agriCULTURAL landscapes

30 years of landscape architecture education in Nitra

BOOK OF ABSTRACTS

ECLAS NITRA 2025

06--11-09-2025

SUA Slovak University of Agriculture in Nitra

SUA·FHLE Faculty of Horticulture and Landscape Engineering

1995 FZKI 2025

LANDSCAPE IN FOCUS

ECLAS EUROPEAN COUNCIL OF LANDSCAPE ARCHITECTURE SCHOOLS

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Slovak University of Agriculture in Nitra, Slovakia

Design and Production Editor, Cover Design
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Visual Concept Authors
ATTILA TÓTH, SOŇA BELLÉROVÁ, MIROSLAV ČIBIK and BRANISLAV KRÁLIK
Slovak University of Agriculture in Nitra, Slovakia

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Reviewers

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Polytechnic University of Valencia, Spain

KATARÍNA SLOBODNÍKOVÁ
Slovak University of Agriculture in Nitra, Slovakia

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ECLAS

EUROPEAN COUNCIL OF
LANDSCAPE ARCHITECTURE
SCHOOLS

ABOUT ECLAS

THE EUROPEAN COUNCIL OF LANDSCAPE ARCHITECTURE SCHOOLS

The European Council of Landscape Architecture Schools exists to foster and develop scholarship in landscape architecture throughout Europe by strengthening contacts and enriching the dialogue between members of Europe's landscape academic community and by representing the interests of this community within the wider European social and institutional context. In pursuit of this goal the European Council of Landscape Architecture Schools seeks to build upon the Continent's rich landscape heritage and intellectual traditions.

The first pan-European meeting of landscape schools was convened by Berlin Technical University in 1989 under the title Europäische Hochschulkonferenz Landschaft. This was followed by a second meeting in Vienna in 1990. The European Conference of Landscape Architecture Schools was formed as a result of the success of the Berlin and Vienna meetings and met first in Wageningen in the Netherlands in 1991. This meeting was followed by a series of further annual conferences. At the 2000 Conference in Dubrovnik, Croatia, a decision was taken to expand the activities of ECLAS beyond the annual conferences and to symbolise this by changing the name of the organisation to the European Council of Landscape Architecture Schools. In 2006 ECLAS was incorporated as a not-for-profit member organisation under Dutch Law, with a formal set of statutes and standing orders. A new logo and corporate identity weredesigned at the same time.

https://www.eclas.org/

ABOUT LANDSCAPE ARCHITECTURE

LANDSCAPE ARCHITECTURE IN THE ACADEMIC AND PROFESSIONAL CONTEXT

Landscape architecture is the discipline concerned with mankind's conscious shaping of his external environment. It involves planning, design and management of the landscape to create, maintain, protect and enhance places so as to be both functional, beautiful and sustainable (in every sense of the word), and appropriate to diverse human and ecological needs. The exceptionally wide-ranging nature of the landscape means that the subject area is one of unusual breadth, drawing on and integrating not just material from the two sides of the traditional divide between the creative arts and the natural sciences, but incorporating many aspects of the humanities and technology as well.

This complexity is closely reflected by the diversity of approaches to the discipline which can be found throughout Europe, a diversity which is clearly illustrated by the range of different types of higher education institutions across Europe in which landscape architecture teaching has been established. These range from universities specialising in the fine arts to those dedicated to agriculture and forestry, and encompass technical universities as well as the more broadly-based 'general' universities.

https://www.eclas.org/about-eclas/landscape-architecture-the-european-dimension/

EUROPEAN FRAMEWORKS FOR LANDSCAPE AND DESIGN

COUNCIL OF EUROPE LANDSCAPE CONVENTION AND THE NEW EUROPEAN BAUHAUS

In 2025, we celebrate 25 years since the Landscape Convention has been opened for signature in Florence. The aim of the Council of Europe Landscape Convention, ratified to date by 40 member States, is the protection, management and planning of the landscape, with reference to the entire territory of the States parties, promoting public awareness and participation. ECLAS is one of the recognized NGOs monitoring and supporting the implementation of the Landscape Convention.

ECLAS is a member of the New European Bauhaus. The New European Bauhaus is a creative and interdisciplinary initiative that connects the European Green Deal to our living spaces and experiences. This conference aims at supporting networking and knowledge creation for the New European Bauhaus. It unites experts to shape sustainable and inclusive environments.

The New European Bauhaus (NEB), launched by the European Commission in 2020, is a creative and interdisciplinary initiative that connects the European Green Deal to our living spaces and experiences. It envisions making the green transition not only sustainable but also beautiful and inclusive. By promoting solutions that combine *sustainability*, *aesthetics*, and *inclusion*, NEB encourages diverse stakeholders to co-design, experiment, and implement projects that enhance both the environment and everyday living. This conference aims to support networking and knowledge creation for the New European Bauhaus. It unites experts to shape sustainable and inclusive environments.

https://new-european-bauhaus.europa.eu/index_en

ATTILA TÓTH, Assoc. Prof. Dr.
ECLAS 2025 Conference Chair

AGRICULTURAL LANDSCAPES

30 YEARS OF LANDSCAPE ARCHITECTURE EDUCATION IN NITRA

WHY IN NITRA? 30 years ago, the Faculty of Horticulture and Landscape Engineering was established at the Slovak University of Agriculture (SUA) in Nitra. This occasion marked the beginning of landscape architecture education in Slovakia, building upon the tradition of the Lednice landscape school in Czechoslovakia.

WHY AGRICULTURAL LANDSCAPES? Nitra is often referred to as the capital of agriculture in Slovakia. It is situated in the fertile Danube Lowland and agriculture has played a central role here for centuries. Moreover, Nitra has been the hub of the most important national institutions for agricultural research, innovation, education, and exhibition. SUA Nitra is the only agricultural university in the country and currently the only university providing landscape architecture education.

With this year´s ECLAS conference, we want to celebrate three decades of landscape architecture education in the agricultural capital, at the only agricultural university in one of the most important agricultural regions of Slovakia. Thus, the theme agriCULTURAL landscapes.

The challenge of ensuring food production and biodiversity conservation on the same land, while enabling mitigation of and adaptation to changing climate presents significant challenges for agriculturally shaped landscapes. How can agriCULTURAL landscapes become more multifunctional, inclusive, resilient, and sustainable? How can they be socially acceptable, ecologically ambitious, and economically viable? What is the role of current and future landscape architects in planning and designing sustainable agriCULTURAL landscapes?

Agriculture has long shaped our landscapes, creating a dynamic relationship between food production and the natural environment. Over centuries, agricultural practices have not only provided the basis for human survival, but also given rise to diverse cultural landscapes, traditional knowledge systems, and regionally specific patterns of land use. Fields, pastures, orchards, and irrigation networks have become integral elements of the rural identity, connecting communities to their environment and contributing to heritage values that persist to this day.

Today, these agriculturally shaped landscapes face growing and often conflicting challenges: ensuring reliable food production and biodiversity conservation on the same land, while also enabling climate protection and adaptation. At the same time, they play a crucial role in the global food chain, which is under increasing pressure to meet rising demands for both quantity and quality of food, while maintaining environmental sustainability and social equity.

Climate change, soil degradation, water scarcity, and urban expansion further disrupt this delicate balance, threatening both productivity and ecological systems. Agricultural intensification risks eroding biodiversity and depleting natural resources, while abandonment of marginal farmland can lead to loss of cultural landscapes and traditional practices. In parallel, consumer expectations, policy frameworks, and technological innovation are reshaping the ways in which landscapes are managed, creating both opportunities and tensions between local needs and global pressures.

How can we perceive, plan, and design agriCULTURAL landscapes? By reimagining agricultural landscapes as multifunctional spaces, we can align food production with biodiversity conservation, soil health, and climate resilience. This approach not only supports local landscapes, but also strengthens the global food chain, ensuring its sustainability, equity, and capacity to feed future generations. Innovative solutions and collaborative efforts across sectors are essential to create systems that are productive, resilient, and beneficial for both people and nature on a global scale.

WELCOME NOTES

MESSAGES FROM THE ECLAS PRESIDENT
AND THE ECLAS 2025 CONFERENCE CHAIR

FREDERICO MEIRELES, Dr.
President of ECLAS

CULTIVATING KNOWLEDGE, CONNECTING COMMUNITIES

A MESSAGE FROM THE ECLAS PRESIDENT

The annual ECLAS Conference has always been a cornerstone of our organisation's mission, and this year's event in Nitra, Slovakia, has once again demonstrated its vital importance. The conference is the primary vehicle through which we, as the European Council of Landscape Architecture Schools, fulfil our core objectives: to foster scholarship, strengthen contacts, and enrich dialogue across the European landscape academic community.

This year's theme, *agriCULTURAL landscapes*, has provided a powerful lens through which to explore the evolving challenges and opportunities in our discipline. For millennia, agricultural practices have served as a fundamental force in shaping Europe's unique and varied landscapes. The intricate agricultural landscape patterns are not a natural occurrence but a direct result of diverse human-land interactions, each adapted to local climate, soil, and culture. These landscapes are rich with cultural heritage, providing not only food and economic stability but also a sense of place and regional identity. They represent a living record of our history, showcasing the ingenuity of generations of farmers and the co-evolution of human society and the natural environment. It is a theme that resonates deeply with ECLAS's mission to promote interaction between academics and researchers, and to represent the interests of scholarship within Europe's higher education system. By bringing together over 200 participants and presenting the contributions of researchers, educators, and practitioners, the conference has served as a critical platform for the exchange of information, experience, and ideas. The six thematic tracks have stimulated discussion and encouraged cooperation, allowing us to collectively advance the development of a Europe-wide landscape academic community.

The host institution, the Slovak University of Agriculture in Nitra, has done a remarkable job of not only organising an outstanding conference but also of celebrating a significant milestone—30 years of landscape architecture education in Nitra and Slovakia. Dr. Attila Tóth and his team have created an event that truly embodies the spirit of our community, fostering a space for both intellectual rigour and collegial connection.

As we conclude this memorable conference and look forward to the next, we remain committed to our shared purpose. The work presented in this Book of Abstracts is a testament to the dedication and originality of our members, and it serves as a valuable resource for furthering our collective understanding of agriCULTURAL landscapes.

Thank you to everyone who contributed to the success of ECLAS Conference 2025. Your participation and scholarship are what make this event so meaningful and so crucial to the future of our profession.

ATTILA TÓTH, Assoc. Prof. Dr.
ECLAS 2025 Conference Chair

THE ECLAS FLAG RAISED IN NITRA

A MESSAGE FROM THE ECLAS 2025 CONFERENCE CHAIR

The Faculty of Horticulture and Landscape Engineering at the Slovak University of Agriculture in Nitra was established in 1995. With the ECLAS Conference 2025, we are proud to mark this significant milestone and to celebrate 30 years of landscape architecture education in Nitra and Slovakia, together with our colleagues from the international landscape community. Nitra, often regarded as the agricultural heart of Slovakia, inspired the central theme of this year's conference: *agriCULTURAL landscapes*. This concept encompasses not only the physical and ecological dimensions of agricultural landscapes but also their rich cultural, historical, and social meanings.

Organised around six thematic tracks — *Ecology and Economy, Heritage and Identity, Democratic Landscape Transformation, Teaching and Learning, Innovative Landscape Practices*, and an *Open Track* — the conference sought to explore current approaches in education, research, and practice. These themes provided a framework for vibrant discussion and exchange of ideas among scholars, practitioners, and educators.

We were delighted to receive more than 230 submissions, and the conference welcomed over 200 registered participants. This Book of Abstracts presents the double-blind peer-reviewed contributions of those whose work was accepted and who joined us in Nitra on site or online. The abstracts reflect a wide range of perspectives on agriCULTURAL landscapes, offering valuable insights into how landscape architecture engages with these evolving and complex environments. We hope that the ECLAS 2025 Conference has played a meaningful role in advancing the discipline's contribution to the planning, design, and stewardship of agriCULTURAL landscapes.

It has been an honour to organise and host ECLAS 2025 here in Nitra. As the conference comes to a close, we symbolically pass the ECLAS flag to the Netherlands, with great anticipation for the continued journey of our shared academic and professional community.

KEYNOTES

INSIGHTS FROM THE
FOUR KEYNOTE SPEAKERS

FRANK LOHRBERG, Univ.-Prof. Dr.-Ing.
RWTH Aachen University, Germany

REDISCOVERING AGRICULTURE BY LANDSCAPE ARCHITECTURE

UNDERSTANDING LANDSCAPE ARCHITECTURE'S SCOPE OF DESIGNING AND PLANNING WITH AGRICULTURE

FRANK LOHRBERG is Professor of Landscape Architecture at RWTH Aachen University, where he has chaired the Institute since 2010 and currently serves as Dean of the Faculty of Architecture. Trained in landscape management at the University of Hannover, he earned his doctorate in Stuttgart with a seminal thesis on urban agriculture. As founder of Lohrberg stadtlandschaftsarchitektur, he has realised award-winning projects across Germany, including the Veielbrunnenpark Stuttgart and the Waldlabor Köln. His research addresses the intersections of landscape architecture, urban development, and productive green infrastructure, with a particular focus on urban agriculture and cultural heritage. A member of the German Academy for Urban and Regional Planning, Lohrberg has shaped discourse and practice alike, notably through the works Urban Agriculture Europe and Urban Agricultural Heritage.

Since the turn of the millennium, landscape architecture has shown great interest in engaging with agriculture, e.g. in the field of urban agriculture, regional design or the planning of food systems. In his keynote, Frank Lohrberg examines how landscape architecture is rediscovering its long-standing yet often overlooked relationship with agriculture. Historically rooted in agrarian practice—as seen in regions like Nitra—the discipline gradually shifted towards urban and aesthetic concerns. In recent years, however, agriculture has re-emerged as a vital field of engagement. This renewed interest is driven by pressing global themes such as food systems, sustainability, and cultural heritage. The lecture reflects on this shift and explores how contemporary landscape architecture integrates agricultural practices not only functionally, but also as a source of spatial identity and design innovation.

ANJA BRÜLL, Dr. rer. nat. Dipl. Ing.
Euregio Maas-Rhein, Belgium

TRANSFORMATION OF AGRICULTURE FOR CLIMATE-RESILIENT LANDSCAPES

CHALLENGES AND OPPORTUNITIES IN THE THREE-COUNTRIES PARK

ANJA BRÜLL graduated as engineer for landscape planning at the Technical University of Berlin in Germany. She received her PhD in environmental planning at the Leuphana University Lüneburg in Germany, where she developed the concept of *Landscape Quality Management* based on the social and ecological (Re)Productivity theory. As a partner of *Aquatectura – Studio for Regenerative Landscapes*, she served as an independent designer and innovation consultant for more than 20 years in local to international projects on water cycles and sustainable land management. Since 2015, she has been coordinating the *Three-Countries Park* (3LP), a landscape partnership in the Euregio Meuse-Rhine at the corner of Belgium, Germany, and the Netherlands.

In response to the devastating floods in 2021 in the Euregio, the 3LP has been focussing on climate-resilient landscapes in cross-border water catchments, where agricultural stakeholders play a crucial role in water retention, biodiversity, landscape character and vital rurality.

In her lecture, Anja Brüll will explore how insights from the (re)productivity approach and the Horizon project PLUS CHANGE can transform agriCULTURE and governance for resilient landscapes without borders. Hosting 2.4 million inhabitants, the Three Countries Park is a densely populated area with industry, (farming) businesses, and cities such as Liège in Belgium, Aachen in Germany, and Maastricht in the Netherlands. It is a highly (bio)diverse region, stretching over 3,500 km^2 with a beautiful hilly hedge landscape and many rivers crossing the borders.

ALENA SALAŠOVÁ, Assoc. Prof. Dr. Ing.
Mendel University in Brno, Czechia

RURAL LANDSCAPE RESTORATION VERSUS INNOVATION

INSPIRING APPROACHES TO THE PLANNING AND RESTORATION OF AGRICULTURAL LANDSCAPES IN THE PAST, PRESENT, AND FUTURE

ALENA SALAŠOVÁ is an Associate Professor of Landscape Architecture and Head of the Department of Landscape Planning at the Faculty of Horticulture, Mendel University in Brno, Czech Republic. With expertise in landscape and urban planning, she has focused her career on the challenges of rural and agricultural landscapes. Her PhD research explored applied dendrology in revitalizing agricultural areas, while her habilitation developed methods for landscape character assessment. Her current work covers heritage management of historic cultural landscapes, landscape planning legislation, climate change adaptation, and the restoration of environmentally damaged areas. She coordinates the long-standing CEEPUS network *Landscape Management – Sustainable Land Use Perspectives in the Central European Region*, promoting cross-border collaboration on sustainable land use.

Agricultural landscapes make up the bulk of the territory of European countries. They are part of our history and identity, the home in which we live and rest. The quality of rural space is not just a matter of concern for agriculture. It concerns many other disciplines, including landscape architecture. The agricultural landscape of Central and Eastern Europe has undergone, and is still undergoing, a series of dramatic changes: ecological, economic, and social. We have not yet coped with revitalising the landscape after the communist era, and suddenly we are faced with far more significant challenges: the need to adapt the territory to climate change, to restore nature, to protect cultural identity.

How should we proceed in this situation?
Turn to history for inspiration, or create new solutions?

LIONEL FANSHAWE, BA Dip LA FLI (Retired), FRGS, FRSA
Terra Firma, Petersfield, United Kingdom

DELIVERING MULTI-FUNCTIONAL OUTCOMES FROM RURAL LANDSCAPES

LESSONS FROM HAMPSHIRE FARMING TEST AND TRIALS PROJECT FOR THE UK ENVIRONMENTAL LAND MANAGEMENT AGENDA

LIONEL FANSHAWE enjoyed a 45-year career in landscape architecture, retiring in May 2025 after 29 years leading the Terra Firma Consultancy in Hampshire, UK, with additional offices in London, Dubai, and Vilnius. His work spanned a wide range of scales and project types across the globe, often involving the interface with agricultural land use—an area particularly relevant to the ECLAS 2025 Conference on agriCULTURAL Landscapes. During 2023–2024, he also served as Director of the Hampshire Farming Test and Trials project for the UK Government's Department for Environment, Food and Rural Affairs (Defra). The project was facilitated by Merrick Denton-Thompson, with whom he worked closely. This talk is presented on their joint behalf to share the project's findings.

Defra sponsored this Test & Trial to assess a county-level Convenor model for delivering the UK's Environmental Land Management schemes, aiming to integrate food production, nature recovery, and climate resilience. Led by landscape architects and structured around National Character Areas, the project developed a natural capital baseline, funding framework, and practical toolkit trialled by diverse land managers. It demonstrated how locally led governance can overcome siloed land management and support multifunctional land use—e.g. soil health and targeted woodland delivering carbon, water, biodiversity, and recreation benefits. Strong support from Defra and stakeholders highlights its potential for national rollout and relevance to UN SDGs. The project offers a replicable, landscape-scale model for land governance, finance, and policy innovation in the UK and beyond.

ECOLOGY AND ECONOMY

CONFERENCE TRACK 1:
THEMATIC TRACK
OVERVIEW AND OBJECTIVES

Agricultural landscapes are central to food production and support the economy at all levels from local to global. Well-planned and structured foodscapes are crucial for the resilience of food systems, and for food security and safety. Agricultural landscapes provide jobs for farmers and related industries, and many people depend on farming for their livelihoods. Agriculture is a key driver of rural development and rural economies. In many regions, agricultural landscapes can also generate income from agritourism and other recreational activities in the landscape.

At the same time, agricultural landscapes are important biotopes for many animal species. Many agricultural landscapes are part of the NATURA 2000 network. Depending on farming practices, agriculture can either enhance or threaten biodiversity. More sustainable and environmentally friendly management practices, such as organic farming or agroforestry can sustain or enhance biodiversity.

In this thematic track, we are looking for contributions on diverse economic and ecological aspects of agricultural landscapes, including co-relations between these two aspects. How can agricultural landscapes be economically productive and at the same time environmentally and economically sustainable? How can landscape architects and planners contribute to more sustainable and resilient agricultural landscapes? What existing good practices can serve as inspiring role models? Your contribution may tackle one of these questions or elaborate on related issues.

LIONEL FANSHAWE, BA Dip LA FLI (Retired), FRGS, FRSA
Terra Firma, Petersfield, United Kingdom

GOVERNANCE OF LAND AND NATURAL RESOURCE MANAGEMENT

CONVENING THE ENVIRONMENTAL LAND MANAGEMENT UK AGENDA.

During the process of replacing the EU Common Agricultural Policy the UK Government have funded a three year research project into establishing a new Governance system for Land and Natural Resource Management. Facilitated and Directed by Landscape Architects the research project focussed on a collaborative approach to delivering a multi-functional outcome to the management of land. Specifically to secure amongst others - sustainable food production, the restoration of nature and the reversal of the drivers of climate change. The findings are relevant to all of Europe and are to be shared freely.

THE APPROACH

The Governance of land has to be localised to reflect the huge diversity in soil, micro-climate and eco-systems – national policies are often too crude to harness the power of natural systems. An Advisory Board was set up – including the National Farmers Union, the Country Land Owners Association, private water companies, the voluntary sector including the National Trust and the Wildlife Trust alongside 3 tiers of Local Government. The Board decided that the agenda setting will be spatially organised, at a landscape scale, making use of the National Character Areas (NCA) map. This map, prepared by the Landscape profession, records the variety of landscapes generated as the outcome of farming and settlement across the different - soil types, micro-climates and ecosystems. Generating a strategic business plan for investing in land management, started with a valuation of the baseline condition of the land and what it produced – including food, timber, water supply, renewable energy, air quality, climate regulation, recreation and physical health. The process of survey and analysis looked closely at the health of the landscape and its natural capital make up, before considering agenda setting. This process quickly identified major failures in market performance and major failures in regulation and enforcement. The process ended by setting out the Strategic Management and Business plans for each NCA designed to empower the farming community to prepare Farm Management Plans, making use of both public and private investment opportunities. This approach was strongly welcomed by the farming community because the fine grain of policy reflected the local circumstances each farm had to work with.

SCOPE OF THE RESEARCH

The research project also covered effective delivery across many different public bodies and reviewed the way statutory obligations were communicated to the industry. It provided a portal to urban based communities to understand what the public investment was delivering for them. It pioneered a refined IT system to empower farmers to access public data and developed a toolkit to enable Farm Management Plans to be prepared.

IR INGE BOBBINK, Dr.
TU Delft, Delft, Netherlands

IN-BETWEEN BOEZEM LANDSCAPES - DESIGNING A MEDIATING WATER LANDSCAPE INTO THE DUTCH LOWLANDS

An in-between *boezem* landscape is a newly built large-scale green-blue diked structure that stores water in a polder landscape and enriches its ecology. A polder is reclaimed low-lying land surrounded by dikes with a specific water management regime, depending on its land use. Since many Dutch polders lie under sea level, the rainwater must be pumped out constantly. Today, polder water is discharged into the *boezem* network, releasing surplus water into rivers and sea. The newly designed in-between *boezem* landscape is mainly positioned between the polder and the *boezem* water level. Exceptional, it can be placed higher than the *boezem* level, meaning higher than the NAP (average sea level), making the land suitable to implement housing.

The principally linear water structure of the in-between *boezem* landscape can incorporate different water levels, veiled with vegetation, boosting ecological and recreational values. It stores polder- and rainwater and should be designed in a way that it can hold flexible water levels of up to 1-meter differences. Water from the in-between *boezem* can be used during dry periods to irrigate agricultural fields and slow subsidence. The water stored in the in-between *boezem* is cleaned by vegetation; surplus water can be discharged via the *boezem*. The in-between *boezem* landscape must be designed according to the soil type, clay or peat.

The new landscape can hold various programs, like water activities, bike lanes, walking paths, fixed and flexible ones, flower meadows, tree lanes, and all kinds of dry-to-wet vegetation serving as a habitat for insects, amphibians and fish. Since the in-between *boezem* is positioned higher in the landscape, it functions as a belvedere overlooking the flat polder landscape. The in-between *boezem* landscape works as a climate buffer and initiator to transform the agricultural areas into a sustainable, circular system, embracing diverse and new forms of farming, like paludiculture, strip cultivation, peat growth and fish farming, by making the polder landscape more attractive and therefore accessible for people and animals.

JIAO JIAO, PhD. Candidate
College of Architecture and Urban Planning, Tongji University, Shanghai, China
MIN SONG
Jiangsu Provincial Planning and Design Group, Nanjing, China
JINSONG JIANG
Urban Planning and Design Institute CO. LTD of Southeast University, Nanjing, China

COORDINATED DESIGN FOR WATER ECOLOGICAL PROTECTION AND THE DEVELOPMENT OF AGRICULTURE, CULTURE, AND TOURISM IN LAKESIDE AREAS: A CASE STUDY OF YANGCHENG LAKE AREA IN XIANGCHENG DISTRICT, SUZHOU, CHINA

Yangcheng Lake is a natural lake located on the outskirts of Suzhou, China. Historically, during the agricultural era, the lakeside area was primarily characterized by grain cultivation and fishing, resulting in an ecological landscape dominated by extensive farmland, a dense network of waterways, and linear village settlements. Today, as the city embraces an era of consumption and leisure, Yangcheng Lake has emerged as a popular destination for tourism and vacations, thanks to its stunning environment, abundant natural resources, unique cultural features, and convenient location. The growing demand for tourism and leisure activities attracts not only external investors but also local villagers. Over the past 10 to 15 years, an increasing number of local villagers have begun transforming their homes into homestays and restaurants. Meanwhile, external investors are seeking expansive plots of land with prime lakefront views to develop resort facilities. In the early stages of development, construction and operation were relatively disorganized, and the conversion of farmland and forest land into construction land lacked a comprehensive regulatory framework. Although the local governance department supports tourism development, they believe it must be pursued with certain restrictions. Overdevelopment could inevitably harm the ecological environment and the unique landscape characteristics, ultimately diminishing the appeal for tourists. Therefore, it is essential to strike a balance between ecological protection and tourism development.

This paper applies the theory of Water Sensitive Urban Design, taking the Yangcheng Lake area in Xiangcheng District of Suzhou, China, as a case study to explore how to identify a balance point and develop a coordinated design approach that reconciles the dual objectives of protection and development. Firstly, the study formulates a structural plan based on higher-level regulatory requirements, current conservation needs, and tourism development demands, guided by the principles of development boundary control, scale reduction, and clustered layout. This plan broadly outlines the foundamental elements of regional development, including the boundaries, scale, and cluster structure. Subsequently, at the cluster level, the land composition is adjusted to balance the needs for protection and construction. A multi-round evaluation& feedback process is conducted regarding the ecological impacts generated by different types and scales of redevelopment compared to the exsiting conditions, leading to a relatively specific land-use plan. Meanwhile, in areas requiring significant construction, appropriate water-sensitive facilities will be incorporated to minimize environmental impact. Finally, an ecological benefit analysis of the overall area after ecological transformation is conducted to ensure compliance with ecological conservation requirements.

FABRIZIO ALBION
University of Nürtingen-Geislingen,, Nürtingen, Germany

GUIDELINES FOR THE SUSTAINABLE DEVELOPMENT OF AGRIPHOTOVOLTAICS IN ORCHARD CULTIVATION: AN APPROACH FOR THEIR HARMONIOUS APPLICATION IN THE NATURAL, LANDSCAPE AND SOCIO-CULTURAL CONTEXT OF SOUTH TYROL

In response to the escalating recognition of the need to combat climate change, renewable energy sources (RES), particularly solar energy, have witnessed exponential growth. The intricate nature of agriphotovoltaics, which combines agriculture and solar energy production, demands rapid legislative and technological development, facing various challenges and multifaceted design. This complexity is also represented by its application for orchard cultivation (APVO), which, in the first part of this research, was studied in its environmental, economic and socio-cultural aspects. Insights from literature, case studies and consultations with experts contributed valuable perspectives, forming a robust foundation for understanding and integrating APVO into rural environments, including those in the South Tyrolean context.

For its harmonious integration into the sensitive Alpine landscape, the second part was then dedicated to the development of guidelines, from the identification of the requirements to be defined as APVO, to its design flexibilities for being integrated into the context. As a basis for further considerations, the drafting of these guidelines was preceded by a program of interviews conducted to investigate the social perceptions of farmers, citizens and tourists on the potential integration of APVO in the fruit-growing valleys of the province.

Conclusive results from the data collected in the first phase are, however, still pending. Due to ongoing experiments and data collection, the current results, although being generally positive, cannot guarantee a definitive exclusion of potential negative impacts on the crop. The guidelines developed should therefore be understood as an initial exploration, providing a basis for future updates, also in synergy with the evolution of existing local projects.

