological status and continuous biophysical indicators, including water clarity and the frequency of algal blooms. Respondents evaluated six referendum-style policy scenarios spatially tailored to their local context. Each scenario considered the improvement of one lake, matched to experimental attributes such as size and distance, and presented via interactive maps. The lakes in the choice scenarios were selected from 1240 different lakes ranging between 1 – 3995 hectares in size.

Preferences were analyzed using a mixed logit model, accounting for lake specific spatial attributes and current conditions. Results show significant willingness to pay for ecological improvements, with marginal values declining in current condition, as well as for improvements in the continuous water quality attributes. The spatial attributes show values declining in distance from the respondents and increasing in size of the lake, as expected. The parameter estimates are used to calculate nationally representative value estimates for each of the 1240 lakes.

Keywords: willingness to pay, water quality, spatial dimensions, distance decay, diminishing marginal utility

4. Forest Ecosystem Services in Space: Does Public Demand Match Supply?

First author: Kaja Plevnik
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Assessing the capacity of ecosystems to provide ecosystem services (ES) and involving the public and their needs for ES is key to the successful implementation of forest-related policies within the European Green Deal (EC, 2019). We conducted a national survey of the general public (n = 813) in Slovenia, the central part of which was a discrete choice experiment (DCE) to determine public preferences regarding possible changes in the supply of ES and ES-based products and services. The results of this part of the survey, together with respondents' place of residence and the use of Moran's I statistic, enabled us to identify areas of strong preferences for ES, whether positive or negative. Based on biophysical indicators, we assessed the potential supply of ES and then compared it with public preferences. We found statistically significant differences in potential supply within and outside areas of pronounced preferences for all seven types of preferences. We then compared public preferences with the potential supply of ES and identified three cases (high-quality wood, strictly protected forests, and forest tourism) in which high potential supply of ES coincides with strong positive preferences in the same area. These areas should be prioritised for action to increase ES supply, as this is both ecologically feasible and desired by the public.

Keywords: Forest ecosystem services, public preferences, potential supply of forest ecosystem services, spatial matching, forest-related policies

5. Using spatially explicit preferences for urban green to support policy makers

First author: Tarin Karzai
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Urban green infrastructure is becoming increasingly important as cities face challenges and risks due to climate change. Green infrastructures have the potential to support urban climate adaptation by regulating microclimates and increasing urban water retention. Through further ecosystem services, green infrastructures enhance the quality of life in cities and are therefore valued by the urban population.
In the interdisciplinary project Value of Green Urban Spaces III (Stadtgrün wertschätzen III) we quantify and value the numerous benefits of green infrastructure in German cities. To this end, we conducted a representative survey including a discrete choice experiment to capture the preferences and the

willingness to pay (WTP) of the urban population in Germany for the cultural ecosystem services of urban trees, green spaces and green roofs and facades. To examine the influence of the immediate residential environment and surroundings on the participants' WTP, data on the location of the survey participants were also collected.

The aim of this analysis is to derive a spatially explicit function that allows for a transfer of the WTP to further cities and neighborhoods using openly accessible spatially explicit statistics. The benefit transfer function will be integrated into an online tool for evaluating freely adjustable greening scenarios in 193 German cities. The tool will allow for the visualization of the benefits of urban green in a 500x500 meter grid. Next to the results from the choice experiment, further environmental-economic valuation of regulatory ecosystem services will be incorporated into the tool, for example the valuation of health effects due to the cooling service and reduction air pollution through urban greenery.
The online tool supports municipal actors, urban planners, politicians, and civil society as an informative asset in urban planning and facilitates evidence-based decision making. It can contribute to the implementation of climate adaptation or the EU restoration law.

Keywords: urban green, cultural ecosystem services, willingness to pay, spatially explicit benefit transfer, online assessment tool

6. Spatial stated preferences, nature restoration, spatial targeting, discrete choice experiments, GIS

First author: Tomas Badura
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Spatial targeting is central to effective and publicly supported nature restoration, yet research on how to translate stated preference results into spatial prioritisation remains limited, as are limited large scale studies that could be used for such purpose. Most spatial stated preference studies focus on accessibility to individual (low number of) sites, while the broader spatial context in which respondents live and make choices is rarely operationalised for decision support.
This paper demonstrates how spatially explicit stated preference data and model outputs can be used to generate spatial targeting maps for nature restoration in Czechia. We build on a unique national site-choice discrete choice experiment that allows respondents to select among multiple potential restoration locations, combined with detailed GIS-based measures of respondents' surrounding natural endowment and site-specific spatial characteristics.
We estimate and compare a set of discrete choice models that incorporate spatial information in different ways, including (i) interactions between individual-level natural endowment indices and choice attributes, and (ii) spatial alternative-specific effects capturing location-specific preferences beyond distance. Results show that accounting for spatial endowment significantly improves model fit relative to distance-only specifications and systematically alters the inferred attractiveness of restoration options. In particular, preferences for restoration are conditioned by the quantity and quality of natural areas surrounding respondents, with implications for how marginal benefits of restoration vary across space.
We then illustrate how estimated preference parameters and willingness-to-pay measures can be projected back into geographic space to construct spatial targeting maps that identify areas where restoration is likely to generate higher aggregate public benefits, conditional on existing natural endowment, location characteristics and distribution of the population.

Keywords: spatial stated preferences, nature restoration, spatial targeting, discrete choice experiments, GIS