ROXANA MARIA TRIBOI, Dr.
LE:NOTRE Institute, Bucharest, Romania

PASTORALISM AS AN ADAPTIVE STRATEGY IN SUSTAINABLE FOOD SYSTEMS

Pastoralism is a dynamic and adaptive food production system that integrates livestock management with ecological processes, making it a key contributor to agroecology and food sovereignty. Unlike industrial livestock farming, which depends on imported feed and centralized supply chains, pastoralism is inherently low-input, circular, and infrastructure-independent, ensuring a resilient model of food production that supports local economies, biodiversity, and ecosystem services. Urban pastoralism has emerged as a critical adaptation strategy in response to land-use changes, rural depopulation, and urban expansion, demonstrating its ability to reinvest in marginal spaces, peri-urban green belts, and abandoned lands. By integrating livestock grazing into urban and peri-urban landscapes, pastoralism provides low-impact land management, supports carbon sequestration, and enhances biodiversity connectivity in fragmented environments. It also contributes to food systems by ensuring direct consumer access to dairy, meat, and wool, reinforcing short supply chains and strengthening territorial food resilience.

As transhumance corridors and open commons decline due to land privatization and industrialization, urban pastoralism offers an alternative land-use model that maintains cultural landscapes, regenerates degraded spaces, and prevents land abandonment. It represents an innovative response to food system challenges, countering the negative impacts of intensive livestock farming while reintegrating extensive grazing into urban food strategies.

By positioning pastoralism within territorial food planning, this research highlights its role in climate adaptation, local food production, and urban ecological management. Urban pastoralism is not just a survival mechanism but an opportunity to redefine food systems through decentralized, community-based, and environmentally sustainable practices. Recognizing its value is essential for shaping food systems that are resilient, regenerative, and integrated into contemporary urban infrastructures.

DIANA CATALINA BARRERA AGUDELO, PhD. Candidate
Roma Tre University, Rome, Italy

THE LANDSCAPE OF SUBALTERN RURALITY: THE FABRIC OF RURALITY. EXTRACTIVE PRESSURES, SUBALTERNIZED SPACES, AND THE STRUGGLE FOR COEXISTENCE IN THE COLOMBIAN ANDES

This research aims to examine the relationship between spatial production practices and extractive-protectionist planning policies in Andean rural territories. The hypothesis is that rurality is primarily a political condition based on systems of radical dependencies, interactions, and conflicts between subjects, ecologies, and economies. Reasoning about such dynamics in planning requires focusing on the question of “coexistence” between different rural “socio-spatial ecologies” rather than working on the valorization of local “palimpsests,” the promotion of “sustainable local development” strategies, and the pursuit of agricultural productivism strategies.

The investigation seeks to reconceptualize thinking around Andean rurality and its subaltern condition through spatial explorations based on southern epistemologies and decolonial studies. The notion of landscape in Colombia and Andean territories is a question that goes beyond contemporary crises of climate change and food demand. Historically, Andean rurality has been the place of conflict, migration and resistance; it is the scenario of struggle and defense for self-determination of an interdependent territory (Escobar, 2010). The latifundist and colonial character of land distribution reflects the hegemonic-colonial position and the responsibility of a violent spatial projection and planning, executed through the social and economic marginalization of certain bodies, spaces, and rural territories that are exploited, indebted, and thus rendered subaltern. And today, labeled as responsible for the rural crisis and for overcoming the agricultural frontier.

The research is conducted through the socio-spatial study of Pueblo de Monguí, in the Colombian Andes. In this case, the conflict between permanently extractive landscapes, that means planning policies and emerging economies (mineral, agronomic, cultural, and environmental). And on the other hand, subsistence landscapes (family agriculture, sartorial craftsmanship, and care work). The proposed project stance is to stop assuming rurality as a ‘reserve of resources and care’ (Nobre, 2017) available to urban demand and global economic centers. Therefore, an ecological stance is adopted in the first place. Ecology, it is useful to clarify, is understood not as the relationship between organisms and their environment but, as Morton (2016) argues, as a fabric in which multiple entities, subjects, and desires are placed in relation, forming interdependencies. These hypotheses are articulated within four ecologies: wild, protected space, extractive, and subsistence ecologies. Finally, a project of coexistence among the various rural ecologies is proposed according to generative, reversible, and dispersal practices a logic that reflects rural practices, an ecology of temporality.

MONIKA KAMENEČKI
University of Zagreb, Croatia
FLORA TUTA
Independent researcher, Split, Croatia
DORA TOMIĆ RELJIĆ
University of Zagreb, Croatia
PETRA PEREKOVIĆ
University of Zagreb, Croatia
LARA BOGOVAC
University of Zagreb, Croatia

THE POSSIBILITY OF CREATING A NETWORK OF URBAN GARDENS IN SPLIT

As Split continues to grow as a Mediterranean city, it faces significant ecological, social, touristic, and economic consequences due to rapid urbanization. This research aims to identify potential locations for urban gardens and enhance awareness of urban agriculture, aligning with the EU's commitment to sustainable urban development as outlined in the European Green Deal and the Urban Agenda for the EU. Urban agriculture embodies a complex typology that promotes community well-being and supports biodiversity, reinforcing the role of urban gardens as critical components of green infrastructure. The pressure from continuous urbanization has resulted in Split losing vital environmental quality. While predominantly a densely built area, there remain open spaces that can be integrated into a functional network of green areas. Currently, the city's green areas are not interconnected, prompting the development of a proposal for a comprehensive green infrastructure system. A thorough analysis of green infrastructure in Split was conducted, investigating opportunities to implement a network of urban gardens through a holistic approach, which resonates with EU guidelines promoting integration of green spaces into urban planning. The importance of urban gardens, their benefits, and developmental potential were analyzed, leading to the creation of a diagram that outlines the expansion and enhancement of green infrastructure in accordance with existing spatial planning documentation. This proposal incorporates principles of wedges, concentric connections, and corridor links that preserve natural landscapes and enhance urban resilience. The wedges serve to protect areas against urban sprawl, notably in the western part of Split (Marjan) and the eastern agricultural zones in Mejaši. Proposed concentric connections encompass the peninsula and the historical Palace, alongside semi-circular links connecting isolated green elements. Identified locations for urban gardens are contextualized within their impact on enhancing Split's green infrastructure. Research findings indicate viable locations that, through a holistic approach, could foster a more interconnected green infrastructure system. To ensure the functionality and sustainability of these urban gardens, guidelines were developed emphasizing accessibility, inclusivity, and community engagement, in line with EU objectives for participatory urban governance. Selected sites for garden establishment—including parks, unorganized green spaces, meadows, squares, brownfield areas, and purpose-free zones—have been integrated into the proposed green infrastructure diagram. The majority of these potential locations align with our development framework, facilitating their networking into a cohesive system of open green areas, ultimately contributing to a more sustainable and livable urban environment in Split.

JOANNA STORIE, Dr.
Estonian University of Life Sciences, Tartu, Estonia
VINETA GAILĪTE
Estonian University of Life Sciences, Tartu, Estonia

CAN DRONE TECHNOLOGY SUPPORT SUSTAINABLE MANAGEMENT PRACTICES OF GRASS-FED BEEF FARMERS?

Originally designed for urban environments, living labs are increasingly utilised in rural areas to foster sustainable living, promote user-centred design, encourage community involvement, and support regional development. In the CODECS project, part of the Horizon Europe initiative, living labs are being used to investigate how digitalisation impacts farming practices. The CODECS Estonian/Latvian Living Lab is a collaboration between conservation experts, drone technology specialists, and grass-fed beef producers operating in landscape protection zones. The primary goal is to assess the potential of drone technology-generated data for managing and restoring biodiverse grassland habitats by improving farmers' digital literacy and providing tailored digital solutions.

However, there are several challenges associated with implementing living labs in dispersed rural areas. Adjustments were needed, such as organising multiple site workshops and digital tours to accommodate the busy schedules of farmers. Workshop dates were also modified to align with agricultural seasonality rather than urban-centred timelines. Additionally, it was essential to simplify the terminology used in workshops to ensure inclusivity without overwhelming farmers with complex research-oriented jargon.

Remote sensing technology holds significant potential for agricultural producers; however, substantial challenges remain in effectively utilising the complex data it generates for daily management decisions, conservation planning, and monitoring ecological restoration. Biodiverse grasslands, which are essential for providing various ecosystem services, often represent low-income agricultural units. As a result, landowners face considerable barriers when it comes to accessing the high-cost equipment and services necessary for effective management and monitoring.

Despite being economically limited in terms of direct income generation, these grasslands deliver a wide range of vital ecological functions, including soil conservation, carbon sequestration, and habitat provision for diverse species, making their preservation critical for broader environmental objectives.

From the perspective of governmental authorities, however, remote sensing technology may offer a cost-effective solution for monitoring extensive agricultural landscapes. Farmers, though, are concerned about the potential for misuse or misinterpretation of the data, stemming from their fears that inaccuracies in data interpretation could lead to penalties. This concern introduces a level of uncertainty among agricultural stakeholders.

To address these challenges and maximise the benefits of remote sensing in land management and environmental conservation, collaboration across various sectors—farmers, government agencies, environmental organisations, and technology experts—is vital. Thus, the benefits derived from such data must be shared equitably among all parties involved. Collaborative efforts are particularly important for overcoming the mistrust that exists between farmers and authorities. By fostering open communication, it becomes possible to establish a more inclusive and balanced framework for land management that harmonises conservation goals with the practical realities of agricultural operations. This approach will enhance the effectiveness of conservation initiatives and restoration monitoring while providing farmers with the necessary support to make informed and beneficial decisions about land management. By promoting partnerships in living labs, knowledge exchange, and mutual respect, remote sensing can serve as a powerful tool to support both agricultural productivity and biodiversity conservation, benefiting all stakeholders involved.

JIAYING SHI, Dr.
School of Architecture, Southeast University, Nanjing, China
NAN WANG
School of Architecture, Southeast University, Nanjing, China

DUAL BENEFITS OF URBAN FORAGING: EXPLORING SUSTAINABLE DEVELOPMENT PATHWAYS THROUGH SOCIAL AND ECOLOGICAL PERSPECTIVES

In recent years, urban food resources have played a crucial role in sustainable urban development. Urban foraging—the practice of collecting wild food resources in urban environments—has gained attention as a potential pathway for sustainable urban development. Studies have shown that urban foraging not only contributes to food security but also promotes urban biodiversity conservation. This study takes Nanjing, Jiangsu Province, China, as a case study to explore how urban foraging aligns with global sustainability goals, particularly the United Nations Sustainable Development Goals (SDGs). By collecting user-generated content (UGC) from Xiaohongshu (a lifestyle-sharing platform) and iNaturalist (a citizen science platform), this study systematically analyzed 994 social media posts and species observation records, focusing on three dimensions: foraging participants (who), foraging locations (where), and foraged species (what).

The results indicate a significant gender disparity in urban foraging, with female participants accounting for 71.8% of the total. Geographic spatial analysis revealed that key foraging hotspots, such as Mufu Mountain and Zijin Mountain, overlap with national ecological conservation areas. This phenomenon highlights a potential conflict between informal resource utilization and top-down ecological conservation policies. Notably, 66% of the foraged species were native to Nanjing, with only one species (*Berchemiella wilsonii*) classified as Critically Endangered. These findings suggest that under appropriate regulation, urban foraging poses minimal threats to local biodiversity. Additionally, the study found that foraging activities targeting invasive species, such as wild carrot (*Daucus carota*), align with ecological management objectives, indicating that urban foraging could serve as an effective supplementary strategy for biological control.

Based on these findings, this study proposes that urban foraging offers dual social and ecological benefits. On the one hand, it enhances food resilience for vulnerable urban populations by diversifying food sources. On the other hand, it fosters biodiversity-friendly land-use practices, contributing to ecological conservation goals. To achieve this balance, we recommend designating specific foraging zones within urban green spaces to ensure the alignment of foraging activities with conservation policies. Additionally, public awareness campaigns and policy incentives could encourage residents to engage in the collection of invasive species, further enhancing the ecological value of urban foraging. Policymakers should also establish a clear legal framework for urban foraging, delineating its boundaries while incorporating citizen science data, such as species observation records from iNaturalist, into urban biodiversity monitoring systems.

This study argues that integrating urban foraging into sustainable urban planning can contribute to multiple SDGs, including Zero Hunger (SDG 2), Sustainable Cities and Communities (SDG 11), and Life on Land (SDG 15). Moreover, it can enhance ecological literacy among urban residents and cultivate a sense of environmental responsibility. The findings provide valuable insights for policymakers and urban planners, offering theoretical foundations and practical pathways to integrate local food practices with global sustainability goals, address global environmental challenges, build sustainable food systems, and strengthen urban resilience.

ANA MEDEIROS
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Porto, Portugal
CLÁUDIA FERNANDES
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Porto, Portugal
JOÃO F. GONÇALVES
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
proMetheus—Research Unit in Materials, Energy and Environment for Sustainability,
Viana do Castelo, Portugal
PAULO FARINHA-MARQUES
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Porto, Portugal

AGRICULTURAL LANDSCAPES BETWEEN ECOLOGICAL AND ECONOMICAL PERFORMANCES: A SPECTRUM-BASED APPROACH TO SUSTAINABILITY

Agricultural landscapes are often shaped by the tension between economic revenue and biodiversity preservation, commonly viewed as opposing forces. Intensive farming prioritizes short-term economic gains, leading to biodiversity loss, soil degradation, and reduced ecosystem resilience. Conversely, conservation-oriented approaches enhance ecological quality but may limit economic viability, making them less attractive to farmers. This study proposes the BIO-PROD Gradient, a spectrum-based framework that reconciles economic and ecological priorities by positioning landscapes along a continuum rather than a binary divide.

The framework was tested in six visual basins (~500 ha each) in the Alto Douro Wine Region, a UNESCO site where steep slopes result in low productivity and high production costs. The Biodiversity Potential Index (BIO) was developed based on expert ratings (1–7 scale), evaluating land use compatibility with biodiversity. The Economic Revenue Index (PROD) was estimated by calculating grape yield multiplied by the price. Using RStudio, both indices were calculated per land-use area and summed for each landscape. ArcGIS Pro was used to map and visually compare spatial patterns of both indexes.

Results indicate a strong negative correlation ($R^2 \approx 0.80$) between the BIO and PROD indices, reinforcing the trade-off between economic revenue and biodiversity conservation. Two main clusters emerged near the extremes, but one landscape—Mesão Frio—stood out as a balanced case, demonstrating how agricultural landscapes can achieve economic and ecological sustainability. A deeper analysis identified five key factors promoting coexistence: 1) Complex, compartmentalized mosaics; 2) Structurally diverse semi-natural habitats; 3) Multifunctional landscapes with diverse land uses; 4) A balance between cultivated and semi-natural areas; and 5) Integration of traditional and modern plantation systems.

Mesão Frio also contains specific landscape elements that enhance biodiversity. Buffer strips with native plants support pollinators, while riparian vegetation prevents soil erosion and improves water retention. Tree rows and hedgerows offer habitat for farmland birds, reduce wind damage, and limit pesticide dispersion. Stone walls further increase habitat diversity and landscape resilience. These features align with the suggested measures by the UN Convention on Biological Diversity (CBD) and the EU Biodiversity Strategy for 2030, though regional adaptation remains challenging.

The BIO-PROD Gradient offers a flexible and strategic tool for land management. It can successfully identify landscapes that balance economic and biodiversity conservation performances, serving as models for sustainable agriculture. Alternatively, it helps prioritize interventions for landscapes at the extremes—where intensive farming requires biodiversity restoration, and biodiversity-rich but low-income areas may need economic incentives like eco-tourism or crop diversification.

By providing a more nuanced understanding of agricultural sustainability, the BIO-PROD Gradient can potentially serve as a valuable tool for land-use planning, policy-making, and conservation strategies. Future research should refine the framework by integrating additional indicators and enhancing mapping techniques better to capture the complexities of biodiversity and agricultural productivity. Ultimately, this study demonstrates that reconciling nature and economic sustainability in agricultural landscapes is not an impossible ideal. Instead, it underscores the need for landscape planners to develop better strategies while continuously seeking win-win solutions that promote ecological and economic resilience.

HONGYU MA
School of Architecture, Southeast University, NanJing, China
HAIOU ZHANG
School of Architecture, Southeast University, NanJing, China
JIAYING SHI, Dr.
School of Architecture, Southeast University, NanJing, China
MICHAEL HENSEL, Prof.
School of Architecture, Southeast University, NanJing, China
Vienna University of Technology, Vienna, Austria
JIE LIANG, Dr.
School of Architecture, Southeast University, NanJing, China
JIEPING CHEN, Assoc. Prof.
School of Architecture, Southeast University, NanJing, China

A REVIEW OF TYPICAL SOIL CARBON SEQUESTRATION MEASURES IN AGRICULTURAL LANDSCAPES

Soil organic carbon (SOC) sequestration in agricultural landscapes plays a crucial role in enhancing agricultural productivity, mitigating climate change, and promoting global sustainability. This review outlines the principles, effects, and current status of typical SOC measures in agricultural landscapes, analyzes their effectiveness. The aim is to ensure food production while providing a reference for creating a sustainable agricultural landscape ecological environment.

The sequestration of SOC in agricultural landscapes is achieved through various means, including reducing SOC consumption, increasing SOC input and making it inert, and altering land functions to increase SOC retention, which is reflected in the practices of cultivation, management, and land transformation correspondingly. In the cultivation phase, conservation tillage methods, such as no-till and cover crops, can reduce soil erosion, thereby decreasing SOC consumption; however, regional application varies significantly due to differences in soil type, climate, and agricultural practices. In the management phase, returning straw to the soil is one of the common measures; on the one hand, it reduces the carbon emissions caused by burning straw, and on the other hand, the biochar formed from straw and other materials can increase soil aggregates, becoming an inert carbon pool. In the transformation phase, the conversion of farmland cover also has a significant impact on land carbon emissions. For example, abandoned farms can be transformed into wilderness tourism estates to achieve carbon return to the soil, but there is limited research and practice in this area.

Future research should prioritize three main directions: (1) improving the stability and efficiency of SOC sequestration measures through targeted agricultural practices and technological innovations; (2) developing location-specific, farmer-friendly practices that integrate carbon sequestration with economic benefits to enhance adoption rates; and (3) exploring low-carbon transformation pathways for abandoned farmland to maximize carbon sequestration potential while maintaining agricultural productivity.

By optimizing these measures, a triple-win scenario can be achieved: increased crop yields, enhanced farmer livelihoods, and sustainable agricultural landscape development. This review underscores the importance of tailored, context-specific approaches to SOC sequestration in agricultural landscapes, emphasizing the need for interdisciplinary collaboration, policy support, and community engagement to scale up effective practices and achieve long-term environmental and economic benefits.

HAIOU ZHANG
School of Architecture, Southeast University, NanJing, China
HONGYU MA
School of Architecture, Southeast University, NanJing, China
JIAYING SHI, Dr.
School of Architecture, Southeast University, NanJing, China
MICHAEL HENSEL, Prof.
School of Architecture, Southeast University, NanJing, China
Vienna University of Technology, Vienna, Austria
JIEPING CHEN, Assoc. Prof.
School of Architecture, Southeast University, NanJing, China
JIE LIANG, Dr.
School of Architecture, Southeast University, NanJing, China

A REVIEW OF THE CURRENT STATUS OF THE APPLICATION OF ON-FARM SOIL CARBON SINK MONITORING TECHNOLOGY IN AGRICULTURAL LANDSCAPE MANAGEMENT

As an important carbon sink, agricultural soils have a non-negligible role in the global carbon cycle. As climate change and agricultural intensification continue to intensify, accurate assessment and management of the carbon sink function of farmland soils has become a central concern for sustainable agricultural development and ecological conservation of agricultural landscapes. In this context, the development and application of soil carbon sink monitoring technology provides an important basis for quantifying the carbon storage potential of farmland and formulating scientific management plans. Based on a large number of literature and case studies at home and abroad in recent years, this study systematically comprehends and reviews the formation mechanism, monitoring indicators, monitoring methods and data processing techniques of soil carbon sinks in farmland.

The study begins with an overview of the mechanisms of carbon sinks in agricultural soils and their important functions in agricultural landscape ecosystems. The stability of agricultural soils, which fix atmospheric carbon dioxide through crop plants, soil microorganisms and inorganic chemical processes, is influenced by agricultural management practices and is linked to the structure and function of agricultural landscapes.

The monitoring of soil carbon sinks in agricultural land can provide data on soil carbon stock and carbon flux as a scientific basis to guide the optimization and adjustment of agricultural landscapes, and enhance the ecological and aesthetic values of agricultural landscapes. The effectiveness of management practices in agricultural landscapes needs to be judged by long-term monitoring of soil carbon sinks in agricultural landscapes. Accurate monitoring of soil carbon sinks in agricultural landscapes is the basis for assessing the potential for agricultural carbon sequestration, which helps to realize the coordinated management of agriculture and the environment and promote the sustainable development of agricultural landscapes.

With regard to existing monitoring technologies, including traditional sampling and analysis, remote sensing technology, model simulation and IoT sensing networks, this study analyzes in detail the scope of application, accuracy requirements, and advantages and disadvantages of each in practical applications. The study shows that, although advanced monitoring techniques show greater advantages in terms of data acquisition frequency, spatial resolution and real-time performance, there are still some limitations in terms of cost control, data standardization and geographic scale adaptability.

Further, this study explores the integrated application model of soil carbon sink monitoring technologies in agricultural landscape management using the examples of the Carbon Agricultural Practice Farm in Finland and the Educational Farm of the Ural State Agricultural University. By constructing a monitoring platform, optimizing data management and applying simulation and prediction models, various technologies achieve effective integration of multi-scale and multi-temporal data, giving full play to the potential of agricultural landscapes to cope with global climate change, and providing scientific support for the achievement of global sustainable development goals. This study innovatively combines the mechanism of soil carbon sinks in agricultural fields with agricultural landscape management, emphasizes the synergistic effect of carbon sink monitoring techniques and landscape optimization strategies, and provides new research perspectives and practical paths to realize the multifunctionality and sustainability of agricultural landscapes.

DANIELA TOLEDANO
University of Algarve, Faro, Portugal
PAULA GOMES DA SILVA, Dr.
University of Algarve, Faro, Portugal
LEAF—Linking Landscape, Environment, Agriculture and Food — Research Center, Lisbon, Portugal

EXPERIENCE TOURISM IN AGRICULTURAL LANDSCAPES AND VILLAGES. A CONCEPT OF CIRCULAR TOURISM THROUGH THE SENSES

The aim of this communication is to present an economic model based on circular tourism with the potential to reverse the abandonment of agricultural landscapes in inland regions.

The agricultural landscapes and villages in the interior of Algarve region, located in the south of Portugal, are becoming abandoned. Without human presence, agricultural fields, rainfed orchards and pastures are disappearing, such as are the knowledge and traditions that wove the cultural matrix that kept the landscape alive.

However, while local residents migrate to large urban centres searching employment and access to facilities and infrastructure, agricultural landscape is attracting more and more tourists, looking for cultural and nature tourism, far from mass tourism. This differentiated tourism could be an opportunity to reverse the abandonment of the agricultural landscape.

To put this idea into practice, a pilot project - Rota dos Sentidos - was developed for a rural area in the municipality of Loulé, associated with a model of circular and sustainable tourism. Based on the identification of existing values, services and actors and the creation of new ones, the project envisages the installation of themed routes, presented to tourists by the local community.

The Senses Route aims to create an experience that stimulates participants' five senses (sight, hearing, smell, taste and touch), inviting them to reflect on the sensations they experience along the way. This approach promotes a deeper and more memorable connection with the destination and a more immersive and enriching experience for tourists.

The itinerary was divided into eight routes, based on the five senses and sub-themes to which they relate. The sense of sight, being the most immediate and reliable of the five senses, allows tourists to capture the visual essence of the place, thereby forming first impressions and memories. Hearing arouses emotions by registering the characteristic sounds of the environment, creating a personal soundtrack that accompanies the individual's journey. The sense of smell plays a crucial role in appreciating and remembering a destination, as particular aromas have the capacity to evoke endearing memories. The palate, representing the local culture, invites tourists to experience the destination through its gastronomy. The act of tasting the local agricultural produce becomes an attraction in itself. Finally, touch, offers a tangible proximity to the destination, acting as a form of direct communication, especially in contexts where the language barrier can be a challenge. The integration of these five senses is pivotal in enhancing the tourist experience and fostering a more profound and enduring connection with the place.

This project has been conceived to evaluating the implementation of novel concepts and methodologies that are designed to encourage the development of circular tourism. In addition, the project has the potential to establish a network between the agricultural landscape, villages and places of heritage interest, whether cultural or natural. Most importantly, it will enable the process of reversing the trend of landscape abandonment and prevent the loss of ancestral knowledge, since these values represent the fundamental focus of this tourist model.

MANUELA RONCI, Dr.
Politecnico di Torino, Italy

URBAN FOODSCAPES. INTEGRATING AGRICULTURE, BIODIVERSITY AND COMMUNITIES IN THE CITY

The paper explores the role of strategic planning and landscape design in the construction of urban agricultural spaces that act as multifunctional ecosystems, capable of contributing to biodiversity enhancement and food security, as well as providing social benefits. Starting from the survey of green infrastructure and biodiversity plans in Amsterdam, Paris and Lisbon, the research investigates how such strategic visions are promoted by the integration of agricultural practices within urban open space.

Amsterdam's approach to environmental issues is based on the enhancement of the urban green infrastructure, promoting its development wherever possible to cope with the progressive densification of the urban fabric, the loss of biodiversity and the effects of climate change. Amongst the multiple declinations of 'urban nature' provided by the Green Infrastructure Vision 2050, urban agriculture practices emerge as a tool capable of increasing the liveability of the city, providing social, educational and environmental benefits. In this sense, the allotment gardens, vegetable gardens and orchard at Park Frankendael demonstrate how historical parks can accommodate contemporary urban agricultural uses, becoming catalysts for a diverse public while improving the functionality of ecosystems.

The Paris Biodiversity Plan has, among its objectives, the development of urban agricultural practices, recognised as a tool to promote environmental education, encourage civic participation, build social bonds and strengthen urban biodiversity. In this sense, the city supports an urban agriculture increasingly based on efficient, sustainable and resilient agricultural systems, relying on ecological management methods. This attitude can be found in the orchard of the Parc Martin Luther King, a park built on a disused railway platform. The orchard hosts regional plant varieties and ensures genetic diversity by combining plants in a way that attracts pollinating animals and auxiliary insects, thus avoiding the use of chemical fertilisers and pesticides.

In the Lisbon Biodiversity Strategy and Action Plan, horticultural plots are considered useful ecotopes for housing urban fauna and enhancing the ecological structure of the city, as well as having educational value. Parque Urbano da Quinta da Granja was the first agricultural park promoted by the municipality and transformed an environmentally degraded, peripheral site into a multifunctional public open space. In addition to redeveloping a problematic site, the intervention offered more recreational opportunities to a densely populated neighbourhood, recalling the area's agricultural tradition and strengthening one of the city's ecological corridors.

The cities selected as case study share the recognition of urban agriculture as a central component to sustain biodiversity, enhance ecosystem services, improve quality of life and engage users in sustainable practices, strengthening their environmental awareness and sense of community. However, the varied overview provided by different historical/cultural contexts, planning approaches, and design outcomes offers the possibility to compare distinct attitudes and practices. Based on these perspectives, the research aims to provide insights for landscape architects, urban planners and policy makers into the potential of including urban agricultural practices in city regeneration strategies.

ŞEYMA BETÜL ALBAYRAK KILIÇASLAN, PhD. Candidate
Ankara University, Ankara, Turkey
NILGÜL KARADENIZ, Prof. Dr.
Ankara University, Ankara, Turkey

ONE HUNDRED YEARS OF FOOD SECURITY: ATATÜRK ORMAN ÇIFTLIĞI-ANKARA (TÜRKIYE)

In pre-industrial cities, food systems were a key driving force in shaping their location, hinterland organization, maximum expansion, and population. However, the dependent link between urban population and food production significantly weakened after the Industrial Revolution.

The weakening of the agricultural production function of cities has caused them to become consumption centers, deeply integrated into global markets in food supply. But all of the catastrophic processes we have recently experienced globally, especially the COVID-19 pandemic, show strikingly that the “fragile” situations of cities should be reconsidered focusing on food security.

Thus, the sustained and healthy delivery of urban and peri-urban food to consumers has become as one of the basic requirements for making cities resilient. Urban agriculture, which both uses urban resources to feed residents and plays a crucial role in socioeconomic conditions, emerges as a key mechanism in this context.

It is critical to maintain and sustain urban and peri-urban food production, processing and local food reserves to build resilience to such crises.

Following the establishment of the Republic of Turkey in 1923, building of a self-sufficient economy with modern production facilities and scientifically informed producers was a primary objective. In pursuit of this vision, Atatürk personally acquired 22,000 decares of land in 1925 to establish the Atatürk Forest Farm (AOÇ), designed as a model agricultural production centre for farmers.

AOÇ was conceived as an urban farm ensuring public access to safe and affordable food. It integrated crop cultivation, livestock farming, viticulture, apiculture, and plant-based and animal-based food production (including poultry, dairy, cheese, and yoghurt) with commercial and educational activities. It was also designed as a recreational green space for public leisure.

However, changing agricultural policies and the rapid urbanization of Ankara with an unexpectedly high population growth rate gradually weakened the agricultural function of AOÇ. Since 1937, AOÇ has lost two-thirds of its centrally located and highly accessible land for various reasons.

Despite the conditions set by Atatürk when he donated the farm to the national treasury in 1937, such as providing “*a healthy area for public recreation and access to high-quality food without additives*”, AOÇ has almost completely lost its agricultural function in recent years. Correspondingly, the function as food-supporting system for the city has been almost completely damaged. Today’s ratio of locally produced food to food consumed is only 24%, within the 20-kilometers zone surrounding AOÇ - where 78.54% of the population lives - indicating a serious deficit in food self-sufficiency.

In terms of increasing urban resilience in the food security aspect, it is essential to develop mechanisms to facilitate the return of the AOÇ to its original purpose. This study discusses the potential mechanisms of re-coupling the AOÇ to the urban and peri-urban food systems in the Ankara region to make Ankara self-sufficient in food production in the context of a resilient city.

MAREK HUS, Dr.
Slovak University of Agriculture in Nitra, Slovakia
ANNA PÁSTOROVÁ, Dr.
Slovak University of Agriculture in Nitra, Slovakia

MEADOWS AS A TOOL FOR INCREASING BIODIVERSITY AND AESTHETIC VALUE IN URBANIZED AND RURAL ENVIRONMENTS

With increasing urbanization, it is necessary to create green infrastructure in cities and urban areas to improve not only the quality of life of residents, but also the health and sustainability of ecosystems. Frequently short-mown grasslands intended for recreational use are the dominant form of urban greenery in temperate regions, but they require significant maintenance and usually provide limited habitat value for most taxa. Therefore, it is necessary to reduce the intensity of maintenance of areas where possible and improve aesthetic and ecological parameters. Currently, an increase in areas that have been replaced by meadows is recorded in cities. Whether in cities or in rural environments, meadows are designed and implemented as an alternative to frequently mowed grass - whether in public spaces or in private gardens. The establishment of meadows has several advantages: 1/ increasing biodiversity in settlements, meadow ecosystems represent the greatest diversity of species compared to other vegetation elements. They ensure the growth of biodiversity - especially pollinators in residential but also agricultural land. Support of diversity, not only of plant species, but also of microorganisms and animal species that find refuge in these stands. In general, the reported diversity of animal species in the meadow is an order of magnitude higher than the diversity of plant species. 2/ intensity of mowing of grasslands. Depending on the type of meadow, the mowing intensity is set to a maximum of 3 mowings per year, thereby reducing the maintenance costs 3/ increasing the aesthetic value of the site. Meadows are a tool for increasing the aesthetic value of the site. By choosing a suitable mixture of grasses, flowering herbs and clovers, the effect is ensured even in the summer months. The presented paper deals with the use and potential of meadow communities in settlements, but also at the border of the settlement and the country, and evaluates the selected localities from the point of view of sustainability. Diversification of settlement greenery by establishing urban meadows instead of some frequently mowed grasslands is likely to bring significant benefits for biodiversity, while a mosaic of meadow types is likely to maximize these benefits. It is precisely by establishing high-quality species-diverse mixtures when grassing gardens, orchards, former hummocks or roadside areas that landscape architects or farmers can benefit the stability of the landscape by increasing its species diversity and, last but not least, the aesthetic value of the landscape.

AMY WHITESIDES
Harvard University Graduate School of Design, Cambridge, USA

FIELD GUIDE TO A NATIONAL AGROFOREST

Agroforestry is a practice of productive land management that includes cultivating tree crops alongside understory crops and/or animal agriculture. In recent years, these practices have been promoted for their potential to integrate productivity and profitability with environmental stewardship, including increasing carbon sequestration and reducing carbon emissions in the agriculture industry. As a result, funding to support and research these practices in the United States has significantly increased. In 2022, the USDA Partnerships for Climate-Smart Commodities program invested record amounts in projects that seek to advance agroforestry in the US.

The Field Guide to A National Agroforest catalogs these ongoing efforts and proposes new opportunities. It asserts that through the leadership of landscape architecture, shifts in policy, and regional planning, agroforestry might be scaled up beyond just increasing the number and scale of practicing farms. By suggesting a 'National Agroforest' akin to the National Forest, it imagines a national-scale agroforestry network operated not through the federal government but instead through a collective, bottom-up means of creating new opportunities for land-based economies that lower carbon emissions and are minimally extractive.

Informed by literature review, site visits to farms throughout the US and Italy, and data-based drawing, the guide identifies a range of lands of marginality. It explores the potential for a productive future for these lands through agroforestry practices. Marginal lands are frequently cited as optimal application sites for agroforestry, compared to prime farmlands where yields may be high enough to support (at least in the short term) industrial models of high-productivity single-crop agriculture. Marginal farmlands include abandoned farms, farmlands with steep slopes and/or poor soils, and erodible streambanks. The field guide adds to these sites a range of other lands of marginality, including historically overutilized and now bereft industrial lands and sites of extraction or what I otherwise term landscapes of long recovery. The project imagines a support system for expanding agroforestry practices to these non-agricultural spaces. Practices employed range from those that produce food to those that produce ecological repair and/or cultural products, such as willow for basketry or wood materials for buildings, furniture, and other crafts.

At the heart of the proposition is the assertion that care and stewardship of the land are central to the physical and mental recovery of both human and non-human systems – recovery from the dominance of capital models that rely only on fast, growth-based systems of extraction from the land and our communities. It acknowledges the climate crisis as a crisis of culture in which many of our solutions focus on technical responses that allow business as usual.

Agroforestry, inherently a slow, collective, multi-species practice, offers a counter approach to these technical solutions, an opportunity to invest in the slow practice of rebuilding relationships to address the fundamental causes of climate change while creating more climate-adapted landscapes that mitigate carbon and build the long-term relationships to land that we need to support our communities into the future.

SEVGI GORMUS, Prof. Dr.
Inonu University, Malatya, Turkey
Neubrandenburg University of Applied Sciences, Neubrandenburg, Germany
GAYE TASKAN, Dr.
Inonu University, Malatya, Turkey
SERHAT CENGIZ, Assoc. Prof. Dr.
Inonu University, Malatya, Turkey
Neubrandenburg University of Applied Sciences, Neubrandenburg, Germany

AGRICULTURAL LANDSCAPE RIFTS IN THE METABOLISM OF URBAN-RURAL BELTS AFTER DISASTERS

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The earthquake that struck 11 provinces in Turkey on 6 February 2023 affected an area of 110,000 km2, resulting in the deaths of more than 50,700 people, the displacement of 3.3 million people, and the homelessness of millions more. The provinces affected by the earthquake are also significant regions, renowned for their diversity of agricultural products and extensive agricultural areas. In the aftermath of the disaster, agricultural areas were rapidly transformed into non-ecological lands, a process that was encouraged. This was especially evident in rural areas on the urban periphery, where the rate of legal and illegal construction increased significantly. Consequently, the metabolic rift between rural and urban areas, which already existed in ecological and social dimensions, deepened further with the impact of the disaster. The primary objective of this research is to assess the transformation process in agricultural landscapes in urban-rural belts in cities exposed to disaster through the conceptual framework of metabolic rift. In this context, the components of hazard, vulnerability, emergency and risk that constitute disaster are examined by adapting them to agricultural landscapes. Disasters are accompanied by tragedies of both displacement and voluntary or involuntary displacement. The absence of a robust agricultural policy engenders a situation where the recovery of society, predominantly reliant on an agricultural economy, remains unattainable. Consequently, the vulnerability of both society and agricultural practices is escalating. This, in turn, exacerbates the degree of rupture between agriculture and people. From this perspective, the insecure and resistless conditions between urban and rural areas that will be created by the metabolic rupture deepened by the speculations and practices on agricultural landscapes after the earthquake in Malatya are called into question.

MINWEN HE, Dr.
Huazhong Agricultural University, Wuhan, Hubei, China
CHONGHUAI YAO, Prof.
Huazhong Agricultural University, Wuhan, Hubei, China

FARMLAND LANDSCAPE RESEARCH AND PLANNING STRATEGY BASED ON TUJIA FARMING CULTURE: FROM THE PERSPECTIVE OF PRODUCTION-LIFE-ECOLOGY

Farmland, as a core component of agricultural landscapes, serves as the foundation for food production and a vital carrier for rural cultural heritage and ecological balance. However, despite the vast expanse of farmland landscapes, they are often marginalized in specialized design, and their multifunctional value has not been fully recognized. The functional attributes of farmland have expanded from solely production to a composite space integrating crop cultivation, field architecture, and ecological conservation, presenting new perspectives and challenges for research on farmland landscapes. This study focuses on multiple functions beyond crop production, including architectural integration and ecological conservation. It was found that the Tujia agricultural culture is distinctive, characterized by ethnically significant valley vegetation, stilted wooden houses, and seamless integration with mountain ecosystems, forming a unique landscape. Additionally, the farmland exhibits diverse textures, color variations, and seasonal dynamics. Furthermore, Tujia folk culture, such as field dances and songs, should be incorporated into the farmland landscape to preserve and showcase traditional practices.

Based on these findings, this study proposes three planning strategies for farmland landscapes: (1) Preserving Agricultural Spatial Patterns by maintaining traditional farmland structures, protecting characteristic farmland textures, and sustaining the harmony between farmland and its surrounding environment to retain the unique spatial form of Tujia villages; (2) Safeguarding Agricultural Heritage by excavating and inheriting traditional Tujia farming culture, restoring and utilizing traditional farming techniques, and conserving agricultural heritage sites to ensure the continuity and development of traditional agricultural practices; (3) Showcasing Ethnic Agricultural Characteristics by cultivating unique crops, creating distinctive agricultural landscapes, and promoting agricultural tourism to enhance the cultural and economic value of Tujia village farmlands.

This research aims to provide theoretical support and practical guidance for the planning of farmland landscapes in Tujia village clusters, contributing to the sustainable development of agricultural landscapes while preserving and promoting the rich cultural heritage of the Tujia people.

VIERA PAGANOVÁ, Prof. Dr.
Slovak University of Agriculture, Nitra, Slovakia
MAREK HUS, Dr.
Slovak University of Agriculture, Nitra, Slovakia
DONAT KARZHAUOV, PhD. Candidate
Slovak University of Agriculture, Nitra, Slovakia
ĽUBOŠ MORAVČÍK, Assoc. Prof. Dr.
Slovak University of Agriculture, Nitra, Slovakia

DESIGNING WITH NATURE: ENHANCING BIODIVERSITY AND RESILIENCE THROUGH NATIVE TREES IN AGRICULTURAL LANDSCAPES

In agricultural landscapes, trees and woody vegetation play a critical role in mitigating degradation processes, regulating microclimates, enhancing rainfall infiltration, and improving soil conditions. The integration of trees into land management systems contributes to production diversification and increases the resilience of the landscape. However, species selection is often influenced more by market availability than by ecological or genetic criteria. This can result in low tree biodiversity, especially when the supply chain is dominated by centralized nurseries offering uniform planting stock.

The current preference for standardized seedlings—such as avenue trees—frequently overlooks the importance of origin and intraspecific variability, both of which are key indicators of genetic quality. While such seedlings are propagated to ensure uniform appearance and growth, they typically represent a narrow genetic base. This reduced diversity compromises adaptability to environmental stress.

Our research focuses on increasing genetic and species diversity by promoting the use of generatively propagated planting material collected locally from qualified sources. We emphasize native, drought-tolerant species that naturally occur in water-limited environments. Specifically, we explore their physiological responses to drought and soil salinity, aiming to understand the adaptive strategies that support their survival under extreme conditions.

Through the platform of the field laboratory www.fieldlab.sk, we present *Pyrus pyraster* and Sorbus domestica as alternative species for avenue planting. These species demonstrate high resilience to drought and elevated temperatures. All propagated individuals originate from seeds of diverse mother trees collected across Slovakia, representing a broad genotypic spectrum. The variability in crown architecture and growth dynamics offers potential for applications in quality timber and edible fruit production, while also contributing to the enhancement of biodiversity in productive agricultural landscapes and semi-natural habitats.

Landscape architects and planners can play a key role by intentionally incorporating native species into design proposals and green infrastructure plans for rural areas. Cultivars and varieties bred for uniformity should be avoided, as their narrow genetic base limits adaptability to environmental stressors. Instead, collaboration with regional nurseries and suppliers who utilize locally sourced reproductive material can ensure a higher degree of genetic diversity and site-specific resilience. This approach supports both, ecological integrity and long-term landscape functionality.

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PAULO FARINHA-MARQUES, Prof.
University of Porto, Portugal
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
JOSÉ MIGUEL LAMEIRAS, Prof.
University of Porto, Portugal
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
FILIPA GUILHERME, Dr.
University of Porto, Portugal
MANUEL GENTIL, MSc
University of Porto, Portugal
RITA ARAÚJO, MSc
University of Porto, Portugal
JOSEPHINE HENDRIKSEN, MSc
University of Porto, Portugal

REGENERATIVE LANDSCAPE DESIGN AT QUINTA DE SALGUEIROS, PORTO

ACKNOWLEDGEMENT
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Quinta de Salgueiros is an innovative landscape architecture project showcasing the adaptive reuse of a historic agricultural estate and ruin in Porto, Portugal. Embracing a regenerative approach, the design restores a culturally and ecologically significant site that had fallen into socio-ecological degradation . The 6.3-hectare property, is being transformed into a resilient urban green space. The project aims to revive the estate's streams, woodlands, and meadows to enhance biodiversity, ecosystem services, and climate resilience . It serves as a demonstration area for innovative nature-based solutions (NBS) in an urban context.

A recent ecological assessment identified 27 distinct habitat types, 28 bird species, 1 reptile, 11 butterfly species, and 66 vascular plant taxa on site, highlighting the area's significant ecological value. At the same time, the study revealed pressing challenges, including the widespread presence of invasive plant species and the fragmentation of natural habitats. The surrounding highway infrastructure further disrupts ecological connectivity, acting as a barrier to wildlife movement. These findings informed a design strategy focused on restoring native ecosystems and enhancing habitat connectivity. Initial on-site works prioritized the removal of invasive species and the rehabilitation of existing trees, setting the groundwork for the phased reintroduction of native vegetation.

The resulting design prioritizes native vegetation, ecological resilience, and climate adaptation. Degraded woodlands will be regenerated with native tree species (e.g. oak and willow) , strengthening habitat complexity. Former agricultural fields are reimagined as biodiverse meadows and community gardens to support pollinators and local food production, thereby enhancing ecosystem services. Two degraded streams will be renaturalized to restore riparian habitats and improve on-site water management. A buffer of new tree belts is planned to screen pollution and noise from adjacent highways.

Crucially, the design integrates the estate's built heritage as a functional part of the landscape. The ruins of the old manor house and chapel have been stabilized and preserved as central features. Rather than reconstructing them, these ruins serve as open-air educational spaces showcasing the site's history and ecology. By treating the ruin as an "outdoor laboratory," the project creates opportunities for environmental education and interpretation within the restored landscape.

Quinta de Salgueiros exemplifies a multifunctional landscape design that weaves together biodiversity restoration, water management, cultural heritage conservation, and community recreation. The new park-laboratory will provide ecosystem services and public amenities while functioning as a living laboratory for urban ecology and climate adaptation. The project is part of a broader urban ecological regeneration strategy in Porto, strengthening a green corridor network in eastern Porto . As an experimental site, it actively involves universities, local residents, and policymakers in co-creating and testing NBS . As such, Quinta de Salgueiros demonstrates that innovative landscape practices can transform an agricultural heritage landscape into a resilient urban nature laboratory, advancing both environmental sustainability and social well-being.

HERITAGE AND IDENTITY

CONFERENCE TRACK 2: THEMATIC TRACK OVERVIEW AND OBJECTIVES

Agricultural landscapes are specific cultural landscapes with unique historical and contemporary structures that co-form landscape character and identity. Many structures and elements of historical agricultural landscapes can be considered as tangible heritage, while traditional farming practices are important parts of intangible heritage. agriCULTURAL landscapes reflect historical traditions and modern transformations. Changes through urbanisation, economic shifts, or ecological factors may affect their heritage value, highlighting the need to balance conservation with contemporary development.

Sustainability is key in heritage conservation, weighing ecological and economic factors. Adaptive land-use models ensure the preservation of cultural heritage while meeting modern needs. Governance and policy frameworks, alongside community-driven initiatives, influence landscape conservation and transformation.

agriCULTURAL landscapes also serve as spaces for recreation, education, and cultural engagement. Effective interpretation and tourism management can enhance heritage appreciation while maintaining sustainability. Key questions include redefining agriCULTURAL landscapes as cultural assets, ensuring sustainable conservation, and understanding governance's role in shaping heritage. Exploring these themes fosters interdisciplinary collaboration, ensuring a balanced approach to heritage and identity within landscapes.

KARIN HELMS, Prof. Dr.
AHO, Oslo, Norway

LONG-TERM SUSTAINABLE VISION FOR AN INTENSIVE FARMING LANDSCAPE, CASE OF THE CLOS-MASURES IN UPPER NORMANDY. HERITAGE AND INTERPRETATION, TO CONSTRUCT THE CULTURAL LANDSCAPE OF TOMORROW

The Clos-Masures, located on the Seine-Maritime plateau in Upper Normandy, is organised in a unique spatial arrangement: the region is made up of farms whose buildings are surrounded by a boundary consisting of a ditch and strip of raised earth, on top of which very tall trees, mainly beeches (*Fagus sylvatica*). These hedgerows act as both a windbreak and a boundary marker and, back in time, as social status.

Changes in the landscape are mainly the result of the industrialisation of farming, which has meant that close-masure farms have had to adapt. Their enclosures have been opened up to allow easier access to mechanised tools.

Intense storms have become more frequent recently, with the severe winter storms of 2013 and 2014 bringing down many trees. Meteorologists believe that heavy storms such as these will become more intense or common in the future. This suggests that we can expect a drastic change in the landscape as many tall mature trees are lost and farms give up the close-measure tradition. The result of this would be that the land would become more banal, a loss of identity.

But what does the future hold for the Clos-Masures´ landscape?

Since the 1970s, it has become increasingly challenging to maintain this type of landscape due to economic and social changes and evolving farming methods. More recently, these changes have accelerated: mature trees planted a century ago are being cut down, and more landscape structures are vanishing. Climate change is another actor in the maintenance of these farming figures in the landscape: The tall Beeches (*Fagus sylvatica*) are predicted to not be the best trees in the region in the future due to long, warm summers. Many activities and an extensive literature exist about this landscape and it threat.

I proposed to provide 2016 an additional educational experience: a workshop in which any ideas put forward would not be bound by laws or heritage obligations. This workshop was inspired by the method “future workshops” devised Jungk and Müllert in the´70. The workshop focused on *revealing* the (in)visible landscape using methods for studying landscape characteristics and *proposing* a landscape project using a tacit method, letting the locals draw their landscape and the landscape architect, me, translating this to action plans. “Holding onto the land” is a phrase that sums up the hopes of these locals for their landscape: they wanted to stop water and soil erosion, construct new landscape structures based on past features, and be involved in creating their future landscape. Some years after the workshop, in 2024, we can observe new hedgerows planted in this landscape that envision a long-term cultural landscape vision.

MIROSLAV ČIBIK, Dr.
Slovak University of Agriculture in Nitra, Slovakia

EXPLORING THE POTENTIAL OF URBAN VOIDS: MAPPING AND RETHINKING WHITE SPACES IN POST-WAR CITIES

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Urban voids, the underutilized or abandoned spaces within cities, offer significant potential for reimagining *post-war urban environments*. These spaces, often marked by gaps in urban planning or *residual areas* left by post-conflict rebuilding, are frequently seen as neglected, transient, or disruptive elements of the urban fabric. However, they can serve as powerful catalysts for transformation, offering opportunities for social, environmental, and cultural regeneration. This paper explores the potential of *urban voids* in post-war cities by mapping and analyzing the underutilized or "white" spaces within these urban contexts, challenging conventional notions of urban vacancy and highlighting opportunities for creative reuse. The study begins by defining *urban voids* and examining their origins within the historical and socio-political context of post-war reconstruction. By mapping these spaces across several cities that have experienced significant conflict, the research identifies patterns in how *urban voids* emerge, are utilized, or remain abandoned. Through a multidisciplinary lens, the paper draws on urban geography, architectural theory, and urban sociology to understand how these spaces are perceived by residents, planners, and policymakers. The core of the research examines how rethinking these voids can foster new forms of urban engagement. The paper presents various case studies, where *urban voids* have been reclaimed and repurposed for cultural, ecological, and community-driven initiatives. These case studies serve to illustrate how the transformation of *white spaces* can serve not only as physical rejuvenation but also as a means of healing social rifts, facilitating collective memory, and addressing spatial inequalities. The paper concludes by proposing a framework for rethinking *urban voids* as sites of potential rather than as markers of urban failure. This framework emphasizes participatory design, sustainable interventions, and the importance of context-specific solutions that consider the local history, culture, and needs of post-war communities. By reimagining *urban voids* as *blank slates* for innovation and social cohesion, this research advocates for a more inclusive and resilient urban future. Ultimately, the study aims to shift the narrative around *urban voids*, positioning them not as forgotten spaces but as opportunities for creative and regenerative urban development in the aftermath of conflict.

NINA MARIE ANDERSEN, Assoc. Prof. Dr.
NMBU, Ås, Norway

LANDSCAPE ELEMENTS IN MEMORIALS: A RECEPTION STUDY OF A DESIGN COMPETITION

Memorials in public space contribute to a society's common history. In modern societies, resting on individuality and diversity, the creation of memorials therefore raises questions about specifically *whose* history should be told. As the same narrative can trigger various feelings, like pride, anger or sorrow, depending on one's perspective, questions about *how* the history is told are also crucial. Thus, both the decision to create memorials, as well as the design of them, are potentially contestable acts. This paper focuses on the latter, building on the ongoing two-step design competition of a national memorial in Oslo's new Government Quarter for the terror attack in 2011.

Whether or not landscape design conveys meaning is a discussion that bridges the understandings of landscape architecture as art versus functional design respectively. Even though designing with landscape elements such as trees, plantings, landforms and water, or other sorts of natural features, is based on intentions (e.g. arousing certain emotions or mimicking certain motifs), these elements may convey meaning less directly than e.g. sculptures. Thus, an assumption to be scrutinized in this paper is that memorials designed with landscape elements appear open to interpretation and may therefore be not very provoking.

After the terror attack against the Utøya political camp and the Norwegian Government building in 2011, several memorials have been constructed or are in route. Building on lessons learned from previous processes, the ongoing competition of the national memorial in Oslo's new Government Quarter is organised by KORO (Public Art Norway) with a strong emphasis on openness and inclusion. This approach has, so far, resulted in public seminars, a public jury report on the first competition stage and widespread public commentaries. For this paper, the jury's statement and assessment, along with the public debate published in editor-controlled media throughout the competition process form the object of this study. The reception of the design proposals will be the subject of close reading.

The specific interest is in how landscape elements are valued and represented in the material. Thus, important questions this paper seeks to address are e.g. whether the landscape elements are interpreted as having any particular meaning; whether landforms or open spaces are interpreted symbolically; and what connotations can be related to the words or phrases describing landscape elements. A potential new insight of the study is an indication of if incorporating landscape elements in memorials possibly can limit contestation. The exploration of the material may further trigger questions such as 'is contestation the opposite of inclusion?'; and 'is contestation undesirable'? This paper does not seek to answer these questions; however, they frame the paper's discussion of the position of landscape architecture in memorials and further the potential of meaning in landscape design.

Reception studies are uncommon in the field of landscape architecture, possibly due to a lack of relevant material. This paper contributes to an increased focus on critiques and reception studies within the field.

AIGA SPAGE, PhD. Candidate
Latvia University of Life Sciences and Technologies, Jelgava, Latvia
MADARA MARKOVA, Dr.
Latvia University of Life Sciences and Technologies, Jelgava, Latvia

THE SYMBOLIC AND SACRED VALUE OF NATIONALLY IMPORTANT RURAL LANDSCAPES IN LATVIA

During the assessment of Latvia's landscapes (2020–2023), conducted within the state research program "*Sustainable Management of Land Resources and Landscapes*", 18 landscapes of national importance were identified. Each of these landscapes has defined quality objectives that will guide the development of integrated territorial planning guidelines. These guidelines must be based on a qualitative and in-depth landscape assessment that reflects not only ecological and visual characteristics but also cultural dimensions.

This study focuses on evaluating the symbolic and sacred values of rural landscapes using a cultural ecosystem service (CES) assessment approach. Although CES are globally acknowledged, its application often prioritises recreational and aesthetic values, leaving symbolic, spiritual, and identity-related aspects underrepresented. These intangible values are particularly significant in rural and agriculturally shaped landscapes, where sacred sites and symbolically essential elements—such as homesteads, field patterns, roadside crosses, holy groves, or historical farming practices—reflect long-standing cultural traditions and spiritual relationships with the land. Latvia's traditional agricultural landscapes are rich in cultural significance, shaped by centuries of farming, local belief systems, and customs. However, these landscapes are now under threat due to depopulation, the abandonment of traditional homesteads, and the intensification or cessation of agricultural practices. These processes have led to landscape homogenization, afforestation, and the loss of features that carry symbolic or sacred significance for local communities.

To explore these dynamics, the study employs two methods for assessing symbolic and sacred values: (1) surveys conducted with local stakeholders in the identified landscapes of national importance, and (2) desk research, including spatial data analysis using Geographic Information Systems (GIS).

The results are expected to support sustainable rural development by highlighting the importance of symbolic and sacred values in (agri)cultural landscapes. Integrating these values into planning and management can help maintain landscape diversity, strengthen community identity, and protect elements of national cultural heritage. This research contributes to a more holistic understanding of rural landscapes as multifunctional spaces that merge ecological, economic, and deeply rooted cultural dimensions.

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NADJA PENKO SEIDL, Dr.
University of Ljubljana, Ljubljana, Slovenia
TADEJA AŽMAN, PhD. Candidate
University of Ljubljana, Ljubljana, Slovenia
TADEJ BEVK, Dr.
University of Ljubljana, Ljubljana, Slovenia
BARBARA KOSTANJŠEK, Dr.
University of Ljubljana, Ljubljana, Slovenia
KLARA KRŽIČ, PhD. Candidate
University of Ljubljana, Ljubljana, Slovenia
TOMAŽ PIPAN, Dr.
University of Ljubljana, Ljubljana, Slovenia
MOJCA GOLOBIČ, Dr.
University of Ljubljana, Ljubljana, Slovenia

RETHINK, REASSESS, REDRAW: LESSONS LEARNT FROM RENEWING SLOVENIAN LANDSCAPE CHARACTERISATION AFTER 25 YEARS

In 2024, a 3-year project, aimed at renewing Slovenian landscape character assessment (LCA) was completed. The original study from 1998 has long served as valuable expertise in landscape characterisation, planning and impact assessment, but had to be renewed to encompass landscape changes and to adopt new tools and methods that emerged in that period. The complete renewal of LCA included reconsideration of the landscape character areas spatial delineation and accuracy, reassessment of landscapes in terms of their importance for national identity, reassessment of outstanding landscapes, detecting trends of change and providing relevant guidelines for protection, management and planning, and testing the protocol for automated, machine-learning inventory of landscape features. The progress on the task and the challenges that emerged during the project were already presented at ECLAS 2022 in Brno. This presentation will reflect on three main topics based on experience and results of the finished project.

An approach to LCA : The adopted approach is based on holistic/expert assessment of landscape character, but follows a pre-defined protocol to ensure consistency, repeatability and overall robustness of methodology. Landscape character was determined with the help of pre-defined lists of landscape patterns and landscape features. Expert approach was adopted also for delineating landscape character areas. Although we tested some automated methods for landscape classification in the initial phases of methodology development, the final delineation of landscape character areas was made considering the perception of landscape character, often following natural borders (e.g. ridges).

Landscape identity assessment: Despite several attempts to assess landscapes, which are important in terms of Slovene national identity and as such representatives for our country, the concept was never fully adopted and implemented into spatial planning and management practice due to non-transparent and too complex methodology and lack of instruments for their implementation. The proposed methodology is based on only three criteria: historical aspect, symbolic value and characteristic image. Each landscape character area is assessed considering these criteria.

Guidelines for future development of landscapes: To follow the initial idea of pre-defined protocols and list, which increase objectivity and observer-independence of assessment, we developed the list of processes, which are the main triggers for landscape change. Since the same type of process can have different effect in landscapes with different characters, guidelines for addressing these processes were prepared at the relevant “crossroads” of landscape patterns and processes. These general guidelines served as a starting point for more detailed guidelines, adopted for (a) each landscape character area.

MARIA RUDKA
BIOPOLIS/CIBIO - Research Centre in Biodiversity
and Genetic Resources, Vairão, Portugal; University of Porto, Portugal
CATARINA PATOILO TEIXEIRA, Dr.
BIOPOLIS/CIBIO - Research Centre in Biodiversity
and Genetic Resources, Vairão, Portugal; University of Porto, Portugal

ARBORETA AS CULTURAL LANDSCAPES: BEST PRACTICES FOR DESIGN AND IMPLEMENTATION

Arboreta play a key role in biodiversity conservation, scientific research, and environmental education, functioning as living gene banks and connecting people to nature. Arboreta are also cultural landscapes, representing the dynamic interaction between society and the natural environment over time. They incorporate historical, aesthetic, and symbolic values, reinforcing the identity of the territories where they are located and strengthening cultural ties.

This study analyzes internationally recognized arboreta to identify good practices that can inform the design and implementation of new arboreta. To achieve this, a selection methodology was established. In the first phase, 52 arboreta were identified based on three criteria: frequency of citation in scientific literature, ArbNet accreditation level, and founding date according to the Botanic Gardens Conservation International (BGCI). From this list, only those with a functional website and a legible map were retained, resulting in a shortlist of 29. For a more detailed comparative analysis, a final selection of 10 arboreta was made, prioritizing those with sufficient spatial scale and data availability. These include, for instance, the Arnold Arboretum (USA), the Geografisch Arboretum Tervuren (Belgium), the Mlyňany Arboretum (Slovakia), and the Westonbirt (UK).

The selected arboreta were analyzed using a set of variables such as mission, number of documented species, spatial design and layout, organization of the collections, presence of water features and entry conditions. This analysis made it possible to understand the contribution of arboreta not only to biodiversity conservation and the visitor experience, but also to their role in shaping cultural landscapes. Many of these spaces incorporate historical narratives and reflect different approaches to landscape design and management.

The studied arboreta demonstrate a variety of strategies for integration into the landscape. Beyond their scientific function, many were conceived as places for contemplation and education, promoting sustainability and encouraging active public participation. For example, the Arnold Arboretum is notable for its extensive collection of woody species and its role as a research center affiliated with Harvard University. The Geografisch Arboretum Tervuren organizes its collections geographically, helping visitors understand biogeographical relationships between world regions. The Mlyňany Arboretum is distinguished by its collection of exotic trees and strong linkage between conservation and educational programs. Westonbirt emphasizes the preservation of endangered species, playing a vital role in plant conservation.

Based on this analysis, recommendations were defined for the design and implementation of arboreta, ensuring that these spaces reinforce the ecological and cultural identity of a territory.

The results of this study contribute to a better understanding of arboreta as cultural landscapes and reinforce their relevance as spaces that integrate science, heritage, and landscape. By highlighting successful strategies and good practices, the study aims to inspire the planning and creation of new arboreta that are biodiverse, resilient, and culturally meaningful.

TADEJA AŽMAN, PhD. Candidate
University of Ljubljana, Ljubljana, Slovenia

TYPOLOGY AND TRANSFORMATION TRENDS OF AGRICULTURAL LANDSCAPES IN SLOVENIA IN REGARD TO LAND USE INTENSITY

Agricultural landscapes are undergoing rapid transformations traditionally driven by technological modernisation alongside new(er) economic, environmental, and policy-related factors. These changes challenge the sustainability, identity, and quality of agricultural landscapes. The combination of these factors and their effects is a relatively new phenomenon, so their long-term impact on landscape structures and the trend of landscape transformation remains largely unknown. To preserve the value and distinctiveness of Slovenian landscapes while supporting agricultural development, it is essential to examine the contemporary evolution of their spatial structures.

First, the study will introduce a typology of agricultural landscapes in Slovenia as a fundamental basis for landscape identification, characterisation and spatial mapping. According to this typology, agricultural areas will be categorised based on their spatial structure, which is understood as a combination of landscape patterns.

Second, the research will include a morphological and structural analysis of the selected landscape patterns, to identify and understand changes in the structural characteristics of agricultural land use from 1990 to the present. A set of the most common changes in the landscape structure will be identified, including, for example, land-use homogenization, loss of landscape features, the presence of agricultural infrastructure, or the clarity of cultivation patterns. We expect that in the line with the common trend of increasing agricultural production intensity, the diversity of the landscape structure is decreasing also throughout Slovenian landscapes, which is reflected in a reduced number of landscape elements, lower diversity of landscape patterns, and greater homogeneity of land cover. Such changes diminish multiple landscape functions, some of them being spatial recognition, cultural identity and place-based belonging.

Third, by integrating desk-based research with field observations, the study will develop predictions of potential further structural evolution in agricultural landscapes. Rather than predicting fixed outcomes, the models will explore potential trajectories, uncertainties, and trade-offs that could arise from different management choices.

In times of significant spatial transformations, this study will define the current inventory of Slovenian agricultural landscape and offer a framework for shaping the future identity and quality of agricultural landscapes. The findings aim to guide policymakers, land managers, and stakeholders in designing strategies that ensure agricultural landscapes remain resilient, functional, and reflective of societal, economic and environmental needs - ultimately shaping the future reflection of society and the economy within the spatial realm.

XIANG ZHOU
School of Architecture, Southeast University, NanJing, China
TIANJIAO LI
School of Architecture, Southeast University, NanJing, China

URBAN BARRAGE: SIGNAGE SYSTEMS AND IDENTITY CONSTRUCTION IN PUBLIC SPACE

This study explores the dynamic and fluid characteristics of signage systems in urban public spaces, investigating their complex roles as material heritage and mechanisms for constructing both urban and individual identities. Urban signage systems are built upon a variety of symbols, including text, graphics, landmarks, and other visual elements, all of which carry meaning within the city. These symbols are shaped not only by their material form and spatial coordinates but also by their semantic content and socio-cultural context. Unlike static architecture, urban signage systems form a unique “barrage” phenomenon through dynamic expressions enabled by new media technologies and the evolving spatiotemporal nature of material spaces. For instance, the neon signs of Hong Kong carry historical symbolic meanings that change with the city’s development and decline. These systems act not only as core elements of the city’s visual identity but also as mediators in decoding the dynamic construction of urban identity through their relationships with commercial activities and embedded socio-cultural structures.

The study introduces the concept of the “urban barrage,” borrowing from the flowing, covering characteristics, performative interaction patterns, and intertextual attributes of digital media’s barrage culture. It systematically examines the structure, dynamics, and characteristics of public space signage systems, focusing on their representation and signification. Special attention is given to how these systems intervene in the spatial production of urban identity and their interaction with individual identity recognition in commercial contexts, such as symbolic acts of “checking-in” driven by consumer behavior and the influence of product narratives on personal identity. Based on field observations and empirical analysis, the study uses a specific community as a case study, categorizing signage into three types: institutional signage, commercial signage, and community co-created signage. These categories are based on production techniques, design stakeholders, and spatial dependencies, and the study contrasts the authoritative narratives in “unified planning” with the grassroots aesthetic of “free growth” environments.

The study finds that urban barrages, as practical symbols, exhibit both common and individual characteristics. These are influenced by explicit aesthetic preferences from businesses and commercial brand atmospheres, as well as the implicit reflection of social stratification and cultural capital accumulation. Regional expressions (such as dialect symbols) and diachronic transformations (e.g., the shift from hand-painted signs to LED screens) have hierarchical impacts on the structural shaping of urban identity. Moreover, through the intermediary role of commercial activities, such as the selection and reinforcement of identity symbols in consumption contexts, the urban barrage reshapes individual identity and self-perception.

Ultimately, the study proposes that the urban barrage, as a fluid medium, can leverage strategies like temporary spatial occupation and co-creation by multiple actors to stimulate the flexible potential of public space. This offers a critical perspective combining cultural reflection and spatial creativity for urban renewal efforts.

This framework also applies to exploring agricultural landscape symbols (e.g., terraced fields, rural signage). These dynamic systems, shaped by production, nature, culture, and commercial mediation, exhibit fluidity, layering, co-creation, and spatiotemporal evolution akin to the “urban barrage,” offering a consistent analytical lens.

LARA BOGOVAC
University of Zagreb, Croatia
VIŠNJA ŠTEKO
Landstudio Ltd, Zagreb, Croatia
INES HRDALO
University of Zagreb, Croatia
MONIKA KAMENEČKI
University of Zagreb, Croatia
DORA TOMIĆ RELJIĆ
University of Zagreb, Croatia

THE LANDSCAPE OF TRSTENO SETTLEMENT - THE ROLE OF DRY STONE WALLS IN THE LANDSCAPE CHARACTER

The landscape of the settlement of Trsteno is defined by a dynamic interplay of natural elements (the sea, coastline, cliffs, and forest cover) and cultural landscape patterns. These various elements combine to create distinct, homogeneous landscape subunits with a unique character.

The area is distinguished by its high landscape diversity, blending natural and cultural characteristics while also exhibiting significant ecological, anthropogenic, and visual qualities. The terrain is highly structured and dynamic, characterized by sharp edges and contrasting features. A key factor in this structuring is the steep slope, horizontally segmented by flysch terraces, where a mosaic of settlements and terraced agricultural land has developed. The lush forest vegetation of the Trsteno Arboretum contrasts with the mostly barren and steep limestone slopes.

The horizontal segmentation of terraces and the uniform forest cover are further accentuated by vertical elements such as cypress groves, solitary plane trees, and individual historical and religious structures that serve as focal points within the landscape. Although deagrarization is evident in the abandonment of terraces in less accessible and more remote areas, the geological substrate and the distinctive terraced relief have preserved clear spatial boundaries and order. This is particularly noticeable where terraces remain visible on barren slopes, while those integrated into the settlement are still actively cultivated.

Based on the general classification of dry-stone terraces and an analysis of the landscape—using visual assessments of digital orthophotos from 1968 and 2019, along with digital terrain models—the existing structural typology has been refined, resulting in the following terrace classifications: (1) Regular, elongated, extremely narrow terraces, (2) Regular, elongated, narrow terraces, (3) Regular, elongated, wide terraces, (4) Regular terraces with rectangular form, (5) Irregular terraces with strip-like form.

The objectives of this study were:

- To classify the landscape typologically within the study area
- To assess the existing landscape qualities (ecological, anthropogenic, and visual-perceptual)
- To evaluate the sensitivity of individual landscape units
- To identify the degree of development pressures on these units and assess the risk to their character
- To divide the space into distinct landscape units and evaluate their current landscape character

These thematic aspects were analyzed using extensive spatial data processing within a Geographic Information System (GIS). The study incorporated appropriate cartographic content to support spatial planning activities.

By utilizing GIS tools, a comprehensive GIS database was established, enabling expert visual and digital interpretation of georeferenced orthophotos, topographic maps, and thematic maps. This approach provided the necessary spatial data for further analysis and visualization, facilitating informed decision-making regarding landscape management and conservation. When planning construction on areas with existing olive groves and terraced plots, it is essential to preserve the existing landscape features. Mature olive trees should be retained as much as possible, serving as natural green buffers against erosion and visual intrusion, with rehabilitation undertaken where necessary. Traditional dry-stone terrace walls should be conserved and integrated into future site development. Additionally, planting should be planned in front of buildings to ensure maximum visual screening from roads and the coastline.

NIKKI MOORE, Dr.
Wake Forest University, Winston-Salem, USA

RECLAIMING LAND, RECLAIMING IDENTITY: THE MODERN FREE SCHOOLS OF AGRICULTURE AND THE AGRICULTURAL LANDSCAPES OF PRE-CONTACT NEZAHUALCOYOTL'S TETZCOTZINGO EMPIRE

In 1924, as the Mexican Revolution came to a close, México's first agro-geneticist, Indian-expat Pandurang Khankhoje, launched the first iteration of the Free Schools of Agriculture on the site of the historic botanical gardens of Acolhuan leader, Nezahualcóyotl (1402-1472). Backed by Úrsulo Galván, director of both the League of Agrarian Communities in Veracruz and the National Indigenous Farmer's League, the Free Schools were designed to demonstrate and bulwark the agricultural expertise of México's First Nations. The historic site of the Free School's first test run demonstrates precisely how pre-contact agricultural ingenuity would be tied to claims for post-revolutionary land restitution.

Around 1431 CE Alcohuan Tlatoani (King) Nezahualcoyotl's rule inaugurated the golden age of Mexico's Central Valley, illustrated by his commissions, including the construction of the largest library in the Americas at the time, a royal palace, multiple baths, and a series of gardens to celebrate this new era. The gardens included an almost encyclopedic collection of species, including edible and medicinal plants, fed by the Americas' earliest aqueducts and *chinampas* (floating fields). Directing water from a nearby spring, Nezahualcoyotl's Texcotzingo aqueduct serviced the palace and created an irrigation system sufficient to supply fresh water to the court's shrines, waterfalls, aviary, menagerie, and perhaps most importantly, its gardens and croplands.

Just short of 500 years later on this same site, as the Free Schools' founders worked with First Nation's *ejido* (communal farm) leaders – including descendants of the Xochimilca, Chalca, Tepanecs, Acolhoa, Tlahuica, Tlaxcaltecans, and Mexica – the school's students could see themselves reflected in not only their teachers, and their people's ancestral techniques, but directly in the surrounding historic landscapes. Challenging the colonizing histories taught by Mexico's Catholic schools before the Mexican Revolution (~1910-1920), the Nezahualcóyotl-infused site of the first ambulatory Free School of Agriculture was a constant reminder of the First Nations' ancestral prowess in the development of maize and extensive irrigation networks long before the arrival of the colonizers.

As the long arm of the post-Revolutionary development-minded government reached from the city into the countryside, photographs of the bounty of the Free Schools' student work in the ejidos--taken by the acclaimed modernist, Tina Modotti, and commissioned by Pandurang Khankhoje--provided ample visual evidence in the case for land restitution. Working through the Free Schools' early documents and Modotti's recently bequeathed site-based photographs, this paper argues that the Free Schools represent a little-known moment in México's post-revolutionary development when community-based Indigenous agriculture and land restitution provided pathways toward land-based equity and justice.

SARA ĐORĐEVIĆ, Research Assistant, PhD. Candidate
University of Novi Sad, Novi Sad, Serbia
ATTILA TÓTH, Assoc. Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia
LAZAR PAVLOVIĆ, Assistant Prof. Dr.
University of Novi Sad, Novi Sad, Serbia
OLIVERA KALOZI, Teaching Assistant, PhD. Candidate
University of Novi Sad, Novi Sad, Serbia
JELENA ČUKANOVIĆ, Assoc. Prof. Dr.
University of Novi Sad, Novi Sad, Serbia
SAŠA ORLOVIĆ, Full Prof. Dr.
University of Novi Sad, Novi Sad, Serbia

HERITAGE VALUES OF TRADITIONAL FARMSTEADS IN AGRICULTURAL LANDSCAPES OF VOJVODINA, SERBIA

Agricultural landscapes have diverse elements, including cultivated fields, roads, water bodies, woodlands, hedgerows, pastures, orchards, vineyards, farmsteads, mills, fences, wells, and other components and structures. Whether considered as individual patterns or part of larger landscapes, they often preserve traces of historical processes, reflecting how communities adapted to environmental conditions and socio-economic changes. Farmsteads, as clusters of buildings and associated farmland used for agricultural purposes that combine food production with residential structures, stand out as characteristic patterns of rural landscapes that emerge from the interaction between architectural and natural elements. Reflecting a harmonious relationship between built structures and unbuilt landscapes, traditional farmsteads represent important agricultural heritage by providing tangible and intangible evidence of past and present farming practices, serving as indicators of broader cultural and economic changes across geographic regions. This study defines values and attributes that make traditional farmsteads significant agriCultural heritage worth preserving. Through a literature review and field research, traditional farmsteads are examined historically to understand their contribution to cultural heritage and their role in shaping the landscape character. The study focuses on traditional Serbian farmsteads, known as *salaš*, located in Vojvodina, northern Serbia. A case study approach was applied, selecting representative farmsteads with diverse settings, ages, sizes, and functions. Site visits were conducted to document architectural and landscape features, assess building conditions, and collect narratives from farmstead owners regarding past and present uses via qualitative narrative interviews. The analysis identified several key values: historical, architectural, cultural, economic, ecological, natural heritage, ambient, and aesthetic values. The findings revealed shared features, such as vernacular architecture, functional layouts, sustainability, traditional construction materials, multi-functional agricultural practices (arable farming, fruit growing, viticulture, beekeeping, fishing, and livestock farming), the use of woody species for multiple purposes and preserved old solitary trees. Additionally, some traditional structures, such as granaries, corn barns, stables, and crane wells, were observed and documented. The study also identified site-specific elements related to the surrounding landscape context and the cultural background of farmstead owners. These features, integral to traditional agricultural practices and local identity, reflect the tangible and intangible cultural heritage of the period in which they were actively used. The study highlights the multifaceted values of traditional farmsteads as an integral part of agricultural heritage. Taking all values into consideration, it offers a holistic approach to understanding heritage within agricultural landscapes. Raising awareness about the importance of these heritage values is essential for preserving the region's identity and history embedded in its landscapes.

MOTI KAPLAN
Technion, Israel Institute of Technology, Haifa, Israel
TAL ALON-MOZES, Prof.
Technion, Israel Institute of Technology, Haifa, Israel

THE ROLE OF AGRICULTURE IN NATIONAL PLANNING: ISRAEL'S NATIONAL MASTER PLANS AS A CASE STUDY OF THE CHANGE IN THE FUNCTION, PERCEPTIONS AND MEANINGS OF AGRICULTURE

The examination of agricultural landscapes in Israel's National Master Plans (NMP) reflects shifts in functions, perceptions, and meanings of agriculture from the establishment of the state in the mid-20th century to the present. This lecture explores the place of agriculture in selected national master plans through an analysis of planning documents, including maps and official texts, within the broader socio-economic context of their formulation. It highlights changes in the discourse on agricultural landscapes along three main axes: from production landscapes to consumption landscapes, from local to global perspectives, and from a development-focused discourse to one centered on conservation.

Israel's first National Master Plan, drafted in 1951, positioned agriculture as a primary planning branch alongside industry, transportation, afforestation, parks, and new towns. Agricultural land was designated as a productive resource expected to supply 75% of the country's food consumption while also supporting exports. Spread across the country along water supply routes, agriculture served broader roles beyond food production, including engaging a quarter of the population in farming, fostering a new agrarian identity, and promoting nationwide population dispersion, including in remote peripheries through rural settlement.

Global changes in food production, crises in local agriculture, and the immigration of approximately one million people from the former Soviet Union in the early 1990s (when Israel's population was around four million) led to new planning perspectives. These emphasized rapid land resource depletion and called for a shift from dispersed rural settlement to urban concentration. During this period, planning efforts focused on strict protection of natural resources. However, despite the early recognition of agricultural land's significance, no national planning framework provided it with direct protection.

A major shift occurred with NMP 35, approved in 2005, which redefined agricultural landscapes as a key component of local identity. Landscape architect Shlomo Aronson introduced the concept of "landscape assembles" as cultural and heritage sites narrating Israel's history, with agricultural landscapes forming a central part of these designated areas. In the plan's revision (2015–2025), planner Moti Kaplan linked these landscape complexes to UNESCO's World Heritage frameworks, classifying them according to distinct types and functions.

The comprehensive NPM 1, approved in 2020, integrated agricultural land within the broader network of open spaces in Israel, emphasizing its role in ecological connectivity between natural landscapes and forests.

In general, these plans reflect a transformation in Israel's agricultural sector—from a production-oriented system aimed at food security and population distribution (focusing on economic and social ecosystem services) to one that contributes to cultural heritage and the stability of ecological corridors (expanding ecosystem services to the realm of culture and ecology). These while adopting diverse conservation tools that correspond with the principles of the European Landscape Convention and UNESCO's declaration mechanisms for world heritage sites. These changes fit into the discourse on the agricultural landscape in the established West that emphasizes the global alongside the preservation of local cultural landscapes.

DANA MOR, PhD. Candidate
Technion – Israel Institute of Technology, Haifa, Israel

THE AFFORDANCES OF FRUIT TREES IN RESIDENTIAL YARDS – EXPLORING RESIDENTS' PERCEPTIONS AND USES

Fruit trees in urban settings have been found to contribute to residents' well-being, social cohesion, and connection to nature, as well as to the overall resilience of cities. Consequently, various initiatives worldwide are promoting the establishment and maintenance of urban orchards and edible landscapes for their recreational, environmental, and material benefits.

In many cities, a considerable number of fruit trees are planted in residential areas. However, since their maintenance and utilization largely depend on residents' decisions and actions, their potential benefits are not fully realized.

While research on fruit trees in urban environments typically focuses on either private yards or public spaces, with little reference to shared residential yards, this ongoing study examines yards shared by apartment building residents in Tel Aviv. Its objective is to investigate the use and significance of fruit trees in these spaces by characterizing their affordances—the environmental features which provoke human action. Affordance theory facilitates an integrated analysis of both tangible and intangible factors, framing the shaping of landscapes as a dynamic, two-way process between humans and their environments, influenced by social, cultural, physical, and natural factors.

In Tel Aviv, fruit trees constitute a significant feature of the urban landscape. Sir Patrick Geddes, who laid out the city's first master plan in 1925, envisioned Tel Aviv as the "Fruit Garden City". His report highlights the social, economic, and health benefits of fruit trees, as well as their central role in Jewish culture. His vision aligned with Zionist efforts to forge a new identity for the Hebrew urbanite through values of productivity and a connection to the land. Consequently, small fruit and vegetable gardens were incorporated into the city's residential yards. Over time, technological advancements and increasing urban density have transformed both the functionality and physical characteristics of these spaces. However, while other natural elements have disappeared, numerous fruit trees have remained in those yards to this day, and many more have been planted in subsequent years.

Fruit trees and orchards have long been central to Jewish culture—initially as a source of livelihood and later as symbols of Jewish heritage. Even today, national, artistic, political, and personal references to fruit trees reflect their fundamental role in shaping local identity.

This research employs qualitative methods, including the documentation and mapping of both natural and man-made elements within selected spaces, alongside semi-structured interviews with residents. These interviews focus on residents' experiences, habits, and perceptions, both past and present.

Preliminary findings indicate that the use and perception of fruit trees in residential yards have undergone notable changes over time, driven by structural, social, and cultural shifts. By analyzing the interconnected effects of urban planning, natural processes, social norms and cultural heritage, this study explores the transformation of urban landscapes as an ongoing process shaped by the reciprocal relationship between people and their environments.

NEHIR MELIS DOĞU, PhD. Candidate
TED University, Ankara, Turkey
Middle East Technical University, Ankara, Turkey

RIZE'S TEA LANDSCAPES AT A CROSSROADS: LANDSCAPE ABANDONMENT, AND THE RISK OF ECOLOGICAL TRANSFORMATION

Despite its recent origins, the tea-growing landscapes of Rize in northeastern Turkey have become emblematic of the region's (agri)cultural identity. Introduced in the early 20th century, tea cultivation has transformed the mountainous topography through terracing and has significantly contributed to the socio-economic development of rural communities. These landscapes encompass tangible and intangible heritage, including vernacular architecture, cultivated terraces, embodied knowledge, seasonal rituals, and robust social networks. However, these landscapes currently face mounting ecological and socio-economic pressures.

Rize tea, a perennial plant, necessitates annual harvesting, typically carried out in multiple rounds—usually three harvests per year. A single year of neglect can lead to the proliferation of invasive species and thorny shrubs, resulting in the degradation of the cultivated land. The restoration of these areas necessitates substantial time, labor, and resources. The sustainability of tea cultivation is contingent upon the maintenance of the harvest cycle. However, shifts in the region's demographics, particularly the decline of rural populations, have begun to disrupt this rhythm. As rural populations migrate to urban areas in pursuit of educational and employment opportunities (a phenomenon that my own family exemplifies), the labor required for tea cultivation becomes scarce. The lack of sufficient seasonal or permanent labor from outside contributed to the gradual abandonment of tea cultivation areas. Consequently, tea plantations remain untended, resulting in visual and ecological disruption, sporadic mechanization, and even land abandonment.

This study explores the evolving dynamics of Rize's tea territories. It accomplishes this through qualitative fieldwork, spatial analysis, and interviews with tea-producing families, including the author's own family. The study critically examines the intersection of labor shortages, demographic shifts, and climate change, exploring their potential implications for the continuity of tea cultivation and the ecological stability of the region.

Tea plantations have been identified as crucial elements in stabilizing soil and regulating water systems. However, the abandonment of these areas often leads to the proliferation of opportunistic flora, thereby altering the local ecosystem. This ecological shift has the potential to further destabilize Rize's sensitive microclimate, affecting precipitation patterns and biodiversity. Climate models already predict rising temperatures and erratic rainfall in the Black Sea region, trends that will only accelerate with continued land neglect.

This paper posits that Rize's tea landscapes must be acknowledged as living heritage, endowed with historical, ecological, and cultural significance. Preserving these landscapes necessitates more than sentimental attachment; it demands the implementation of policy frameworks that encourage sustainable agriculture, empower local economies, and promote intergenerational stewardship. Without the implementation of targeted conservation and proactive strategies, Rize risks losing not just an agricultural tradition but also an entire ecological and cultural system.

The present study underscores the necessity for interdisciplinary approaches to tackle this challenge, situating the discussion of tea landscapes within broader discourses of climate resilience, rural revitalization, and heritage governance. The implications of this loss extend beyond the realm of mere commodities, encompassing the preservation of vital life-sustaining systems, communal cultural memory, and ecological equilibrium.

CATHERINE VENART, Prof.
Dalhousie University, Halifax, Canada
Visiting Researcher, Delft University of Technology, Delft, Netherlands
MARYAM NAGHIBI, Dr.
Delft University of Technology, Delft, Netherlands

THE CONSTRUCTION OF LAND AND IDENTITY, THE TASKSPACES OF THE DUTCH LANDSCAPE AS GEOLOGICAL HISTORIES

The (Agri)Cultural landscape, is defined through practices of cultivating the soil, producing crops, and raising livestock. This interplay between natural and cultural processes constructs history, and inscribed taskspaces through embodied actions. This is not a static representation of human history but the living result of ecological, hydrological, geological, and human interventions as a dynamic palimpsest.

In the Dutch Delta landscape, the formation of 'land,' through processes of *reclamation* from sea, bog, or lake, physically and symbolically form the nation and its' identity. The Netherlands, identity is attached to these (agri)cultural landscapes, as more than just spaces of production, but embedded as continuums of social contracts or waterboards that organize taskspaces of tending and are constructed into infrastructures – heaping soil or forming Dijk's, digging ditches/canals, and polders –that control water. This continuum of taskspaces, displace, exchange and trade, are formalized through the construction of parcels of polder lands, and represented as legal contracts, and maps that delineate as symbol and give value to investments in making land from delta in exchange for future by-products of land in real estate, industrial or agricultural products. Equally seen highlighted in landscape paintings, where the expansive land, constructed taskspaces, and its' technologies are assimilated as symbols, imported, and domesticated as printed maps of lands reclaimed by poldering and human industriousness. Its soil reconfigured for tulips; a nation built as by-product.

Land as dynamic entities embodying the interplay between human activities and natural processes—shaping identities and reflecting the temporal and scalar exchanges of centuries of land transformation, reclamation, water management, and agricultural adaptation from field to glass house. The Dutch landscape—constructed through commoditized extractions, displacements in peat, water/land in polder-making, and river engineering, exemplifying the fusion of natural and anthropogenic processes in shaping territorial consciousness. In this context, the continuous reclamation of land has not only transformed the physical environment but also embedded deep cultural memories and identities within the landscape. These geological taskspaces—defined by interactions between soil, water, and human intervention—serve as both physical foundations and symbolic representations of Dutch values such as control, cooperation, and sustainability.

However, these landscapes do not merely reflect the past but actively shape contemporary identity, governance, and climate adaptation strategies. The Dutch experience exemplifies the paradox of heritage preservation: to safeguard cultural landscapes, one must embrace transformation rather than rigid protection. The paper follows the taskspaces between human and geological interactions as mattered constructs of displacements of land and water, but also soils—serving functionally and symbolically but severing ecological connectivity to 'place'. While history reveals the hidden layers of landscape—unearthing its submerged cultural and environmental legacies—geology provides a firm structural foundation, offering a canvas for both past modifications and future transformations. Arguing for a conceptual shift—viewing (agri)cultural landscapes not as relics or production spaces but as evolving systems shaped by human-environment interactions. Amid climate change and urbanization, understanding them as palimpsests emphasizes their role in identity, land management, and heritage conservation in delta regions.

FRANCISCO COTALLO, PhD. Candidate
Universidad de Valladolid, Spain
Polytechnic University of Bari, Italy
JESUS DE LOS OJOS, Prof.
Universidad de Valladolid, Spain
JAIRO RODRÍGUEZ ANDRÉS, Prof.
Universidad de Valladolid, Spain

THE PRODUCTIVE LANDSCAPE OF PUGLIA AND ITS ARCHITECTURE

Puglia is an Italian region with a Mediterranean climate and is almost entirely surrounded by the sea. There is plenty of sunshine at any time of the year and the soil is rich in minerals, physical characteristics that make it a perfect place for cultivation. The main economic engine of the region has historically been its landscape, local peasants with hard work have managed to blur the boundaries and unify the territory, transforming it into a more homogeneous surface. The bare rock of vast expanses was turned into dense woody crops of vines, olives, almonds and citrus trees. After World War II, fishing also became important and the cultivation of tomatoes, beets, lemons and cereals such as corn grew. Today the region produces 35% of Italian olives and is the largest producer of San Marzano tomatoes in Italy.

When you look at the “Pugliese” countryside, you can see a network of masserías that structure its productive landscape. The “artificial” landscape made of stone by anonymous artisans over time is superimposed on the natural environment. The masserias emerge from the ground in an imposing way, following the translation of the classical Mediterranean world and at the same time dialogue perfectly with their surroundings through their construction and their rotund geometry. The idea of integrating the man-made artifact with nature is not romantically pursued. The association between construction and environment is not made through mimesis strategies, but through the Greco-Roman heritage that structures the rural space. Architecture completes nature and makes the landscape an object understandable by reason. The masseria settles in the landscape in a specific way, on the one hand, it seeks a safe and protected environment by establishing itself in places that dominate the vision of the territory and at the same time it seeks a strategic place from which to obtain scarce and necessary resources such as water. Masseria is a form of rural settlement typical of Puglia and similar to those found in other areas of southern Italy. “The phenomenon called masseria can be defined as the only testimonial essence of the relationship that has existed for centuries between: man, agricultural work and production.”

Despite being one of the most authentic places in Italy, in recent years industrial activity and tourism have come to the region with a vengeance. These latest tourist developments are already occupying a large part of its agricultural heritage, making us wonder if they do not sometimes threaten its local identity. At the moment, agricultural activity is still resisting these waves of tourists, but it is worth thinking about other ways to reuse this heritage in a more ecological and sustainable way so that we are fed in a respectful way.

BEATA DREKSLER, Dr.
American University of Beirut, Lebanon
KARIM BACHA
American University of Beirut, Lebanon

PLANTED HISTORIES, CURATED NARRATIVES: A CASE STUDY OF ALULA, SAUDI ARABIA

AlUla, a historical region in the Kingdom of Saudi Arabia, has undergone a dramatic transformation from an agriculturally rooted oasis into a curated destination. Traditionally defined by centuries of indigenous farming practices, ancient irrigation systems, and deep-rooted community stewardship, AlUla's landscape has long served as both a productive ecosystem and a repository of rich tangible heritage - exemplified by traditional orchards, historic settlements, and water management systems - as well as a canvas for intangible cultural narratives embodied in local traditions and communal practices. Nested within the expansive Saudi Arabian desert at a historical crossroads for trade and enriched by significant archaeological heritage, AlUla is celebrated as a rare natural oasis.

Under the ambitious framework of Saudi Vision 2030 and guided by initiatives from the Royal Commission for AlUla, the region faces a significant shift as planned, staged adaptive land use models are implemented to reshape its agricultural landscapes. These carefully crafted strategies have been introduced to manage visitor flows and protect fragile cultural assets. This transformation is articulated through a comprehensive master plan and an evolving series of experiential, homogenized interventions that convert organically developed spaces into regulated environments.

This study employs a case study method, integrating ethnographic fieldwork, spatial analysis, literature review, and stakeholder interviews. We critically assess the impact of these planned interventions on redefining AlUla's agricultural heritage. We analyze the transformation of AlUla's landscape from a productive agricultural oasis into a multifaceted destination that serves recreational, educational, and cultural functions. Our study highlights an innovative approach grounded in modern governance, contemporary policy frameworks, and evolving management systems, critically examining how these strategies redefine the role of community-driven initiatives in the region's transformation. Furthermore, this research investigates the role of landscape architects in the modern transformation of heritage landscapes.

The results show the pivotal role of landscape architects as key agents in designing experiences that adeptly balance escalating tourism pressures with the imperative to preserve culturally sensible landscapes. The curated narratives are not necessarily authentic in the traditional sense yet still resonate with AlUla's historical and cultural legacy. It is enabled by a new form of governance and management committed to a pre-emptive commitment to absorbing large influxes of tourists while protecting fragile cultural assets. On the other hand, it questions the tourism model that privileges order and predictability over the organic, evolving narratives of cultural landscapes. While these measures simplify and standardize the visitor experience, they also risk constraining the self-directed engagement that has conventionally allowed spontaneous exploration of the layered historical and natural qualities of the landscape. These measures risk cultivating a form of staged authenticity and heritage commodification.

KATARÍNA MIKLÁŠOVÁ, Assoc. Prof. Dr.
Slovak University of Agriculture, Nitra, Slovakia
JOZEF PORVAZNÍK
Slovak University of Agriculture, Nitra, Slovakia
LADISLAV BAKAY, Dr.
Slovak University of Agriculture, Nitra, Slovakia

WOODY PLANTS DIVERSITY AND THEIR FUTURE PROSPECTS IN AGRICULTURAL LANDSCAPES

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This contribution is an outcome of the research project VEGA 1/0072/24 Harmful activity of animal pests on ornamental woody plants in urban environment and the possibility of their regulation We would like to thank this project for supporting our scientific, research and educational activities.

Agricultural landscapes are rich in cultural and environmental significance. They often reflect a deep connection between human societies and the land they cultivate, shaping the identity of communities and their practices over time. These landscapes are the result of centuries of farming activities. Over time, these landscapes can define the cultural identity of a region or community. The cultivation of land and the use of its natural resources have shaped the cultural heritage of the Nitra region as well. This paper deals with agricultural landscapes in the Nitra region. Nitra and surrounding settlements strongly relate to agriculture. The total area of agricultural land in the Nitra region is 464 389 ha, of which arable land represents 405 200 ha. These agricultural landscapes can be considered a form of living heritage in this region, with certain crops, farming techniques, and even specific tree and shrub species serving as symbols of regional identity. The main crops that are grown in selected areas are grains, cereals, oil plants, potatoes, vegetables, and fodders lasting more years. The region is typical also with vineyards, which are rich in the occurrence of different woody species, mainly fruit trees and botanical roses. Preserving these landscapes helps maintain a cultural connection between past and present generations. Trees and shrubs play an essential role within landscapes, providing ecological, medicinal, utility, and aesthetic benefits. They offer crucial benefits, including soil stabilization, water retention, and habitat for wildlife. They help mitigate soil erosion and improve soil fertility. Shrubs and trees also serve as natural boundaries between fields. Fruit trees, mostly apple, cherry, plum and peach trees provide valuable fruits for humans, and wildlife in agricultural landscapes. This paper aims to summarize the study, which deals with the occurrence of different taxa in agricultural landscapes of the Nitra region, focusing on the territory of the municipality of Rišňovce, and defining their potential in shaping environmental sustainability. Woody species determined in the surroundings of the municipality of Rišňovce represent an overview of typical taxa that can be found in the Nitra region. Some of them, such as botanical roses, different cultivars of old cherry trees, apple trees, and others represent, amongst others, an important gene pool, which is threatened by human activity. In conclusion, agricultural landscapes, along with the trees and shrubs that inhabit them, play a multifaceted role in the environmental sustainability of an area and the cultural identity of its people. Preserving these landscapes and their natural features ensures that future generations can continue to benefit from and appreciate the deep historical and ecological connections they provide.

HAFIZE NUR SILAY EMİR, PhD. Candidate
Akdeniz University, Antalya, Turkey
MERYEM ATİK, Prof. Dr.
Akdeniz University, Antalya, Turkey

INTEGRATING HISTORICAL AGRICULTURAL LANDSCAPES INTO THE SAINT PAUL TRAIL IN ANTALYA/TÜRKIYE

The Saint Paul Trail, approximately 500 km long, is a second long-distance trekking route in Turkey and stands out as a significant cultural path with its historical and natural richness. The route begins in Perge, east of Antalya, and terminates in Yalvaç, northeast of Lake Eğirdir in Isparta. A secondary branch originates from Oluk Köprü and merges with the main trail at the ancient city of Adada.

The traditional agricultural landscapes along this route represent significant landscape elements in terms of sustainable land use and water management, dating back to antiquity. However, factors such as modern agricultural practices, the abandonment of villages by the younger population, and climate change increasingly threaten the preservation of these systems. This study aims to assess the potential of agricultural landscapes along the Saint Paul Trail for nomination under the Global Important Agricultural Heritage Systems (GIAHS) program, addressing the historical and rural heritage of the route through a holistic approach. The study also seeks to contribute to the diversification of this cultural route by integrating historical and rural heritage elements.

This research defines the study area as the Saint Paul Trail routes located within the boundaries of Antalya province, beginning from the ancient cities of Perge and Aspendos in the eastern part of Antalya. The study examines the historical evolution of the agricultural landscapes along the route, evaluating their usage from ancient periods to the present. The functions of these traditional agricultural systems—including erosion prevention, efficient water resource management, and support for biodiversity—are analysed to emphasise their significance for ecological and cultural sustainability. Through an evaluation based on GIAHS criteria, the potential of the historical agricultural landscapes along the Saint Paul Trail to encompass key attributes such as biodiversity, traditional water management techniques and knowledge systems, cultural heritage, and sustainability will be revealed.

As a conclusion, the study proposes a collaborative governance model involving local authorities, farmers, and the tourism sector to ensure the conservation of agricultural heritage. Furthermore, the GIAHS nomination process is expected to enhance the international recognition of the region while contributing to sustainable rural development. This research ultimately aims to demonstrate that traditional agricultural systems are not merely remnants of the past but also models for future sustainable agricultural practices.

RICHARD STILES, Prof. em.
Vienna University of Technology, Vienna, Austria

EU NATURE RESTORATION LAW – THREAT OR OPPORTUNITY FOR LANDSCAPE ARCHITECTURE?

In August 2024 IFLA Europe dutifully welcomed the passage into law of the EU 'Regulation on Nature Restoration'. At both the ECLAS and the IFLA Europe conferences speakers from the Commission and the EEA respectively praised its importance and paid lip service to landscape architecture. Yet, when questioned on the role of landscape in recent legal and policy documents, they had to concede that it was not mentioned.

As a consequence, the landscape profession is again faced with the challenge of retrospectively trying to find a niche to play a role within an important new European policy area that it was not involved in formulating, as was also the case of the 'New European Bauhaus' and earlier with regard to the European Landscape Convention – another bandwagon which the profession had to jump on to at the last minute. There must be two reactions to this.

Firstly, rather than blindly heaping praise on the Nature Restoration Law, a biodiversity-led initiative, it might be pointed out that there is no 'nature' left within Europe to be simply restored, but rather a complex cultural landscape shaped over millennia by humankind, and thus a priceless record of human civilisation that must not simply be eradicated.

While there is much to recommend the current mode for 'rewilding', it should be stressed that this needs to be undertaken with great sensitivity to the historic and pre-historic record that the landscape represents, but also with careful thought to the future interaction between human visitors and the to be 're-wilded' landscapes. This is a task pre-eminently suited to landscape architecture, and not a case for simply 'letting in the jungle' - to quote the title of a story from Kipling's Second Jungle Book.

In January 2025 the UK National Trust announced a new policy of 'creating new nature-rich landscapes' on the land that it manages, surely a far more sensitive and differentiated approach than simply 're-wilding'. This, or a similar approach, is what landscape architecture organisations should be commending to the European Union.

The second reaction to the Nature Restoration law is one that calls for a little self-reflection and then determined action on our part. Rather than resigning ourselves to playing 'catch-up' with every new piece of EU legislation with implications for the landscape, we must resolve to play a role in shaping policy *before* laws are proposed, let alone enacted. To do this it is vital to become *au fait*, not just with the main EU institutions and policies, but to enter into a continuing dialogue with them and other relevant organisations about key policy concerns affecting the landscape. This may well also involve providing them with some 'education' about landscape!

Recently ECLAS and IFLA Europe have reaffirmed their ambitions to cooperate more closely. There can hardly be a better project with which to put flesh on the bones of this objective, than to establish an active collaboration to put this worthy ambition into practice: perhaps in the shape of a 'European Landscape Think Tank'.

PATRIK OLSSON
SLU, Alnarp, Sweden

IMPLICATIONS IN THE LANDSCAPE WHEN NATURE-CONSERVATION HAS THE LEADING ROLE IN PROTECTING THE MAN-MADE AGRICULTURAL LANDSCAPE

The European Landscape Convention defines landscape as “an area perceived by people whose character is the result of the action and interaction of natural and/or human factors”. However, when we discuss how values in the agriCultural landscape can be protected it does not focus on man, but on biodiversity.

One example of this is pastures and wood-pastures that has been grazed for decades, sometimes centuries. The conservation plan has historically focused on free-development in these landscapes in order to protect the biodiversity.

Another example could be abandoned industrial sites where, once again, the focus is on biodiversity not on the remnants, craftmanship and heritage of man.

A third example is trees e.g. pollarded trees or trees in an avenue (tree-lined road), both examples of a man-made product that today is protected thanks to its high biodiversity.

As often, the failure of protecting or rather respecting the heritage of man cannot only be blaimed on nature-conservation. In fact, if nature-conservation had not existed, several man-made landscapes had probably disappeared. Still, the cultural environment act is also to weak to protect valuable landscape elements. One example could be an old stone arch bridge. As long as it is not entirely abandoned and some people perhaps still use it for walking, it cannot be protected as an important *part of our heritage*.

The last four words of the previous sentence are perhaps the core of this presentation. Why cannot the landscape, elements and objects in the landscape be protected as a *part of our heritage*. Why do we need to receive help from nature-conservationists in order to protect something. Tim Ingolds short sentence highlights however one important problem with letting nature-conservationists take over, he writes:

“The landscape tells – or rather is – a story...”.

If only singular objects are observed there will be difficulties in understanding the entire landscape and what the processes, decisions, power relations and survival strategies are, that created it. We stand a risk of not understanding the context in which the objects are situated in. If we do not understand the whole of the landscape we will also have difficulties in understanding each object that together create a whole landscape. Can we give the whole of the landscape a cultural historic value? Can we safeguard, the landscape and its elements and objects as a value in itself, something created by man and which therefore should be respected and acknowledged as a part of our heritage and identity?

LEVENTE BÉLA HALECZKY, PhD. Candidate
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
DÁNIEL KOMES, PhD. Candidate
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
ALBERT FEKETE, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

SPATIAL STRUCTURE AND VEGETATION OF URBAN PUBLIC PARKS IN EUROPE FROM THE LATE 18TH CENTURY TO THE FIRST HALF OF THE 20TH CENTURY

The research examines the spatial structure and plant composition of historical public parks that define major European cities, focusing on the period from the late 18th century to the first half of the 20th century. The aim of the study is to provide a comprehensive understanding of the development of urban public parks' spatial structure and the vegetation that has influenced it. To achieve this, the methodology primarily compares the original designs of the parks with their present state, considering four principal aspects: the relationship between vegetation and spatial structure, canopy coverage, the species composition of woody vegetation, and the road network in both their original and current conditions.

The research methodology includes analyzing historical plans, descriptions and maps of the parks. It also examines illustrations, and documents related to the vegetation. Finally, it assesses the parks' current state using remote sensing techniques. In addition, other available professional materials such as contemporary descriptions, photographs, reviews, and critiques are integrated into the analysis. Following the extraction of the necessary baseline data, comparative analyses were performed to examine the changes in the spatial and vegetation structure of the parks.

The results of the study shed light on the trends through which the spatial structure, pathway network, canopy coverage, and character-defining tree vegetation of historical urban parks have evolved, The result of the analysis also highlights the extent to which these historical parks have diverged from their original designs. This includes an exploration of how urban development, shifting societal needs and new landscape design practices have influenced the transformation of public parks, both in terms of their physical structure and the types of vegetation they contain.

In conclusion, the research provides significant insight into the dynamic relationship between urban parks' spatial organization and vegetation over the past centuries, offering valuable information for urban planning, heritage preservation, and ecological management in contemporary cities. When presenting the results, we also interpret the social, economic, and ecological processes that have shaped – and continue to shape – the character of our parks.

KRISTINE VUGULE, Dr.
Latvia University of Life Sciences and Technologies, Jelgava, Latvia
LZE STOKMANE, Assoc. Prof. Dr.
Latvia University of Life Sciences and Technologies, Jelgava, Latvia
SIMON BELL, Prof.
Latvia University of Life Sciences and Technologies, Jelgava, Latvia

ASSESSING ROAD LANDSCAPE CHARACTER FOR STRENGTHENING LOCAL LANDSCAPE IDENTITY

Many landscapes that individuals encounter during daily commutes or travel are primarily views from the road. The nature of road landscapes is crucial in reflecting the local identity of a place, municipality, or nation. To design and plan landscapes for the future effectively, it is crucial to fully understand contemporary societal perspectives on local landscapes. This includes identifying the elements that are valued and appreciated, as well as recognizing the preferred characteristics of these landscapes. Understanding societal perceptions and interpretations of landscapes, particularly how road users perceive road landscapes, is critical for planners, designers, and managers in their decision-making processes. This understanding also promotes public engagement in road landscape planning and enhances educational initiatives regarding landscape aesthetics. This research aimed to investigate how travelers perceive various types of road landscapes in the countryside in Latvia. A mixed-methods approach was employed, incorporating case studies, scenario-based assessments, road landscape modeling, and an online questionnaire survey. The case studies were conducted on the three most representative landscape types in Latvia: the agricultural landscape, the forest landscape, and the mosaic landscape, which encompasses areas of open agriculture interspersed with forests. One of the main roads linking all three Baltic states, which is frequently used by a significant number of tourists, was selected for the study. Respondents assessed various factors, including landscape attractiveness, the degree of landscape openness, positive and negative elements or features, feelings of safety, preferences for landscape types, and evaluations of different roadside maintenance options. The findings revealed local travelers' preferences concerning different landscape types and the specific features and aspects that capture their attention. The results indicate potential strategies for managing the landscape character of each landscape type to fortify local identity and can assist local planners in making informed decisions regarding the development of diverse road landscapes.

ANNA AGNES BENKO, PhD. Candidate
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
IMOLA GECSENE TAR, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

COMPARISON OF VERNACULAR FLOWER GARDENS AND CONTEMPORARY PLANTING DESIGN

One of the greatest challenges of landscape architecture is to form and maintain a planting that fits a certain venue both ecologically and aesthetically. Today, facing the effects of climate change and experiencing the development of urban environment, plant use and planting methods became topics of high importance.

One of the leading directions in contemporary planting trends is to create plantings that stay decorative as long as possible, require low maintenance, and consist of taxa well-adopted to the local climatic environment. The same principles seem to affect traditional vernacular flower gardens. Moreover, in both cases the beds are mainly consist of herbaceous plants (perennials, annuals, bulbs), low and medium-height shrubs only appear in minority.

Therefore, comparing these two planting methods of different origins can lead us to recognise useful features and aspects of suitable plant use and planting schemes in the territory of our observations.

The subject of the historical investigation is the traditional vernacular flower garden as characteristic entity of Hungarian cultural and ethnographical unity. The study focuses on revealing similarities and differences between these gardens and contemporary planting designs in Hungary.

Hungarian folk culture can be divided into four ethnographic regions: the Hungarian Great Plain, Transdanubia, Highlands and Transylvania. In these regions vernacular flower gardens have been formed and developed together with society. Main eras can be designated in this organic growth by following the significant changes of the population's lifestyle and the remarkable turning points of ornamental plant use accounted by cultural history.

In the comparison I examine the purposes of creating the different plantings, their presence in properties of different ownerships and use (private, public, institutional, etc) and their typical occurrence in various settlement types (farms, villages, towns, etc). Concerning the species used in the plantings, I focus on the issues of maintenance and the sources of supply of the plant material, which turned out to be a key question in nowadays' practice.

Observing some examples of contemporary ecological planting designs in Hungary, we could define and calculate the ratio of plants that were typical of traditional vernacular gardens, in the level of species and in the level of the numbers of plants. Their occurrence could work as an indicator of their suitability. Also, low incidence or lack of native or traditional taxa and subspecies can be interpreted as a need to uncover the reasons of their disappearance in nowadays' practice (Does it have ecological causes or was it just a shift in fashion?) and overview the possibilities of their use.

LINDSAY BURNETTE
Colorado State University, Fort Collins, USA

AN ARCHIVE OF RESILIENCY: STORIES OF PLACE MAKING AT THE HISTORIC LITTIG FREEDOM COLONY AND REFUGEE COLLECTIVE FARM IN TEXAS

In Central Texas, among acres of endangered Blackland Prairie and the confluence of three small creeks, lies the remnants of a 3x3 town grid, a historic church and cemetery, and rich soil that has been tilled and toiled with fortitude for generations. This land is one of the oldest African American Freedom Colonies in Texas, founded by Jackson Morrow, a former slave and the first black postmaster in Texas. In 1883, Morrow donated the land to start the railroad town of Littig, creating a refuge community of former slaves and future civil rights activists. Due primarily to aggressive nearby development and cultural erasure, the history of the Littig Freedom Colony is largely hidden, buried deep within the soils of the flood plain, farms and cemetery. Today however, new seeds of resiliency are sprouting from this historic farmland. In 2017, the Refugee Collective, a social enterprise that provides livelihood opportunities for refugees, immigrants and asylees, began renting a 20-acre plot of land from Jon Beall, the owner and conservationist of 315 acres of Littig land. Today this organic, regenerative farm provides a means of income, work, culturally desired food, and community for refugees from around the world. The farm is part of a larger farm-to-fiber mission that connects products produced on the farm with a refugee operated textile manufacturing studio in Austin, TX.

This presentation documents the creation of a resiliency archive; employing a lens of resiliency to uncover the buried histories of the Littig Freedom Colony and support the growing futures of the Refugee Collective. The archive explores the identity of the people, plants and soil that have shaped this landscape through writing and printmaking, using natural dyes and paper from the landscape itself. Inspired by the work of Anuradha Mathur and Dilip da Cunha, this work employs the processes of mapping, sectioning, drawing, marking, and tracing to “re-articulate the past, experience the present and envision the future.” The layering process of printmaking, like that of soil, helps us to reveal a cross section of history. Within this process, we ask, how do memories arise out of the landscape? What stories can we learn from the land, and how might those stories shape future connections with the land? This project aims to create a deeper reading of the working landscape to help us celebrate the perseverance of marginalized communities that have worked tirelessly to create new identities, community and place across this landscape.

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MARIO BARRA, PhD. Candidate
Czech Technical University in Prague, Czechia
KLÁRA FANTOVÁ, Ing. arch.
Czech University of Life Sciences Prague, Czechia
TOMÁŠ EFLER, Assoc. Prof.
Czech Technical University in Prague, Czechia

AGRICULTURE WITH AN EMPHASIS ON HOP GROWING IN THE ŽATEC REGION AND IN THE NORTH BOHEMIAN BROWN COAL BASINS

The hop-growing areas around the royal town of Žatec are a highly valuable example of an agriculturally managed cultural landscape, whose values have been recognized not only by protection in the form of the landscape conservation zone 'Žatec Hop-growing Landscape' and the protection of individual historically valuable objects (such as hop warehouses and drying houses, Stekník Castle), but also by the recent inscription on the UNESCO World Heritage List as 'Žatec and the Landscape of Saaz Hops' at the 45th session of the World Heritage Committee in Riyadh, Saudi Arabia, in 2023. The cultivation of hops, or the existence of hop fields in the areas around Žatec, has been documented since the mid-16th century, with an increase in cultivation from the mid-19th century (documented by military surveys and Stable Cadastre maps) related to landscape changes with the construction of the railway to improve the serviceability of the area and the export of processed hops. Today, Žatec and its surroundings consist of many preserved buildings and several institutions that continue to care for hop fields and research hop cultivation and its processing into food products.

The prevalence of hop cultivation in the Žatec region is also evidenced by the fact that records of the production of this crop can be found even in locations that today do not resemble an agricultural landscape at all. The Žatec region, existing since the 13th century, covered an area comparable to today's Ústí nad Labem Region, extended to part of the Karlovy Vary Region, and records of hop field areas can therefore be found in the Stable Cadastre area report from 1845 also in settlements in the areas of today's Most and Chomutov districts or the historical districts of Kadaň, Bílina, or Duchcov. These areas, historically formed by an agriculturally managed cultural landscape, in the case of the area under Jezeří Castle, previously a large area of Komořany Lake, have undergone turbulent development, especially in the second half of the 20th century, when the increase in surface brown coal mining transformed agricultural areas into so-called lunar landscapes and caused the displacement of dozens of settlements with many historically valuable objects subsequently demolished. A similar fate befell several villages whose perish was caused in the years 1961-68 by the construction of the Nechranice Reservoir, primarily for the Tušimice power plants, burning brown coal from nearby surface quarries.

The aim of the paper is to present to conference participants not only the agricultural cultural landscape of the better-known Žatec region but primarily the areas of today's North Bohemian brown coal basins and nearby areas as lesser-known hop-growing locations, where today almost no monuments can be found. The presentation will cover not only the hop-growing but also the overall agricultural past of the area, its massive transformation in the second half of the 20th century, and a brief introduction to considerations about the future of the region after the end of surface mining in the coming years, including the considered possibilities of using the area for agricultural activities.

YUXIA LUO, PhD. Candidate
RWTH Aachen University, Aachen, Germany

FUTURIZATION OF HISTORICALLY EVOLVING URBAN AGRICULTURE IN NUREMBERG METROPOLITAN REGION: HERITAGE LABELING PROCESS AS A TOOL

Although we are talking more and more about urban agriculture these days, we also need to notice that, as Lohrberg et al (2022) clarified: “Urban agriculture is not an invention of the twenty-first century.” In Nuremberg Metropolitan Region (MRN) in Germany, some urban agriculture sites can trace its history back to Middle Ages.

Until the beginning of 20th century, urban agriculture sites in MRN still played a key role in urban food security. However, with the development of the food supply system, especially after World War II, their role in local market production diminished. Nevertheless, in recent decades, their environmental, social, and cultural value have gained attention, leading to the growing recognition of both tangible and intangible legacies within these historically evolving urban agriculture sites.

In this context, the heritage labeling processes—referring to the identification, evaluation, and recognition of urban agriculture as heritage—have been initiated at various levels, including UNESCO World Heritage, National Intangible Heritage in Germany, and Significant Cultural Landscape in Bavaria, for historically evolving urban agriculture sites in MRN, and these efforts are led by both governmental and independent organizations. Although the designation of “heritage” does not have a direct economic impact, it is still worth researching its influence on the transformation toward the future (futurization) of historically evolving urban agriculture. Especially in the present, the futurization of historically evolving urban agriculture is facing many challenges such as land fragmentation caused by urbanization, lack of successors and loss of profitability.

Hence, this thesis will take historically evolving urban agriculture sites in MRN as the research objects, explore the challenges for futurization they currently face, and analyze how different levels of “heritage” labels can promote their long-term development. Specifically, this research will be divided into the following main sections leading by research questions:

What challenges do historically evolving urban agriculture sites in MRN face under the current changing conditions? This section will focus on the challenges these selected sites encounter in their futurization, specifically in spatial, economic, cultural and social aspects.

How can the “heritage” label at different levels help the historically evolving urban agriculture sites overcome challenges and contribute to futurization? This part will focus on three specific aspects:

Resilience enhancement – how can the heritage label help improve the resilience of urban agriculture under the threat of land fragmentation?

Business model innovation – how can the heritage label promote the development of new business models and economic sustainability?
Community development – how does heritage label affect the participation of existing actors and the formation of new “heritage communities“?

Based on the two sections above, the section will summarize the influence patterns of heritage labeling processes in the futurization of urban agriculture, as well as its potential limitations.

YING LI, Prof.
Tianjin University, Tianjin, China
Tianjin Key Laboratory of Healthy Residential Environment and Smart Technology, Tianjin, China
ALESSANDRO MARTINELLI, Prof.
Chinese Culture University, Taipei, Taiwan

AGRICULTURAL LANDSCAPE REDEVELOPMENT IN CHINA: CULTURAL LANDSCAPE PERSPECTIVES ON TOURISM AND HERITAGE WITH GLOBAL REFLECTIONS

Agricultural landscapes today are multifaceted spaces that not only contribute to food production and ecological sustainability but also play a pivotal role in shaping the cultural identity and economic frameworks of larger geographical regions. Over recent decades, China has implemented policies aimed at redeveloping both densely populated rural areas and the sparsely populated rural frontiers, with a distinct emphasis on integrating architectural landmarks that are intrinsically linked to tourism. These developments serve as “tourist attractors” while also functioning as “cultural developments” designed to catalyze a transformative restructuring of agricultural landscapes. In this context, the paper provides a critical analysis of the concept of “cultural landscapes,” traces the trajectory of recent Chinese policies on agricultural redevelopment, and evaluates the impact of these policies on the perceived identity of China’s rural areas as cultural landscapes.

The first section of the paper offers a comprehensive review of the concept of cultural landscapes, examining its theoretical underpinnings and significance. In particular, this section positions cultural landscapes as both heritage and artifacts, the identities of which can be intentionally shaped through policies and physical interventions. This theoretical framework serves as the foundation for subsequent evaluations of recent Chinese policies and interventions.

The second section delves into the policies and interventions themselves, acknowledging that, in recent years, these have been widely incorporated into China’s rural modernization efforts as a means of addressing the imbalances created by unchecked urbanization. These policies and interventions seek to transform traditional agricultural landscapes into tourist destinations, thereby contributing to rural economic revitalization while fostering a distinctive conceptualization of rural areas as cultural landscapes.

The paper then examines a series of case studies that illustrate the tangible outcomes of these policies and interventions. Through the analysis of these case studies, the paper investigates how agricultural landscapes are reimagined as cultural landscapes designed to support tourism development. These examples shed light on the global perception of China’s rural landscapes as cultural assets, highlighting the challenges involved in balancing development with heritage preservation.

In conclusion, the paper advocates for a nuanced approach to future policy formulation, one that carefully weighs the balance between new development and heritage conservation. By more effectively aligning the objectives of cultural development with heritage preservation, agricultural areas can emerge as both economic assets and cultural preserves, thus contributing to the long-term sustainability of rural communities and the preservation of landscape heritage.

MEDRIA SHEKAR RANI, Dr.
Institut Teknologi Bandung, Indonesia
DIAH ASIH PURWANINGRUM, Dr.
Institut Teknologi Bandung, Indonesia
BUDI FAISAL, Dr.
Institut Teknologi Bandung, Indonesia
M ZAINI DAHLAN, Dr.
Institut Teknologi Bandung, Indonesia
WIDJAJA MARTOKUSUMO, Prof.
Institut Teknologi Bandung, Indonesia

HARVESTING HERITAGE: THE ROLE OF SUSTAINABLE AGRICULTURE IN PRESERVING KAMPUNG NAGA'S ROOFING PRACTICES

Since UNESCO's formal recognition of Heritage Landscapes and Sites in 1992, heritage discourse in rural settings has undergone a paradigm shift in landscape design. This transformation has shifted the focus from individual architectural structures to the intricate interrelationships between built environments, socio-cultural systems, and broader landscape contexts. The discourse has evolved into a values-based approach, emphasizing associative meanings, the agency of indigenous and local communities, and the preservation of traditional knowledge.

Kampung Naga, a traditional settlement in Indonesia, epitomizes vernacular architecture as a manifestation of intangible cultural heritage. The built environment, including roofing systems, is predominantly constructed using locally sourced natural materials from surrounding agricultural landscapes, which are cultivated and managed by the community. However, the sustainability of these roofing materials is increasingly threatened by modernization and the concomitant decline in agricultural land availability. Moreover, the local community traditionally perceives these roofing materials as naturally occurring, as the Sugar Palm (*Arenga pinnata*) seeds are dispersed through the digestion process of the luwak (Asian palm civet) and germinate when excreted. As a result, systematic cultivation practices for Sugar Palm are largely absent, making adaptation to contemporary landscape changes particularly challenging. This issue is further exacerbated by the reduction of available land and the increasing exploitation of luwak for coffee production, disrupting the natural regeneration cycle of Sugar Palm trees.

This study investigates the local challenges associated with the traditional cultivation practices of Sugar Palm, a key resource for roofing in Kampung Naga, with a particular emphasis on community-driven methods. Focusing on the significant decline in the availability of traditional building materials, this research critically assesses the resilience of the current agricultural landscape in sustaining the provision of roofing materials and practicing the know-how of vernacular architecture while exploring adaptive strategies employed by the local community in response to environmental and socio-economic transformations. The findings underscore that sustainable landscape management and community resilience can be strengthened through an integrative understanding of ecological sustainability and economic viability.

ANNA STANIEWSKA, Assoc. Prof. Dr.
Cracow University of Technology, Cracow, Poland
JADWIGA ŚRODULSKA-WIELGUS, Assoc. Prof. Dr.
Cracow University of Technology, Cracow, Poland
KRZYSZTOF WIELGUS, Dr.
Cracow University of Technology, Cracow, Poland
ANNA MAJ, PhD. Candidate
Cracow University of Technology, Cracow, Poland

FROM AGRICULTURAL LANDSCAPE THROUGH ENGINEERING LANDSCAPE TO URBAN SPRAWL - THE TRANSFORMATION OF KRAKOW'S PERIPHERY ON THE EXAMPLE OF THE 8TH DEFENCE SECTOR OF THE KRAKOW FORTRESS

The landscape of Krakow's outskirts today is the result of transformations associated with the spatial development of the city over the last 150 years. During this period several turning points can be distinguished, which determine today's traces of agricultural landscape in the suburbs of the capital of Malopolska. This article presents the transformation of the southern periphery of the city, the shape of which changed fundamentally during the construction of the Krakow Fortress in the second half of the nineteenth century. It was then that the agricultural landscape was transformed into an engineering landscape, in which the shaping of greenery and views to serve the art of defence played an important role, while in between the fortification, the agricultural use was still functioning. Thus, we point out that one type of historical archive containing valuable information on purposeful scenographic landscaping may be military archives. In our research, we use historical archival sources which present the principles of landscape design implemented at that time for the purposes of "architecturae militaris". This stage is what distinguishes this landscape from other rural areas now urbanised. In this period the prohibition on development introduced in connection with the military function effectively inhibited urban sprawl outwards. The next stage of transformation is linked to several waves of urbanisation, resulting from the spatial expansion of the city at the end of the 20th century and in the last two decades, which absorbed areas of suburban agricultural landscapes. Two post-military phases can be identified: the phase of uncontrolled development resulting from a drastic change in national legislation abolishing existing general plans, and the phase of development implemented based on newly established fragmented local development plans. Cartographic materials, including orthophotos, and local legislation were analyzed. The research concludes by demonstrating the importance of the remnants of historic landscape elements as contemporary green spaces with relevance to newly developed residential areas. Remnants of agrarian and military phase have crucial significance for maintaining the cultural identity of outskirts of Krakow, helping to preserve collective knowledge about its history, maintain historical continuity and a sense of belonging among residents.

KHUSHBOO PRASHANT
Centre for Environmental Planning and Technology, Ahmedabad, India
CHANDRANI CHAKRABARTI
Centre for Environmental Planning and Technology, Ahmedabad, India

REVIVING THE LOST

Agriculture plays a significant role in India's cultural, economic, and ecological geography. The diverse landscape of India has provided opportunities for communities to build a cultural connection with their surrounding landscape. Today, nearly 42% of India's land is under agricultural use. However, less than 10% of this area practices organic or traditional farming. Historically, traditional agricultural systems were informed by local wisdom, emphasising soil health, hydrology, nutrient cycling, and integrated water management. Currently, the growing demand for food and economic yield has led to a widespread reliance on monoculture farming practices, leading to degradation of soil and water resources and a loss of ecological balance.

Addressing monocultural practices through adaptive agriculture plays a crucial role in mitigating the challenges of anthropogenic pressures on the ecology of land. The study, titled 'Reviving the lost', explored the lost association a regional community had with agriculture practice, along the Sabarmati river. Sabarmati, is a non-perennial river in semi-arid Western India, through the cities of Ahmedabad and Gandhinagar. The community residing along the river Sabarmati river used the dry river bed to develop rituals and practices that resonated with the changing water in the river. During monsoon, the river would flood and replenish the aquifer in the region, while during the summer months, the bed still had enough moisture for cultivating crops. This riverbed was not just used for food production, but it was used as commons for cultural gatherings. However, after damming the river in 2005 for a water infrastructure and beautification project, the ephemeral nature of the land and water has affected the region's agricultural practice. This shift in practice as a result of water, coupled with the growing food demand, led to the adoption of monocultural, water-intensive farming, further deteriorating the ecology.

To revive the lost connection through agroecology principles, the study followed a scale-based methodology that identified a sustainable approach to balance agricultural productivity with ecological conservation. First, at a peri-urban zone of the river, sandwiched between two cities of Gandhinagar and Ahmedabad, multiple villages with shifting agriculture patterns were identified. At the scale of one such village, the study then recorded the current agriculture practices and proposed a cyclic crop rotation in response to water and companion planting. Finally, an entrepreneurial model was proposed to promote agriculture to urban dwellers through different types of curated events that allowed community empowerment beyond farming.

Thus, the authors argue that the model of 'Reviving the Lost' could serve as a tool to reintroduce agricultural landscapes along the banks of the Sabarmati River. These activities will promote the practice of adaptive agroecology, urban agriculture, and community empowerment, as well as enhance the region's biodiversity.

JULIA NERANTZIA TZORTZI, Assoc. Prof. Dr.
Polytechnic University of Milan, Italy
ISHITA SAXENA
Polytechnic University of Milan, Italy

BETWEEN TRADITION AND MODERNITY: THE LIVING ROOT BRIDGES AS SYMBOLS OF CULTURAL AND ECOLOGICAL RESILIENCE

The living root bridges (*Ficus elastica*) of Meghalaya, India, exemplify a profound architectural manifestation of cultural heritage, ecological adaptation, and community-driven design, seamlessly merging functionality with symbolic significance within a monsoon-intensive, mountainous terrain. For centuries, the indigenous Khasi communities have meticulously crafted these structures, which transcend mere utility to emerge as living cultural artifacts that encapsulate the interplay of tangible and intangible heritage. Architecturally, they embody an organic, adaptive design philosophy, wherein the aerial roots of *Ficus elastica* are carefully guided to form resilient, self-sustaining bridges that harmoniously integrate with their natural surroundings. Intangibly, they encapsulate traditional knowledge, communal labor systems (*rit*), and animist beliefs, reflecting a worldview in which nature and culture are deeply interconnected. Situated within agrarian landscapes, the root bridges coexist with terraced betel leaf farms, sacred groves (*Law Kyntang*), and shifting cultivation (*jhum*), creating a cohesive cultural landscape where architecture, agriculture, and ecology converge. However, the survival of these structures is increasingly threatened by rapid urbanization, climate variability, and the commodification driven by tourism, raising pressing questions about sustainable conservation and the role of traditional knowledge in contemporary architectural practice. This study adopts a qualitative architectural research approach, utilizing historical documentation, cultural narratives, and critical discourse analysis to explore how root bridges redefine cultural assets within agricultural landscapes. It emphasizes their role as dynamic, evolving systems rather than static relics, examining their symbolic integration into the Khasi cultural fabric, where they serve dual purposes as functional infrastructure and sacred sites that reinforce community identity and resilience. The research underscores the tension between state-led modernization policies, which often prioritize conventional infrastructure, and community-driven conservation efforts that advocate for adaptive governance models rooted in traditional custodianship (via village *Dorbars*). By analyzing the architectural and socio-cultural dimensions of root bridges through a qualitative lens, the study proposes frameworks for integrating indigenous design principles into contemporary architectural practice, advocating for their recognition as “living heritage.” This approach not only preserves their ecological and cultural value but also offers scalable insights into sustainable, community-centered design in an era of climate uncertainty. Ultimately, this research positions Meghalaya’s root bridges as a paradigm for architectural innovation, where tradition and modernity converge to create resilient, culturally significant landscapes.

ATTILA TÓTH, Assoc. Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia
IVAN ČITÁRY, Dr.
Slovak University of Agriculture in Nitra, Slovakia
ZUZANA VINCZEOVÁ, PhD. Candidate
Slovak University of Agriculture in Nitra, Slovakia

AGRICULTURE AND EXHIBITION: DIVING INTO A HALF-CENTURY HERITAGE OF AGRICULTURAL EXHIBITIONS AND THEIR ROLE IN THE IDENTITY OF NITRA, SLOVAKIA

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Agrokomplex is a term that comes to mind for many when they think of Nitra. It is a vast exhibition space established in 1974, which has developed over the past five decades on the southeastern side of the city. The creation of such an extensive agricultural exhibition centre was ideologically and politically motivated. During the 1970s and 1980s, large annual exhibitions were held for farmers and agricultural cooperatives from across Czechoslovakia.

Beyond its political and ideological context, Agrokomplex has played a significant role in shaping the city's identity on one hand, while also contributing to its urban development on the other. The half-century heritage of this site is both tangible and intangible. The tangible heritage includes elements of period landscape architecture, such as ponds and tree and shrub plantings, as well as exhibition buildings like the pavilions, an underwater restaurant, and an open-air museum featuring traditional rural architecture. Sample allotments with varying types and designs of cottages and gardens, a mobile tribune on rails, and many other features contribute to its historical value.

The intangible heritage includes, for instance, the preservation of agricultural traditions in the open-air museum, as well as the more recent intangible legacy of the exhibitions. At present, the area faces challenges related to the diminishing economic and social significance of exhibitions, as well as sustainability concerns regarding both the economy and land management. The vast space is located within the large Chrenová housing district, which lacks a substantial urban park, while the extensive green space of Agrokomplex remains with limited public access.

This contribution will explore the fifty-year history of this exhibition site of national importance and international relevance, showcasing period documents, photographs, and projects related to architecture, urban development, and landscape architecture. It will also discuss the current issues and future challenges faced by the area and possible landscape strategies for future development.

SUZANNE KATZ, PhD. Candidate
Cergy Paris University, Cergy Pontoise, France
National School of Landscape Architecture, Versailles, France

MIGRATORY CULTURAL LANDSCAPES: LESSONS FROM THE ANÁHUAC FARM PROGRAM FOR GLOBAL AGRICULTURAL HERITAGE

This communication focuses on the potential of 'cultural landscapes of the future,' emerging from the migration and cultural hybridity of Indigenous peoples in North America, as they adapt and negotiate with one another and a landscape of arrival. Through the exploration and design support of the creation of an agri-cultural center founded and managed by Mesoamerican Indigenous farmworkers in the Willamette Valley, Oregon, the research asks if and how this center can serve as a model for future systems of Globally Important Agricultural Heritage in the face of climate change. The Anáhuac Farm Program, a pilot project accompanied by its parent organisation, the Capaces Leadership Institute, reflects the intersection of traditional Mesoamerican agricultural practices (Zapotec, Purepecha, Nahuatl, Mixtec, Maya and others) with local land stewardship systems. The Anàhuac Farm Program offers an innovative framework for land use, bridging cultural heritage (including dance, languages, culinary arts, and spiritualities) and contemporary sustainability practices. Conducted as part of a Project-Led PhD between 2022 and 2023, this research highlights the role of cultural hybridity in shaping landscapes and agricultural systems that are both culturally significant and ecologically sustainable. Through ethnographic fieldwork, including participant observation, semi-directive interviews, and the collaborative design of an ethnobotanical garden on the 22-hectare farm,the study explores how this initiative preserves and passes on Intangible Cultural Heritage through landscape to future generations. The Anáhuac Farm Program, in partnership with the US National Seed Laboratory, is also introducing mésoamerican traditional crops to the higher latitude of the Willamette Valley—potentially serving as an early model for climate change acclimatisation. By expanding agricultural zones and diversifying crops suited to new climates, this initiative has the potential to pioneer resilient agricultural practices in response to shifting environmental conditions. In the case of the Anáhuac Farm program, the 22hectare site weaves together centuries of history and a plurality of agriCULTURES. Their own mesoamerican tapestry reaches out to weave in those who were there before them : from an initiative to restore the Indigenous Kalapuyans' White Oak and Camas prairies, to the way Norton Creek is canalized across the property and even the way the trains can be seen passing through the valley floor along the NS axis of the Jefferson Grid. The ongoing design work for the farm underscores the evolving role of landscape architecture in creating spaces that are not only functional but also culturally and ecologically rich, demonstrating the potential of migratory cultural landscapes to inspire future global agricultural heritage systems, blending traditional knowledge with innovative responses to modern challenges.

MIKLÓS GYURASZA, PhD. Candidate
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
MÁTÉ SÁROSPATAKI, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

THE USE OF WATER IN 19TH CENTURY HUNGARIAN LANDSCAPE GARDENS AS REPRESENTED ON CADASTRAL AND MILITARY MAPS

The research is aiming to get an extended view on the use of water in landscape gardens of present-day Hungary. Water was often a focused element of these representative gardens, so researching the water elements is a beneficial way to get to know more about the work of these gardens, also it could bring us a step closer to the possibility of a restoration, or a reconstruction.

In Hungary, many smaller and even some really great historical gardens were partially or completely perished over the past century, often together with their original plans and documentation. However, we still have some useful tools to find valuable informations about these gardens' details. There were already beneficial researches about the use of water in some of these gardens, but there is no unified database that would collect these informations and would help to make comparisons, or to get other useful conclusions.

Historical gardens within the boundary of present-day Hungary can be clearly discerned in the cadastral maps of the Habsburg Empire. Although these maps record the state from a limited and narrow time period, they provide a quite accurate and detailed overview of the gardens that existed there in the second half of the 19th century. It is important to mention, that some of the settlements are randomly missing from these cadastral maps, in these cases we were using the maps of the Second Military Survey. Our research method is based on distinguishing and measuring point-like, linear, and surface-like water elements.

The importance of the use of water in historical gardens is demonstrated by the fact that nearly 40% of the parks recorded on the maps at the time contained built or natural water features which were considered worthy of depiction. Our research has revealed the role of water in the landscape gardens of Hungary in a given period, the forms in which it appeared, its typical locations in the layout of the parks, and the distribution of historical gardens with a water feature by county. Besides these statistic numbers, diagrams and maps, we also found evidence for the garden-creating power of a natural watercourse, as well as for the involvement of agriculture in the 19th century Hungarian landscape gardens.

ZUZANA ŠTEMBEROVÁ, MSc
Czech Technical University in Prague, Czechia

MEMORY OF PLACES: THE LANDSCAPE NARRATIVE OF PRAGUE'S STREAMS

Landscape features, including watercourses, are key components of urban fabric and identity. Prague's streams, whose headwaters are often located in open landscapes while their flow is regulated or buried in urban areas, are examples of hidden and transformed landscape structures. This paper focuses on the phenomenon of Prague's streams through the concept of landscape narrative as formulated by Matthew Potteiger and Jamie Purinton (1998).

The landscape narrative provides a theoretical framework for interpreting landscapes as dynamic systems where natural and cultural processes, historical continuity and contemporary uses intersect. Watercourses not only structure the physical form of the landscape, but also carry layers of meaning that reflect social, ecological and planning aspects. In the context of Prague's rivers, this method can be applied to analyse historical change, perceptions of place, and opportunities for river landscape revitalisation.

The paper discusses selected methods of landscape narrative interpretation and their application in landscape architecture and urban planning. It focuses on the identification of water features in the urban landscape of Prague, their ecological and cultural value, and approaches to their reintegration into the urban fabric. The aim is to present landscape narrative as an interdisciplinary tool that enables not only the analysis of river landscapes, but also the active participation of local communities and the promotion of environmentally sensitive planning.

ADÉLA RUPRECHT CHMELOVÁ, PhD. Candidate
Czech Technical University in Prague, Czechia

URBANIZATION AND (AGRI)CULTURAL LANDSCAPES: SEEKING FOR BALANCE IN THE PERI-URBAN CONTEXT

Peri-urban landscapes are dynamic interfaces between urban expansion and rural traditions, reshaping agricultural land. Is there still a “rural” in these areas, where traditional agriculture once thrived? This contribution explores their spatial characteristics and their essential role in providing recreational spaces for urban dwellers. Through case studies, it highlights challenges such as land fragmentation and ecological shifts, emphasizing the need for sustainable management that balances urbanization, agriculture, and recreation.

Exploring the spatial characteristics of peri-urban areas in the Czech context reveals how agricultural land is transformed in response to urban pressures. These landscapes play a critical role in providing green spaces for relaxation and leisure, serving as the closest natural environments for urban dwellers. The analysis draws on case studies to shed light on key challenges such as land fragmentation, ecological shifts, and the loss of traditional agricultural practices. These challenges raise questions about the long-term sustainability of these areas.

Sustainable management strategies that balance urbanization, agriculture, and provide recreational spaces at once are essetial. Ultimately, the contribution highlights the complex interplay between urban growth and rural traditions and the need for thoughtful planning that integrates both urban development and the protection of valuable agricultural and recreational landscapes. As peri-urban landscapes evolve, it is crucial to preserve the remaining rural qualities while adapting to new social, ecological, and economic realities.

LAURA NICOLINI, MA, MSc, PhD. Candidate
University of Alcalá, Madrid, Spain
CARLOS JHON GARATE, Dr.
University of Alcalá, Madrid, Spain

THE INTERPLAY BETWEEN ARCHAEOLOGICAL HERITAGE AND LANDSCAPE IN THE WORLD HERITAGE SITE AND NATIONAL PARK OF BUTRINT IN ALBANIA

The interaction between archaeological heritage and landscape plays a crucial role in shaping the identity of cultural and agricultural landscapes. The case of Butrint, a UNESCO World Heritage site within the Butrint National Park in Albania, provides a compelling example of how holistic conservation strategies can sustain both the historical and environmental integrity of a site threatened by climate change. This study examines the interdependence between Butrint's archaeological remains, its hydrogeological context, and the evolving landscape where the community lives and works utilizing the cultural and natural resources. The traditional subsistence farming practised in this area has a low environmental impact which is compatible with the protection of the natural and archaeological heritage. Its support helps of confirming and perpetuating the historic landscape, consolidated by historical iconographic representations and idealised in the common perception of the genius loci. The proposes integrated approach to mitigate the challenges for the sustainable development considers the conservation of the cultural and natural heritage in relation with the fulfilment of local community needs highlighting its living traditional production systems and techniques. Butrint is characterized by its unique environmental setting: a semi-saline lagoon connected to the Ionian Sea by the Vivari Channel, historically serving as a site for aquaculture and agriculture. This relationship between water systems, human activities, and ancient structures has shaped the site's identity across millennia. However, increasing groundwater levels, influenced by natural springs documented since antiquity and exacerbated by climate change, threaten the preservation of Butrint's rich architectural heritage.

Concurrently, the progressive sedimentation of the Vivari Channel—now reduced to a depth of six meters—has led to a decline in water exchange between the lagoon and the sea, resulting in eutrophication, diminished aquatic biodiversity, and a reduction in the quality and quantity of local fish and mollusk production. This research underscores the necessity of adopting integrated conservation strategies in the context of the new management and governance that balance archaeological preservation with environmental sustainability considering the impact of the tourism. By considering the interplay between cultural heritage and ecological processes, this study advocates for multidisciplinary interventions, including hydrological management, landscape adaptation, and sustainable aquaculture practices including traditional techniques still in use. These measures aim to protect Butrint's identity and ensure the resilience of its landscape, demonstrating how conservation strategies in the mix cultural and natural value can support both heritage protection and biodiversity preservation and the positive potential impacts in the local community and the region. The findings contribute to broader discussions on how a holistic approach to conservation of the (agri)cultural landscapes can foster climate resilience encompassing biodiversity conservation and socio-economic sustainability. In the theoretical and practical debate on the management of cultural and environmental heritage, Butrint case has the ambition to be one of the best practices in the Mediterranean Bassin and Balkans as it is one of the most relevant cultural and natural heritage sites of the region with a new management model, offering insights applicable to heritage sites facing similar environmental pressures globally.

ANA LUISA SOARES, Prof.
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Lisbon, Tapada da Ajuda, Portugal
MARIA ROMEIRAS, Prof.
LEAF - Linking Landscape, Environment, Agriculture and Food Research Centre,
Tapada da Ajuda, Portugal
University of Lisbon, Tapada da Ajuda, Portugal
ANA RAQUEL CUNHA
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Lisbon, Tapada da Ajuda, Portugal
LEAF - Linking Landscape, Environment, Agriculture and Food Research Centre,
Tapada da Ajuda, Portugal

"QUINTAS DE RECREIO": A TRADITIONAL PORTUGUESE RECREACIONAL ESTATE AS (AGRI)CULTURAL LANDSCAPE IN LISBON

Lisbon city, currently covering an area of 100 km^2, lies in a transition zone between the Atlantic Ocean and the Mediterranean, and between Africa and Eurasia. It occupies an interfacial position between the Tagus estuary and the Atlantic Ocean. The city's topographical characteristics, shaped by hills and with a southern exposure facing the Tagus estuary. The conjunction of these features has allowed the coexistence of various botanical species from different biogeographical regions, making it a biodiversity hotspot.

From the late 18th century and early 19th century to the present, Lisbon's urban area has experienced a period of accelerated and extensive expansion, a phenomenon that intensified in the mid-20th century, leading to the significant transformation of rural areas into urban spaces. As a result of this growth, the "Quintas de Recreio" and other rural areas that once characterized the surroundings of Lisbon's historic urban centre were transformed into urban space. Some of these old rural spaces remain as a testimony, in the current urban fabric as Quintas de Recreio and have been converted into urban public urban spaces such as parks and gardens, such as: Parque do Monteiro Mor (11 ha), Quinta das Conchas e dos Lilases (26 ha), Quinta de Santa Clara (1.8 ha), Tapada das Necessidades (10 ha), Tapada da Ajuda (100 ha), Quinta das Laranjeiras (0.4 ha), Quinta dos Azulejos (0.3 ha), Parque Bensaúde (3.5 ha), and, as gardens, the case of Jardim do Campo Grande (13.4 ha). At the same time, new urban green spaces have been created in old rural areas, such as Vale do Silêncio Park (8.5 ha), located in the actual parish of Olivais (an old rural area characterized by extensive olive groves).

As the profession of landscape architecture emerged in Portugal, Francisco Caldeira Cabral, the pioneer of the Landscape Architecture profession in Portugal, highlighted the significance of Lisbon's recreational estates ("Quintas de Recreio") and their adaptation into public parks throughout the 20th century. These estates, originally private, retained distinctive characteristics traditionally associated with the 18th century, though influenced by earlier European landscape traditions. Their transformation into public parks reflects broader urban and social changes. Their enduring presence highlights their cultural and historical significance, warranting further study to assess their distinctiveness within the Portuguese landscape heritage.

The structure of this traditional Portuguese farm, the "Quinta de Recreio", is characterized by the existence of a house with a strong relationship with the garden, a vegetable garden area, an orchard, and a forest. This structure is still well characterized by the testimony of spaces that have remained over time as (agri) cultural landscape in Lisbon. These (agri) cultural landscapes represent an important contribution to recreation and well-being, biodiversity, climate change mitigation, and offer valuable ecosystem services in an urban context.

KATHARINA CHRISTENN
RWTH Aachen University, Aachen, Germany
YUXIA LUO
RWTH Aachen University, Aachen, Germany
AKIKO IIDA
The University of Tokyo, Tokyo, Japan

APPROACHING URBAN AGRICULTURE AS HERITAGE: LEARNING FROM THE PAST FOR A SUSTAINABLE FUTURE

Urban agriculture has a mostly unknown but rich history, as food production was always strongly linked to urban development. However, the historical perspective of urban agriculture has not been systematically studied. Today, in view of the upcoming transformations towards post-fossil economic forms, it is helpful to revisit inherited examples of urban agriculture, as they often embody pre-industrial, 'pre-fossil' knowledge of how to supply cities with food using regionally limited resources. Moreover, the local knowledge on organization, resource management, culture and species that is inscribed in traditional urban agriculture practices and can be the key to face today's urban challenges and to democratize food access.

Against this background, INSUAH is conducting the first Integrated Study on Urban Agriculture as Heritage merging traditional knowledge, contemporary research and different concepts of heritage. By addressing Urban Agriculture as Heritage in a living lab approach in different global contexts —Havana, Cuba, São Paulo, Brazil, Nürnberg & Bamberg, Germany, Bandung, Indonesia, Tokyo, Japan— INSUAH is showcasing the wealth of local knowledge and cultural specifics embedded in these traditional farming systems. Through collaboration with diverse local actors, this study will show further which support heritage initiatives need to operate successfully. Finally, INSUAH will provide evidence-based insights for making urban agriculture and urban food systems a key enabler for sustainable development. As we emphasize: learning from the past for a sustainable future.

Currently, INSUAH has analyzed 16 urban agriculture cases from five living labs by categorizing and summarizing their heritage values in four key areas: cultural landscapes and adaptation to (limited) resource availability, local resource management and urban integration, ethnobotany, and social structures and collective memory. During this case study process, INSUAH has also established a scientific framework for understanding the phenomenon of urban agriculture as heritage, along with developing standards for its mapping and description.

The case studies reveal that urban agriculture heritage serves as a valuable "repository" for sustainable, locally adapted practices, solutions, and resource management techniques. Additionally, we also noticed that urban agriculture heritage acts as a powerful "motor" for bottom-up initiatives, as these projects tend to be successful when local actors have a strong sense of identification with their heritage. Hence, in the next phase of the study, INSUAH will collaborate with local actors (farmers, administrations, policymakers) through living labs to develop methods for raising heritage awareness within local communities and test strategies for fostering a participatory understanding of living local heritage. Additionally, the study will propose policy changes to support heritage-based strategies in urban planning and practice.

DIEGO TORIBIO, PhD. Candidate
Polytechnic University of Madrid, Spain

A NEW PROJECT FOR BRITISH AGRICULTURAL LANDSCAPES: THE WORK OF THE INSTITUTE OF LANDSCAPE ARCHITECTS IN POST-WAR DECADES, 1945-1979

For the United Kingdom, the end of World War II in Western Europe marked the beginning of a transformation process of its insular territory, essentially that one of Great Britain. Reconstruction of the country called for a far-reaching spatial reorganization that strongly affected the historical fabric and aesthetics of the countryside. Numerous non-urban geographies, including agricultural landscapes, quickly became under pressure from expanding urbanization, population growth, mechanized means and a rising demand for raw materials, farm products and energy. The British hinterland gradually became colonized by a myriad of elements that posed a threat for the integrity of its elements: field patterns, hedgerows, woodlands, water management systems, among others.

Faced with the threat of a territorial imbalance, some voices advocated for a proper landscape planning of the British agriculturalscapes. Key to the design and reformulation of this rural spaces was the significant role of the Institute of Landscape Architects (ILA), a group of professionals first established in 1929 and that included prominent members such as Brenda Colvin, Cliff Tandy, Sylvia Crowe, Brian Hackett, or Geoffrey Jellicoe. Large-scale transformations of the British countryside were subject to the professional activity of many of these individuals, as well as to most of their key writings, such as Land and Landscape (Brenda Colvin, 1948) or Tomorrow's Landscape (Sylvia Crowe, 1956).

Through these landscape architects and their work, we can find an appraisal of agricultural landscapes as territories that are not only a source of economic exploitation, nor a passive recipient of capital influx, but also as integral parts of the cultural and ecological fabric of the countryside. A firm belief in the fact that planning and design could maintain both the productivity and the aesthetic and heritage values of a changing agricultural landscape, while also absorbing new activities and multiple land uses (e.g. recreation or wildlife conservation).

This contribution aims to approach the work of those landscape architects who, from their practice, sought a new aesthetic project for post-war british agricultural landscapes, highlighting the significance of rurality through new territorial and architectural forms. The aim is to outline a theoretical framework that captures a record of lessons from this period with the aim of informing contemporary architectural practice. This work will be complemented by a selection and analysis of a set of case studies in which sustainability, ecology, governance and policy frameworks are key elements.

AGNIESZKA GRENIUK, MSc
Cracow University of Technology, Cracow, Poland

TRANSFORMATIONS OF THE “HALF TOWN - HALF VILLAGE” AND THEIR CORRELATION WITH THE DEVELOPMENT OF TRADITIONAL SETTLEMENTS: THE EXAMPLE OF HRUBIESZÓW, EASTERN POLAND

Hrubieszów is a small town in eastern Poland, located in the Lublin Voivodeship near the border with Ukraine, within one of the country’s main agricultural regions. Its urban structure, historically described as “half town, half village,” has been shaped for centuries in accordance with the principles of the so-called Magdeburg Law, in which a regular, tight spacial arrangement of an urban character coexisted with traditional farmsteads adapted to local conditions and multigenerational experience.

The presented research focuses on the processes of landscape transformation in Hrubieszów in the context of urban changes and their impact on the microstructure of traditional settlements. A key aspect of the analysis is the correlation between macro-scale urban transformations and changes occurring at the level of individual plots and homesteads, highlighting the complexity of these processes. In particular, the study examines traditional wooden architecture with features that give it the status of local architecture and the evolution of homestead gardens. The home garden plays a significant role as an integral part of the sattlement, which is subject to dynamic changes as a result of modernization, suburbanization, and shifts in residents’ lifestyles.

This paper continues research conducted as part of the project “Local Development of Hrubieszów – From Participation to Implementation,” carried out between 2020 and 2024 in collaboration between the Cracow University of Technology and the City of Hrubieszów. The findings indicate significant challenges related to the preservation and adaptation of traditional wooden architecture, as well as maintaining the function of homestead gardens in the face of contemporary urban trends. The spatial, functional, and social aspects of these transformations are analyzed to develop of certain guidelines for integrated heritage conservation and the support of local spatial development patterns.

The research methodology includes historical analysis, spatial documentation, and field studies, enabling a detailed understanding of transformation processes. These findings can serve as a basis for formulating spatial policies aimed at the sustainable development of small towns while preserving their cultural and landscape identity. In the context of increasing urbanization and demographic changes, Hrubieszów may constitute an interesting case study for other small urban centers facing similar challenges of contemporary times.

MATE SÁROSPATAKI, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
ALBERT FEKETE, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
SZABOLCS VAJDA, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

SPECIFICITIES OF THE DESIGN APPROACH IN GARDEN HERITAGE CONTEXT

The renewal of historic gardens, landscapes, and sites has grown to be a current issue in Central and Eastern Europe. Based on scientific research, the Department of Garden Art and Landscape Design at MATE (Hungarian University of Agriculture and Life Sciences) has been dealing with landscape renewal since 1963 on regional, settlement, and garden scales, too.

The historical value cannot be simplified or understood as the notion of “old”, the heritage being represented by the all-time valuable garden features and elements, independent from their formation in time. In addition to the historical authenticity of the actual use, the social needs and sustainability are important aspects, which must be integrated into heritage protection and reclamation.

Meanwhile, the renewal approach can be also multiplied, depending on, among others, the availability of historical sources, the intentions of the actual owners, and the functions of the estates, the ecological and economical sustainability considerations. Historical knowledge, characteristics of the ancient and recent environment, ownership and functions are expressed in different ways in different places, presenting planners with exciting challenges.

A focus area of our design activity is the reconstruction of some Hungarian historic gardens. Using case studies, the paper intends to explore how proper landscape design in historic environments is achieved. The design attitude and the right renewal ideology is presented through five examples belonging to different historic layers. Due to time constraints, we will limit ourselves to presenting details of the whole garden or part of it, or an object or feature of each site. The five sites presented represent the early Renaissance (The Herb Garden of the Pannonhalma Archabbey), late Renaissance (The Kálnoky Castle Garden at Miklósvár), Baroque (the Royal Palace Garden at Gödöllő), English Landscape (The Teleki Castle Garden at Koltó) and Modern (The geometrical garden of the Royal Academy of Horticulture, Budapest) garden styles from the Carpathian Basin, where garden renovation has been carried out using a variety of design approaches.

ANNA EPLÉNYI
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
LEJLA HARGITAI
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

THE LANDSCAPE STORY OF STRIP-LYNCHETS OF TRANSYLVANIA, CALATA REGION; GEOMORPHOLOGICAL, AESTHETICAL AND AGRICULTURAL ASPECTS

Artificial, human-made terrasses appear all across the World such as: stone-, rice,-or salt-banks; but strip lynchets (agricultural landform-terrasses mainly for ploughing) are rather common in parts of Europe's rolling landscapes. In my research area (Kalotaszeg = Calata Region, Transylvania, Romania) I've concluded a 15-years-long study on the landscape-history of these terrasses. I made agricultural-, and land-use chronicle with oral-, and field research, based on ethnographic images, comparing survey-, and military maps. For better visualisation I created character assessment drawings, sketches and complex 2,5 dimension map-charts. The research focuses on the geomorphological-, the agricultural- as well as on the landscape aesthetical aspects and findings.

This agro-terrain-feature has got not only significance in traditional land-use, but with its unique, flexible land-morphological fitting to the local hillsides, it causes a very strong visual landscape character-element all across Transylvania. The variety, complexity, coherence of lynchets (morphology, size, forms, exposure, slope angle) and their more-and-more scrubby natural appearance results in a special high-aesthetic value.

The time of establishing these lynchets are still unclear, but the main goal of this enormous terrain-modification was to improve the productivity of the rocky, barren soil. These flattened terrasses retained it against the rainwater-erosion when stable-manure was taken out to the croplands in spring. A systematic study of these strip lynchets has revealed many details about their role in landscape history: a special, turnable plowshare was used; the enlarged, useful area fields with their grassy slope marked the property-boundaries in past as well as today. The land-use changed in the last 200 years: from arable land to mowed meadow and finally to pastures. The inner edge of the escarpments became scrubbier and copsier because of the extensive-use, which led to more biodiverse habitat and to a friendlier, spontaneous, more natural vegetation character.

According my micro-topographical field-walking observations, these landforms can be classified into four main types (gently sloping/ evenly cultivated/ gradually steepening and broken-terrasses), which I illustrate with photographs, sections and schematic drawings. The undulating terraces form clusters of linear patterns in the landscape while covering full hillsides. Lynchets clusters cause a rich "edge-effect" in the land-view (the length of linear features, such as land-use boundaries or slope toe-and crestlines). The densest extent of the lynchet-pattern appears on the 'Upper-lands' and on the Nádas-valley's rolling scenes. In the mountainous regions, where forests cover the steep hillsides, lynchets appear on sunny, flat plateau-tops. Based on a landscape aesthetic study (2009), it was concluded that this immense dynamic landscape intervention, created by generation of human hands with a 'staggering' investment of time and energy, is a unique, 'non-repeatable', site-specific landscape feature, which owes its aesthetic value to its rhythmical but varied light effects on the one hand, and to its natural 'not-intentionally-beauty-creating' artistic power on the other. To summarize strip lynchet-system is a memento of the traditional, historical land use, it is fundamental in the local landscape-character, and it holds a high landscape aesthetical value as well as.

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NEVENA VASILJEVIĆ, Prof.
University of Belgrade, Serbia
SANDRA MITROVIĆ
University of Belgrade, Serbia

ENHANCING AGRICULTURAL LANDSCAPE CHARACTER THROUGH FOREST LANDSCAPE RESTORATION (FLR): THE CASE OF SURČIN MUNICIPALITY

Despite being part of a highly urbanized metropolitan area of Belgrade, Surčin Municipality has a rich agricultural background that has shaped its landscape for centuries. The territory of Surčin has been settled since prehistoric times, it has been characterised by flat, marshy terrain intersected by numerous canaled streams. While it no longer represents a traditionally rural landscape, this area has a long history of agricultural land use. Over the past fifty years, the municipality has undergone significant transformation due to infrastructure development and urban expansion, altering landscape structure, functioning and meaning, impacting both historical identity and ecological integrity. However, rapid urbanisation processes fragmented the landscape, urging for strategies to preserve and enhance its distinctive landscape character.

The European Landscape Convention (ELC) represents a paradigm shift in landscape conceptualization. Rather than focusing on the identification or designation of specific exceptional areas for protection, as in the UNESCO framework, the ELC employs a comprehensive approach that encompasses the entire territory for integrated landscape planning, protection, and management. Ratification of the ELC in 2011 (Off. Gazette of the RS, no. 4/2011) created a more favourable context for Serbian landscape planners to apply the holistic approach of landscape conceptualization which has been implemented in The Spatial Plan of the Republic of Serbia (SPRS) for the period from 2010 to 2020 and from 2021-2035. Legislative measures for the implementation of the third national planning document (SPRS 2021-2035) foresee the development of landscape character assessment, as a methodology for identification of the landscape character, its protection, and management at the regional and local levels through regional, local and sectoral planning (forestry, agricultural, transportation system, infrastructure, tourism, etc.). In addition to urban planning, the preservation and enhancement of agricultural landscape character largely depend on the effective planning and management of forestry resources.

This paper explores the role of the novel “Forest landscape restoration plan” (FLR) in maintaining the agricultural identity of the Surčin municipality. The FLR approach is conceptualized as focusing on the landscape, maintaining and enhancing natural ecosystems within landscapes, engaging stakeholders and supporting participatory governance, tailoring to the local context using a variety of approaches, restoring multiple functions for multiple benefits, and managing adaptively to enhance the resilience of the landscape and its stakeholders over the medium and long term (UNFCCC 2003).

This paper presents the Surčin Forest Landscape Restoration Plan as a case study, illustrating the application of Landscape Character Assessment (LCA) as a research method with the capacity to integrate the concept of FLR implementation. By evaluating landscape sensitivity (biodiversity sensitivity and visual sensitivity), the study addresses the fundamental questions of „what “, „where “, and „how“ in establishing new forested areas within a broader landscape framework.

By adopting a strategic, spatially informed LCA approach, we can ensure that restoration efforts enhance biodiversity, connectivity, and the cultural and ecological identity of Surčin Municipality. This integrated method promotes sustainability, resilience, and a strong sense of place for local communities.

ANYELA PIEDAD ROJAS CELIS, PhD. Candidate
College of Civil Engineering and Architecture, Zhejiang University, Hangzhou, China
SHEN JIE, Prof.
College of Civil Engineering and Architecture, Zhejiang University, Hangzhou, China
JOSE DAVID MARTINEZ OTALORA, PhD. Candidate
College of Civil Engineering and Architecture, Zhejiang University, Hangzhou, China

SPATIOTEMPORAL EVOLUTION OF LAND USE AND LAND COVER AND THEIR IMPACT ON LANDSCAPE PATTERNS IN THE COLOMBIAN COFFEE CULTURAL LANDSCAPE

Cultural landscapes with Outstanding Universal Value (OUV), as recognized by UNESCO, represent the historical relationship between human societies and their natural environment, thereby generating territorial systems of high ecological, cultural, and economic value. However, these landscapes face increasing pressures—such as climate change, urban expansion, and transformations in land use and land cover (LULC)—that threaten their integrity, continuity, and resilience. The Colombian Coffee Cultural Landscape (CCLC), declared a World Heritage Site in 2011, is a paradigmatic example of an organic landscape shaped by traditional agricultural practices associated with coffee. Nevertheless, in recent decades, it has undergone drastic changes: deforestation, territorial fragmentation, and the displacement of coffee crops, driven by unplanned urbanization and alterations in land suitability.

This study analyzes and projects the spatiotemporal dynamics of LULC in the CCLC (2014–2034), evaluating their effects on landscape structure. The objectives included: (1) classifying and validating LULC categories (2014–2024); (2) predicting changes toward 2034 using a hybrid modeling approach; and (3) quantifying impacts on landscape patterns. The methodology combined multisensor supervised classification (using optical images from Landsat 8 and radar data from Sentinel-1), with the Random Forest algorithm (accuracy: 87.90%; Kappa: 0.84), and a predictive CA-ANN model (Cellular Automata–Artificial Neural Networks), which achieved 86.52% accuracy (Kappa: 0.83). Landscape patterns were analyzed using FRAGSTATS (moving window approach), quantifying fragmentation and connectivity. The analyses revealed critical trends in the CCLC. Between 2014 and 2034, accelerated urban growth was evident, increasing from 1.47% to 16.95% of the total area, driven by infrastructure expansion and densification. Simultaneously, forest cover suffered an 80.4% reduction, concentrated in hillside areas and ecological corridors. Coffee-growing zones, which form the socioeconomic foundation of the landscape, declined from 77.36% (2019) to a projected 61.89% in 2034, being replaced by grasslands and non-traditional crops. FRAGSTATS metrics confirmed greater spatial heterogeneity, with a 45% increase in the fragmentation index and a 32% loss in ecological connectivity, particularly in peri-urban areas. These patterns reflect anthropogenic pressures associated with changes in land suitability, as well as the lack of effective land-use planning policies.

This work provides a comprehensive methodological framework for monitoring transformations in the CCLC, which is relevant for sustainable planning policies. The results underscore the urgency of interdisciplinary interventions that balance heritage conservation with adaptation to LULC change. The integration of multisensor data and predictive models emerges as a key tool for anticipating scenarios and designing mitigation strategies. In particular, it is recommended to prioritize the restoration of biological corridors, promote sustainable agricultural practices, and regulate urban expansion in the CCLC.

INGRID SARLÖV HERLIN, Prof.
SLU, Alnarp, Sweden

THE ROLE OF UNDERSTANDING AND KNOWLEDGE ON HUMAN-LANDSCAPE-ANIMAL INTERACTIONS IN THE DESIGN, PLANNING AND MANAGEMENT OF SUSTAINABLE LANDSCAPES

Through the long timespan of agriculture and animal keeping, many landscapes are results of long-lived practices of human- landscape-animal interactions; through stewardship and co-existence with farm animals, including different types of pastoralism, transhumance, and grazed outfields, including sylvopastoral and agro-sylvopastoral systems. Many such practices have now become obsolete and have declined in areas or are under threat, as they do not fit in the efficient, industrial global food system, or in the modern way of living. Today, products from farm animals have often obtained a negative reputation as contributing to greenhouse gasses. Not at least the negative sides of (industrial) animal husbandry have been in focus in public debate and media. Obsolete practices that embrace human- landscape-animal interactions are as best recognised as intangible or tangible cultural heritage, or as traditional ecological knowledge (TEK). In addition, customs and lifestyles of husbandry communities are threatened by significant changes; with effects on identity and sense of place. Animal keeping practices that can promote biodiversity and other bio-cultural values are likely to vanish in the near future; basically as a result of dissolving economies and cumulative interest from land use pressures, resulting in lost knowledge, of lost cultural traditions related to the animal keeping.

In this presentation, I address in what way landscape architecture can contribute to the understanding and knowledge about human-landscape-animal interactions; and how grazing practices (particular on multifunctional semi-natural grasslands or/and urban commons) can contribute to putting light on issues such as ethics and identity related to landscape heritage; as well as ecological cultural, and economic benefits. For this, case studies from landscape design, planning and management, in UK and Sweden, involving landscape management through grazing animals are examined and described. The paper elaborates on how a “more-than-human” perspective for the understanding of past, present and future landscape relations is crucial in the Landscape architecture curricula for promoting meaningful and sustainable future landscapes.

DEMOCRATIC LANDSCAPE TRANSFORMATION

CONFERENCE TRACK 3:
THEMATIC TRACK
OVERVIEW AND OBJECTIVES

The year 2025 marks the 25th anniversary of the Council of Europe Landscape Convention, opened for signature in Florence in 2000 and ratified by 40 member States. The Convention aims to protect, manage, and plan landscapes while promoting public awareness and participation.

Since its inception, it has stressed public involvement in landscape evaluation, assessment, and development, advocating for participatory processes to create landscape quality objectives.

In 2024, at the Council of Europe Summit in Reykjavík, responsibility for the Convention shifted from the Directorate-General for Democracy to the Directorate-General for Human Rights, highlighting landscapes as integral to human rights.

As we enter the second generation of the Landscape Convention, several pressing questions arise:

- *What competences are needed for democratic landscape transformation?*
- *How can these competences be developed in higher education?*
- *How can local planning and policy embrace and promote democratic landscape transformation?*
- *What barriers prevent planning and policy from adopting processes and methods of democratic landscape transformation?*
- *What new forms of research are required?*
- *What existing good practices can serve as models?*

This thematic track invites educators, researchers, professionals, activists, and public planners to engage in a transdisciplinary reflection on the current position of the Council of Europe Landscape Convention. The goal is to generate a joint publication as part of the conference proceedings.

Through this collaborative effort, we also aim to identify knowledge gaps in education, research, and professional practice, and to brainstorm ideas for future development projects.

BARBORA HRMOVÁ , PhD. Candidate
Academy of Fine Arts, Bratislava, Slovakia

PERIURBAN TRANSITION: FROM DICHOTOMY TO CONTINUUM

The concept of a dichotomous system, where urban and rural environments are perceived as two distinct and mutually exclusive realms, has deep historical roots. However, if two interconnected poles existed between these realms, their interface would indicate the presence of change - the interface between the city and the country. In the past, this boundary was distinctly defined across various scales, from the micro level to the broader urban context. The term *hortus conclusus* (Latin for “enclosed garden”) referred to a physical demarcation of space as a protective measure against the harsh influences of nature and the threats specific to a given historical period. Similarly, defensive walls historically delineated urban areas, separating the inner city from the organically expanding suburban zones. In contemporary times, however, there is a tendency toward blurring boundaries between the city and the countryside, resulting in a continuous gradient that leads to homogenization, significantly complicating spatial orientation within these areas.

The dissolution of clear boundaries between urban and rural areas presents a significant architectural challenge in contemporary urban planning. (Agri)Cultural landscapes, as living cultural artifacts, are shaped by cultural decisions that reflect a society’s values and needs. These landscapes, once clearly separated from urban areas, now require thoughtful, context-sensitive design to restore continuity and identity. (Agri)Cultural landscape is considered a hybrid between continuum and dichotomy, where urban and rural elements coexist and interweave, creating a dynamic and adaptable environment. This submission aims to create a transition that preserves ecological and cultural values while supporting sustainable land use practices. In doing so, they can ensure that the city and the countryside thrive within a harmonious, resilient framework.

An example of such a hybrid environment is the landscape of ponds located to the west of the city of Trnava, known as Kamenný mlyn (Stone mill). This artificial landscape, shaped over centuries by human activity, aims to improve the living environment and create green spaces for the city’s residents. The main impetus for creating the forest park was to enhance the quality of public spaces, support nature conservation, and simultaneously provide a place for relaxation and recreation within a natural setting. Experts in landscape ecology and urban planning were involved in its development. The forest park was gradually expanded, and today it represents an important part of the green infrastructure of Trnava. In addition to its original recreational function, the area is now being supplemented with elements of sports, housing, and culture. This transformation of periurban space Kamenný mlyn from a purely recreational space into a multifaceted environment exemplifies the evolving role of urban landscapes. By integrating sports, residential, and cultural elements, while preserving its ecological significance, the area has become a dynamic model of sustainable development. It not only caters to the diverse needs of the community but also serves as a precedent for the successful fusion of nature, urban planning, and human activity, fostering a harmonious and resilient urban environment for future generations.

GUILLERMO REHER, Dr.
Comillas Pontifical University, Madrid, Spain

THE POWER OF THE BLANK SHEET. MENTAL MAPS AS AN INSIGHT INTO CULTURAL VALUES

Mental maps have been used as a tool for understanding Human Geography since the 1950s. They have been used to demonstrate divergence in how people perceive certain phenomena, such as crime, and how it contrasts with data on the ground. Since the 2000s, GIS tools have begun to be used to process the information of mental maps in order to incorporate it as a layer in spatial analysis. There is, however, still a lack in using this information for understanding how people perceive their landscape. As a key principle in the ELC, the idea of landscape perception becomes the fulcrum of any landscape analysis. Particularly, when we use the landscape to understand the interrelation between people, the landscape, and heritage, and how they all inform regarding identity, we start coming into the sphere of influence of the Faro Convention (CoE, 2005), on the value of heritage for people. This paper aims to show the ways in which local communities can be active participants in the creation of meaning by highlighting their cultural values and how they are present in the landscape.

GHIETH ALKHATEEB, PhD. Candidate
Estonian University of Life Sciences, Tartu, Estonia
JOANNA STORIE, Dr.
Estonian University of Life Sciences, Tartu, Estonia

SPATIAL ADAPTATION AMONG DISPLACED AND HOST COMMUNITIES: TOWARDS A DEMOCRATIC LANDSCAPE TRANSFORMATION

Public participation is central to democratic landscape transformation, however, many marginalised spatial practices remain overlooked. Newcomers, particularly those displaced by war or catastrophe, engage in informal spatial adaptations to shape their surroundings in ways that conventional planning frameworks fail to recognise. These adaptations - whether through modifying public spaces, introducing cultural symbols, or repurposing urban infrastructure - are essential in fostering a sense of belonging. Yet, as the urban spaces undergo transformation, the host community also experiences changes in its sense of place. The new dynamics introduced to the shared environment (re)shape the concepts of home and belonging among the host community. Despite these changes, the traditional newcomer integration policies remain focused on language, employment, healthcare and education. This overlooks the spatial dimension of integration, relying on rigid top-down approaches and at the same time, fails to consider the impact of these transformations on the host community. By neglecting the agency of the displaced individuals in shaping their environment and the voice of the host in the transformations, the current planning policies risk reinforcing exclusion and division.

This research investigates how displaced individuals reshape urban landscapes through informal place-making and explores how urban policies can incorporate these bottom-up transformations. It seeks to answer three key questions: 1) How do displaced communities modify urban spaces through informal mechanisms?; 2) What factors influence the recognition and integration of these practices into urban policy?; and 3) How do host communities experience and respond to the changes caused by these adaptation practices?

A comparative qualitative approach will be employed, focusing on displaced and host communities in Tartu and Tallinn, Estonia. In-depth, semi-structured interviews and focus group discussions will be conducted with members from both communities to explore their perceptions and experiences with spatial adaptations. Thematic analysis will be used to identify recurring patterns in adaptation strategies, highlighting both barriers and opportunities for inclusive policy development. By considering both perspectives, the research aims to provide insights into how spatial adaptation contributes to broader integration policies and the changing/evolving sense of place of all community members.

By recognising and supporting organic transformations, urban policy can shift from rigid integration models to flexible, participatory planning strategies. Aligning with the evolving vision of the Council of Europe Landscape Convention, this research advocates for a policy framework that incorporates migrant-informed place-making into democratic landscape governance, fostering inclusive and resilient urban environments, without neglecting the needs of the host community to adjust to the new transformations.

EMILY BOWERMAN
Architectural Association School of Architecture, London, United Kingdom
PRIYANKA AWATRAMANI
Architectural Association School of Architecture, London, United Kingdom

CULTIVATING COMMONS; DESIGNING PUBLIC-COMMON PARTNERSHIPS TO MOBILISE THE BIOBASED CONSTRUCTION INDUSTRY IN THE UK THROUGH A LANDSCAPE URBANISM APPROACH

The UK construction industry accounts for 40% of their total carbon emissions. To reach Net Zero targets by 2050, the sector is exploring alternatives to conventional extractive materials for retrofitting, including biobased materials. These materials are gaining attention for their lower embodied carbon, sequestration potential, regenerative properties, and end-of-life circularity. However, a carbon-centric approach risks exploiting natural assets and masking deeper systemic issues such as environmental degradation, unequal resource distribution, and labour rights within material supply chains. For example, straw, a byproduct of cereal crops, could be certified and scaled as an alternative to rockwool insulation. However, large-scale monoculture cereal production provides minimal biodiversity benefits and depletes soil quality, making agricultural landscapes vulnerable to climate change. Similarly, seaweed farming along the UK coastline is gaining interest for its potential use in acoustic panels, yet the expansion of aquaculture in fragile marine environments raises concerns. Not only do production methods elicit reservations, but the shift to biobased industries if continued within a *business-as-usual* model could also concentrate profits in large corporations, and the transition to biobased could negatively impact industrialised communities.

How can biobased materials be cultivated in a sustainable manner without further compromising productive landscapes?

This paper is based on the MArch thesis Cultivating Commons, conducted within the Landscape Urbanism program at the Architectural Association School of Architecture (2024-2025). Cultivating Commons critiques capitalist material supply chains by challenging the processes, methods, and systems that underpin biobased materials. It calls for a reevaluation of how sustainability is defined and measured, advocating for an approach that considers landscapes, labour, and ownership within the biobased sector by addressing three key questions: *How are materials produced? Who benefits from material production? And who will produce biobased materials?*

The research proposes a phased approach to biobased prototyping and transitioning conventional monoculture farms to agroecology, for improved ecological conditions on farms, based on a community-centred approach to land management, material production, and local economic benefits. The research employs case studies, policy analysis, interviews, and cartography to develop the Public-Common Partnership (PCP) model which is an alternative economic framework that fosters community ownership, equitable resource distribution, and collaborative decision-making in straw and seaweed production, manufacturing, and use in architecture. By reimagining ownership structures and decision-making processes, PCPs offer a pathway beyond capitalism, ensuring that biobased materials do not merely substitute extractive industries but instead reshape the material economy.

By bringing together institutions, local authorities, land and marine workers, businesses, and community members, this partnership connects various actors within the material supply chain ensuring equitable and sustainable biobased material production. The aim of this policy is to leverage the power of the anchor institutions to initiate systematic reform of supply chains through progressive procurement, ensuring that the benefits of the biobased retrofitting project remain within the communities.

This paper addresses the *Democratic Landscape Transformation* stream, demonstrating how designers can engage in democratic procurement models through Public-Common Partnerships (PCP), mobilising material supply chains that support local economies and strengthen regional ecologies.

ELLEN FETZER, Dr.
Nürtingen-Geislingen Univeristy, Nürtingen, Germany

DEMOCRATIC LANDSCAPE TRANSFORMATION: TOWARDS AN OPEN LANDSCAPE ACADEMY

OLA – Open Landscape Academy - is an emerging transnational community of people who work to make landscapes more resilient and inclusive for all. OLA does this through academic and non-academic methods. This work involves education, research, practice, and community participation, all related to landscapes. OLA's mission is to build capacity for democratic landscape transformation in the global community. Its values are shared by the 'Charta for Democratic Landscape Transformation', a document that has been co-created over the past three years with a community of interest and practice.

OLA follows the definition of landscape laid out in the 2000 Council of Europe Landscape

Convention, that celebrates its 25th anniversary this year. According to this convention, a landscape is not just what you see; it is how people perceive it, and it is shaped by both environmental and human factors. The convention also highlights the crucial role landscapes play in our well-being and emphasizes that everyone has a role to play in caring for them.

As we enter the second generation of the Landscape Convention, several pressing questions arise, as defined also in the call for this track:

What competences are needed for democratic landscape transformation?

How can these competences be developed in higher education?

The community around OLA has been operating for 10 years now and the Open Landscape Academy is currently emerging as a result from this process. At ECLAS 2025, we will share our experience and reflections on an emerging set of values and competences for the field of democratic landscape transformation.

With students and communities, we reflect critically on power structures and ecologies of inequalities and are committed to community, democratic life, sustainable mobility, and environmental justice. We work to set in motion a series of landscape democratic processes, developing and supporting a network of living labs in diverse communities, and bottom-up initiatives for sustainable landscape transformation. We want to share this approach as a practice example of education for democratic landscape transformation.

ANUDARI GANKHUYAG, MSc
Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary
AGNES SALLAY, Dr.
Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary

URBAN GREEN SPACE DISTRIBUTION IN ULAANBAATAR: A HISTORICAL AND SPATIAL ANALYSIS

Traditionally nomadic country Mongolia has been transitioning to urban settlement since the 20th century. The first urban plan blueprint with street structures was created in the 1920s, and the first urban park in Ulaanbaatar, Mongolia was built between 1920 and 1930. The initial plan of the city exceeded its capacity after the Democratic Revolution of 1990 when the land ownership law enabled citizens to own land without any additional tax. Since then the city has expanded substantially, both in area size and population.

Along with the expansion numerous urban parks have been built in the city. The early development of the planning of Ulaanbaatar has been kept in the city center, and the unplanned growth of the urban area now called Ger districts is created outside of the master plan of Ulaanbaatar. These unstructured areas lack various important structures, such as engineered water systems, heating, and waste collection, as well as urban green areas. The problems raised with ger areas have been studied in terms of spatial sprawl, soil and air pollution, and policy implementation, however, the issues with green areas, especially its absence in the area have not been explored. This study addresses this gap by analyzing the historical and current urban green space distribution in Ulaanbaatar.

The aim of the study is firstly to review the historical development of Ulaanbaatar to see the initial phase of urban planning, and how they included urban green spaces. Secondly, it aims to examine the current distribution of urban parks and identify the disparities in availability, particularly in the ger areas. By focusing on these inequalities, the study seeks to provide insights into the spatial distribution of green areas and their availability for different parts of the city.

Archival data and books have been collected from online libraries of the Geographical Society of Mongolia. The district and sub-district borders and population data alongside OpenStreetMap and Google Satellite Image were used in QGIS software to firstly map and register the urban parks and, secondly to calculate the distribution and availability of urban parks of the city.

Due to the unplanned expansion of the ger area, urban parks and green areas in Ulaanbaatar city have been distributed in connection with the closeness to the city center, not in connection to the size or population of the districts. The spatial analysis revealed a clear concentration of urban parks in the city center, while the outer parts of the districts lack green spaces. This pattern of park distribution suggests that green space availability is not equally provided across the city. This unequal distribution limits the environmental, social, and physical benefits of urban parks, disproportionately affecting the residents of ger areas who have limited access to recreational spaces. The lack of infrastructure and public transportation further complicates access to the city's existing green spaces for those in outer parts. Addressing this issue is crucial for ensuring equal urban development and improving the quality of life for citizens of the city regardless of their residential area types.

LAURA CIARNIELLO, PhD. Candidate
CURDIUR (CONICET-UNR), Rosario, Argentina
University of Kassel, Germany
CECILIA GALIMBERTI, Dr.
CURDIUR (CONICET-UNR), Rosario, Argentina
NADIA JACOB, Dr.
CURDIUR (CONICET-UNR), Rosario, Argentina
MARÍA CORTOPASSI, Archit.
FAPyD-UNR, Rosario, Argentina
EVANGELINA GÓMEZ, PhD. Candidate
FCPOLIT-UNR, Rosario, Argentina
SANTIAGO GHIONE, Archit.
FAPyD-UNR, Rosario, Argentina
JULIA LASTRA
FAPyD-UNR, Rosario, Argentina
LAURA MESTRE
FAPyD-UNR, Rosario, Argentina

URBAN-RURAL INTERFACE CHALLENGES AND DEMOCRATIC LANDSCAPE TRANSFORMATION.

EXPERIENCES FROM THE URBAN AGRICULTURE PROGRAM IN ROSARIO, ARGENTINA

Urban-rural interface spaces undergo constant changes and disputes, leading to accelerated transformation process, conflicts among different actors and environmental challenges. Expansive urbanization dynamics -often dispersed- clashes with rural activities, resulting in juxtaposed practices that are incompatible. In addition, pressures on natural resources generates diverse environmental impacts, and landscape approaches tend to be fragmented and outdated, failing to address complexities, which further intensify current problems.

This study focuses on the city of Rosario, Argentina, which has been exposed to multiple changing dynamics over the last decades. As one of the main components of the Latin American agro-export model, Rosario has experienced strong transformations in the rural sphere due to soybean expansion and commodity exports, as well as in the urban environment due to accelerated urbanization. In this context, the research explores the existing tensions in the edge spaces, recognizing both the problematic issues and the alternatives developed within the framework of the Urban Agriculture Program (PAU). This program aims to foster democratic landscape transformation in response to current conflicts throgh food production.

The methodology used is qualitative with an empirical exploratory profile of a critical-interpretative type, through which the problems derived from unplanned urban expansion in urban-rural interface spaces are analyzed, as well as the pressure on traditionally agricultural-livestock lands, which has increased conflicts over land use and its effects. Through the study of three PAU cases, the relevance of integrated planning strategies is discussed, together with the active participation of local communities in the decision-making process, to recognize the necessary skills for democratic transformation and the difficulties involved.

In this regard, the study underscores the need to develop urban-territorial planning policies to promote a balanced, multi-scalar development, incorporating the cooperation of all involved actors and implementing strategic practices and guidelines to achieve integration and sustainability. By examining internationally recognized experiences due to their contribution to the current discussion on the effective management and regulation of edge spaces, this research seeks to inspire new best planning practices.

LAURA CIARNIELLO, PhD. Candidate
CURDIUR (CONICET-UNR), Rosario, Argentina
University of Kassel, Germany

HIDDEN LANDSCAPES AND URBAN AGRICULTURE: THE GARDEN-PARKS EXPERIENCE IN THE TERRITORIAL EDGES OF ROSARIO (2004-2016)

Metropolitan edges are currently the focus of attention and debate in studies that consider them as places of opportunity and seek to understand their complexity. In these in-between spaces, new morphologies and overlapping land uses emerge, significantly transforming the traditional rural landscape. New landscapes with particular characteristics are configured there, yet many of them remain invisible to citizens, developers and even planners, despite being often inhabited and productively utilized.

In this context, urban agriculture has positioned itself as an alternative for integrating fragmented territories and reorienting ongoing processes. Many initiatives align with hegemonic discourses associated with international debates on sustainability, ecology, historical value, or the concept of healthy eating. Likewise, and especially within the framework of Latin American inequality, they are configured as a development strategy for impoverished environments. Rosario and its surrounding region represent a paradigmatic case in Argentina, what initially emerged as a response to the early 21st-century crisis and was consolidated in 2004 with the development of the Garden-Parks. These typologies integrate public spaces and productive uses, regenerating diverse urban areas. The strategy, incorporated into urban planning, has helped unveil certain dimensions of previously hidden landscapes. However, the hypothesis of this study is that there are still layers to be discovered, as both planning and knowledge produced, offer fragmented perspectivs and fail to fully interpret the coexisting dynamics within these landscapes.

A complex approach to the territory, one that integrates multiple perspectives in pursuit of a holistic habitat, requires recognizing hidden landscapes and their singularities to incorporate them into planning. Acknowledging the diverse layers that shape a territory allows for more comprehensive policies. This study aims to contribute to that gap by providing a positive view on what remains hidden, that allows finding new rules and ways of acting. It is proposed to put the focus on the protagonists, exploring the experience of inhabiting these spaces. Understanding the plurality of landscapes as a social construction that acknowledges individuals while linking them to the collective, could serve as a valuable tool for reinterpreting and re-signifying these territories.

SIGNE HALD, PhD. Candidate
Aalborg University, Aalborg, Denmark
NIRAS A/S, Aalborg, Denmark
LEA HOLST LAURSEN, Assoc. Prof. Dr.
Aalborg University, Aalborg, Denmark
HANNE BRENDSTRUP NIELSEN
NIRAS A/S, Aalborg, Denmark

LANDSCAPE CHARACTER ASSESSMENT IN LIGHT OF CURRENT CHALLENGES AND DEMANDS: ANALYSIS OF PARTICIPATION IN EUROPEAN METHODS

In 2000 the Council of Europe Landscape Convention, known as the European Landscape Convention (ELC) emphasized the need to integrate landscape into policies, urging authorities to establish policies and measures for protecting, managing, and planning of landscapes, while promoting public participation and awareness. As means of promoting the ELC and democratic landscape transformation, landscape character assessment (LCA) serves as a method. It provides baseline evidence of landscape to inform decision-making processes of landscape development, that builds on site-specific understandings that involve how the landscape is perceived and experienced by people. Several countries have transferred and modified the early British LCA method from 2002 to fit their national context and cultural ideas of landscape, while other countries have developed parallel innovative methods.

Since the development of the first generation of LCA methods, the pressure on landscape has increased due to contemporary environmental crises, were biodiversity loss and climate change impact landscape character and identity. To reverse the negative development political land use targets such as those aimed at enhancing renewable energy, nature, and carbon sequestration, necessitate further landscape transformation. Landscape planning and management must address increased land use pressure with competing demands and ensure public involvement in the formulation of landscape quality objectives. In this context, LCA can potentially serve as a unifying and integrative planning tool to address grand challenges and promote democratic landscape transformation. However, LCA methods have been criticized for being predominantly expert-led, lacking participation, and plurality in the characterization.

This study aims to explore LCA's capacity to manage increased landscape pressures and promote democratic landscape transformation. For this purpose, four LCA methods - the British, the Swedish, the Irish and the Danish - are analyzed and compared to reveal cross-border learnings, with particular attention to the integration and articulation of public participation. Results show significant variation in the formal incorporation of participation across the methods. While one method defers public participation to subsequent planning stages, typically through formal hearings, the others embed participation at different stages during the LCA process. Notably, the more recent methods introduce advanced tools and approaches aimed at enhancing democratic inclusion. Still, critical questions persist regarding the relevance of input in relation to scale of the analysis, as well as the amount and form of involvement.

CHINGWEN CHENG, Dr.
Pennsylvania State University, State College, USA
HUABING YU
Arizona State University, Tempe, USA

CULTURAL RESILIENCE BY CO-DESIGN LANDSCAPES

Cultural resilience refers to the human-centered capacity to cope with change and uncertainty while sustaining the unique characteristics of a group of people reflected through both tangible and intangible components. Cultural resilience is constructed through a collective of individuals and serves as the foundation for community resilience that encompasses the in the social-ecological-technological systems and the built environment. In order to cultivate cultural resilience, it is critical to apply the approach of co-design that is rooted in collaborative, democratic, and authentic decision-making processes. Humans are shaping and being shaped by landscapes. Thus, landscape components reflect human-centered characteristics in both tangible and intangible ways. Through co-design landscapes, communities reflect upon their heritage, values, languages, and artifacts that define their culture, and further enhance their capacity to preserve and thrive, in turn, enhance cultural resilience.

This session aims to disclose how using a co-design approach through landscapes as a media to facilitate and enhance cultural resilience. Landscape architecture projects are interconnected within the social-ecological-technological systems of the built environment and embedded in the communities. The approach that a landscape project is constructed goes through each stage of the design process from the formation of the project to design development, implementation, management, and monitoring. In what ways, does the co-design approach in each stage of the landscape projects reflect on building cultural resilience? In turn, each landscape architecture project enhanced through cultural resilience could contribute to community resilience at large.

JAN PEŠOUT, PhD. Candidate
Czech Technical University, Prague, Czechia

AGRICULTURAL LANDSCAPE ARCHITECTURE IN THE CONTEXT OF CLIMATE AND SOCIAL CHANGE

The topic of the doctoral thesis is a proposal for a qualitative method that would be able to contribute to the assessment of different landscape scenarios over time and verify the proposed transformation of the landscape regardless of the chosen method by its actual users. The meaning of the word user, today closely connected to the subject who cultivates the landscape, is much broader. Despite the loss of the link between residents - owner - user, a large number of other entities are included in the current transformation of the landscape, which have an influence on the future formation of the agricultural landscape, but due to the absence of tools and resources, this influence is not used. An example of all can be the inability of communities to prevent recurring soil erosion or contamination of water with agricultural chemicals.

The aim of the work is to design a well-known and agriculturally managed landscape in such a way that it is carbon neutral, in accordance with current trends options - from carbon sequestration into the soil to the placement of RES compensating for the carbon footprint of agriculture. This landscape model will then be verified using the focus group method by various stakeholders and verify their preferences. In the focus, it is appropriate to separate the different views of owners, farmers, village leaders, vacationers and others.

We are on the threshold of the biggest transformation of the landscape in many decades, we are watching the manifestations of climate change, as well as the decline of interest in farming and active life in the countryside in the working age. I perceive the role of landscape architects precisely as a moderator who has the chance to project the opinions of the participants into the agricultural landscape and design the result in such a way that it covers the interests of biodiversity and sustainability in all senses of the word.

I have been an active farmer for almost 20 years, a resident of the countryside in the area of the so-called Inner Sudetenland, I farm with my family in a combination of plant and animal production, I am currently studying a doctoral program at the Institute of Landscape Architecture of the Czech Technical University in Prague

MARIE-LUISE SCHEGA
Weihenstephan-Triesdorf University of Applied Sciences, Freising, Germany
SONJA HÖRSTER, Prof.
Weihenstephan-Triesdorf University of Applied Sciences, Freising, Germany
STEFFI SCHÜPPEL
Weihenstephan-Triesdorf University of Applied Sciences, Freising, Germany

BEYOND PLANNING: A CASE FOR PRACTISING PARTICIPATION AND CO-CREATION IN THE CONTEXT OF SHRINKING CITIES

Designing urban spaces demands that spatial planners navigate a vast and complex set of factors. While participatory and co-creative processes are increasingly recognised as essential for sustainable and transformational design, opportunities for young planners to practise and develop these skills during their studies remain limited.

Here we present the effort to place participation and co-creation at the core of the final group-project of two Bachelor cohorts studying landscape architecture at the University of Applied Science Weihenstephan-Triesdorf in Freising, Germany. As part of the umbrella initiative *T!Raum: Strengthening local authorities' ability to act*, the overarching project aim is to strengthen participation, particularly by increasing diversity in co-creative processes. The study sites are Zeitz and Weißenfels, both small to medium-sized cities in Saxony-Anhalt, a former East German federal state, that face challenges typical of shrinking rural towns due to deindustrialization and emigration following the German reunification in 1990. In the autumn of 2024, we established three Open Studios in Zeitz, collaborative spaces where community members and students worked in small groups to explore ideas on different topics relevant to the town, like creating a climate resilient neighbourhood. Zeitz has already implemented a Sustainable Community Orchard and wants to take further actions towards a productive, healthy and resilient urban landscape. Following the field trip to Zeitz, students created concepts and designs that identified key locations and planning strategies that we later discussed with citizens and council representatives in follow-up workshops.

These participatory experiences not only influence the students' designs but also provided valuable lessons for the education of future spatial planners. Hence, our research questions accompanied the process on two levels: 1) How can participatory and co-creative practices contribute to more democratic and, therefore, more sustainable spatial planning processes within the specific —but not uncommon — context of the selected towns? and 2) How does *practising* participation equip future spatial planners to navigate complexities such as those present in shrinking urban spaces?

As both an assistant in the research project and a student who participated in the semester project, I am eager to present our results thus far. Based on student evaluations, our design panels, and follow-up workshops with citizens and council representatives in Zeitz, we are now adapting the process to include more co-creative practices for the second student cohort in Weißenfels. I also intend to explore how our learnings transfer to the planning disciplines at large: What skills do planners need to effectively co-create spaces? To what extent can participatory, co-creative and democratic practices be integrated into education, and what impact do they have on learning? Do current institutional frameworks for teaching, assessing, and evaluating spatial planning allow for adaptation to tomorrow´s design demands? We will explore how to shift from top-down planning to the integrated co-creative practice that is essential for democratic landscape transformation. Given its exploratory nature, the topic would do well in various formats, including a talk, roundtable discussion or workshop format.

ZUZANA VINCZEOVÁ, PhD. Candidate
Slovak University of Agriculture in Nitra, Slovakia
TÍMEA ŽOLOBANIČOVÁ, PhD. Candidate
Slovak University of Agriculture in Nitra, Slovakia
ATTILA TÓTH, Assoc. Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia
ROBERTA ŠTĚPÁNKOVÁ, Assoc. Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia

ASSESSING AGRICULTURAL LANDSCAPES IN SLOVAK COLLECTIVE HOUSING: URBAN AGRICULTURE AND SUSTAINABLE RESIDENTIAL DEVELOPMENT

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As urbanization continues to accelerate, cities face increasing challenges related to food security, environmental sustainability and community well-being. Agricultural landscapes within collective housing refer to the incorporation of food-producing elements into shared residential spaces, transforming underutilized green areas into productive environments. Historically, Slovak collective housing developments, particularly those built during the socialist era, prioritized standardized layouts with large, monotonous green spaces that often lacked meaningful social or ecological functions. However, these spaces present an opportunity to be repurposed into community gardens, vertical farms, edible landscapes, and agroforestry systems, fostering a new relationship between residents and their environment.

Urban agriculture within collective housing can take multiple forms, from individual gardening initiatives to fully planned, cooperative urban farms managed by residents. Community gardens, for instance, not only provide fresh produce but also strengthen social ties, encourage intergenerational knowledge transfer. Roof gardens and vertical farms offer additional opportunities for food production in space-constrained environments.

In the Slovak context, the potential for integrating agricultural elements into residential landscapes is shaped by historical and socio-economic factors. Many collective housing estates feature expansive courtyards, vacant green plots, and communal areas that could be transformed into food-producing spaces with minimal structural changes. Additionally, the cultural tradition of home gardening in Slovakia suggests a predisposition toward urban agriculture, making residents more likely to engage in and sustain such initiatives. However, challenges such as land ownership uncertainties, municipal regulations, and the need for community organization must be addressed to ensure long-term viability.

While much research has focused on its role in individual housing developments or as part of larger green infrastructure, its integration into collective housing landscapes remains underexplored. This research examines the role of urban agriculture in shaping the agricultural landscapes of collective housing developments in Slovakia. By analyzing case studies and assessing policy frameworks, it aims to propose strategies for integrating productive green spaces into residential zones, ultimately contributing to a more sustainable urban future.

CAROLINE DE VRIES
Nürtingen-Geislingen University of Applied Sciences for
Business and the Environment, Nürtingen, Germany
Weihenstephan-Triesdorf University of Applied Sciences, Freising, Germany

LIVING RIVER SHORELINES: PROCESSES FOR CO-DESIGN OF CLIMATE-ADAPTIVE URBAN SHORELINES

Urban river shorelines are integral to the character of a city, yet integrating waterfronts with inclusive access and climate adaptation is a ubiquitous challenge to local municipalities. Public access to the water's edge can provide benefits such as improved public health and well-being, local identity, and economic amenities. However, this social and recreational use must be balanced with the restoration of continuous ecological networks, biodiversity initiatives, and coherence with environmental policies. In order to harmonize interests and contribute to the development of sustainable, co-creative landscape architecture practices, this work highlights new participatory design methods for living shorelines. In this case, "living" shorelines refers to designs that support life – both people and nature – where land meets water.

This study tests an integrated socio-ecological approach to climate adaptation in landscape architecture that combines methodological frameworks in Research by Design with Co-Creation.

Original co-design methods and activities were created to illustrate landscape architecture work with tangible materials, sound, and games to aid knowledge exchange and the creation of spatial solutions though interactive modes of participation. The methods and workshop were developed to guide collaborative design thinking, discussion, and collective creativity to identify new opportunities and limitations for the development of a local urban shoreline. These methods were then tested in a local workshop hosted in Freising with participants who live and/or study in the area.

Results from the Co-Design Workshop were then analyzed to reveal local ideas and desires for the development of Freising's urban shoreline. Data gained in the workshops and in site analysis then contributed to the development of an initial design concept to integrate local desires and ecological restoration.

Several new concepts have emerged through this study, including (1) a new utilization of methodologies that combines processes in Research by Design and Co-Design, or "Research by Co-Design", (2) creation and testing of original methods in co-design for use in local Living Labs, and (3) a design concept for Freising's Isar River shoreline that applies the research findings. This study shows both a process for new approaches in design in landscape architecture, and an early outcome of the process.

Preliminary survey results show a positive response to the modes of interaction and show support for further development of co-design methods to be used in an inclusive design process. After participating, workshop attendees showed an increase in interest in co-design, and stated they would like to be a part of similar processes in the future.

While the methods developed in this study were aimed at a workshop on the Isar River, the methods are transferable and adaptable to suit the needs of diverse locations, age groups, and design priorities to support a co-creative process. Democratic landscape transformations require sustained effort and imagination; this work adds to the palette of tools and techniques that can be used to enable regenerative, collective planning.

DIEGO MARTÍN SÁNCHEZ, Dr.
Polytechnic University of Madrid, Madrid, Spain
NOEMÍ GÓMEZ LOBO, Dr.
Rey Juan Carlos University of Madrid, Madrid, Spain

MINI, MIDI, MAXI: A TRANSCALAR DESIGN GUIDE FOR URBAN AGRICULTURE IN MADRID

Urban agriculture has the potential to strengthen local food networks, social cohesion, and economic resilience, yet it is often dismissed as lacking design quality. However, far from being an improvised practice, its success depends on the careful integration of environmental ethics and aesthetics. When thoughtfully designed, urban agriculture transcends its role as a means of food production to become a multi-benefit infrastructure, a strategic tool for urban regeneration. This raises a critical question: is urban, architectural, and landscape design an exclusive disciplinary practice, or can it be democratized to empower communities?

To examine this, the study presents a case study: a practical design guide developed in collaboration with the Madrid City Council as part of *Barrios Productores (productive neighborhoods)*, an innovative public program that provides vacant plots for implementing urban agriculture initiatives. The guide has various goals that go beyond conventional farming, such as: 1) social engagement, ensuring that urban agriculture fosters community participation, 2) infrastructure integration, linking productive landscapes with existing urban systems and public functions, 3) aesthetic identity, addressing design quality to enhance local appropriation, 4) multi-scale adaptability, offering a modular “instruction manual” for different spatial conditions. The guide serves as a paradigmatic model, as it provides a structured framework that allows the access to a design methodology, empowering citizens, regardless of prior experience, to implement an urban agricultural project.

Unlike conventional approaches that separate technical expertise from community engagement, the guide provides a step-by-step outline for integrating agricultural functions in latent spaces. A key feature of this approach is the “build-it-yourself” model. This guide challenges the notion that productive spaces must sacrifice design quality for functionality, resulting in an accessible yet methodologically robust tool. A defining innovation is the prototyping of modular urban furniture, which allows users to build essential farming infrastructure with minimal resources and technical expertise. This system is designed to be highly adaptable, addressing needs at multiple scales: Mini, for basic interventions like perimeter fencing; Midi, for enclosed structures such as tool sheds or storage units; and Maxi, for larger elements like pergolas or greenhouses. These prototypes offer a comprehensive spatial toolkit, guiding users in designing everything from site enclosures and access points to shaded areas, micro-offices, and energy-capturing devices.

Building upon existing agricultural literacy approaches, this guide goes further by equipping local stakeholders with co-design knowledge to navigate different urban situations, enabling them to better adapt their economic viability through business models tailored to local conditions. While rooted in Madrid, the transcalar nature of the guide makes it a relevant example for integrating productive landscapes into residential environments globally. By embedding agriculture into the built environment, this strategy catalyzes both ecological and social regeneration, interconnecting productive landscapes that support urban biodiversity, providing qualitative design solutions and redefining agriculture as a core component of adaptive and inclusive cities.

IOANA ELISABETA ENACHE, PhD. Candidate
“Ion Mincu” University of Architecture and Urban Planning, Bucharest, Romania

COMMUNITY GARDENS AND SUSTAINABLE TRANSFORMATION: PLANNING URBAN AGRICULTURE IN BUCHAREST

In large cities of post-socialist Romania, grass-roots movements and activists are developing a new kind of urban agricultural landscape in the shape of community gardens. These gardens are a response to the current polycrisis and represent a manifestation of the need of the city inhabitants to connect to their food system and the natural environment in order to lead a more sustainable, healthy and meaningful lifestyle. At the same time, agricultural activities are just informally tolerated by local administrations, as they are prohibited in most Romanian city regulations.

This research aims to investigate how to include urban agriculture in strategic spatial planning documents, in order to support these local initiatives and encourage the just and sustainable transformation of cities.

To achieve this aim we conducted comparative case study analysis of the legal frameworks and strategic planning documents supporting urban agriculture in two major European cities: Berlin and Madrid. In order to identify the most suitable approach in the local context, this research also includes an in-depth analysis of community gardens in Bucharest, using sociological methods.

Results show the need for legal frameworks (regulations, strategies and public policies) that support and encourage urban gardening initiatives. The study demonstrates the different benefits of urban agricultural spaces, contributing to the well-being of participants by encouraging outdoor activity, a connection to nature, fostering a sense of community and civic engagement.

Considering agricultural landscapes as a continuum on the urban to rural transect, these smallscale agricultural spaces are situated in the more densely populated and least agriculturally productive areas on the transect. For this reason, they represent a unique opportunity to connect the city inhabitants to the agricultural landscape and the source of their food, contributing to shaping the mentalities and the behaviour of people, encouraging public participation and a care for the commons, raising awareness on the more-than-human environment and building towards a post-growth future.

KATARÍNA MELICHOVÁ, Assoc. Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia
SOŇA BELLÉROVÁ, Dr.
Slovak University of Agriculture in Nitra, Slovakia

CO-CREATING INCLUSIVE AND DEMOCRATIC PUBLIC SPACES: INSIGHTS FROM IN-HABIT AND KO-SPACES PROJECTS

The transformation of public spaces into inclusive, democratic, and multifunctional landscapes requires innovative governance models that integrate participatory approaches, social inclusion, and environmental sustainability. This paper explores the interplay between two complementary projects—IN-HABIT and KO-SPACEs—which focus on the co-design, co-deployment, co-management, and co-assessment of urban spaces to foster inclusive well-being in small and medium-sized cities.

IN-HABIT (Horizon 2020) piloted visionary and integrated solutions (VIS) to enhance health and well-being by leveraging social, cultural, and nature-based innovations in four European cities (Cordoba, Spain; Riga, Latvia; Lucca, Italy; and Nitra, Slovakia). In the Nitra pilot, a local partnership of a university, city administration and grassroots community organisation reimagined urban and peri-urban public spaces through participatory redesign processes that engaged diverse communities, including marginalised groups, in shaping their environment. By integrating soft (social and cultural) and hard (infrastructural and nature-based) interventions, IN-HABIT demonstrated how public spaces could become more inclusive, fostering social cohesion and environmental awareness.

Building upon this foundation, KO-SPACEs extends the impact of IN-HABIT through the creation of a Community Observatory and Co-Design Atelier aimed at deepening participatory planning practices and assessing their long-term socio-economic and environmental benefits. This initiative refines methodologies for democratic landscape transformation, testing models of inclusive governance and participatory urbanism that align with contemporary challenges in equitable space-making.

Both projects include peri-urban environments, particularly in Dražovce, a formerly independent municipality that was integrated into the expanding urban fabric of Nitra during the previous regime. The most peripheral neighbourhood of Nitra, which retained its rural character, has experienced a profound transformation due to its proximity to the Jaguar Land Rover manufacturing plant, which has significantly altered local land use, demographics, and economic dynamics. As industrial expansion reshapes the region, public spaces must navigate the tensions between urban growth, agricultural heritage, and social inclusivity. The interventions in this area should aim to redefine agricultural and peri-urban landscapes as socially inclusive and environmentally sustainable spaces rather than merely transitional zones between urban and rural functions. Through nature-based solutions, community gardening, and participatory landscape transformation, these projects highlight the potential of peri-urban spaces to enhance well-being, biodiversity, and democratic governance.

This article situates these projects within the broader discourse of democratic public space transformation, highlighting key insights from participatory processes that enable community agency in spatial decision-making. It reflects on methodologies such as co-design, co-creation, citizen science, public-private-people partnerships (PPPPs), and the use of digital tools, such as dashboards and decentralised networks of sensors, as tools for fostering socially just and ecologically resilient public spaces. Additionally, it addresses challenges encountered, including engagement barriers, governance complexities, and the integration of social impact assessments into urban planning frameworks.

TEACHING AND LEARNING

CONFERENCE TRACK 4: THEMATIC TRACK OVERVIEW AND OBJECTIVES

Agricultural landscapes face global challenges, such as climate change, and biodiversity loss. There is a need for enhancing the sustainability and resilience of agricultural landscapes and developing multifunctional landscapes that integrate food production, ecology and biodiversity, tourism and recreation and other functions and uses.

What is the role of current and future landscape architects and planners in this context? How can landscape architects and planners contribute to sustainable land management, in close cooperation and partnership with farmers and other stakeholders? How can we prepare future generations of landscape practitioners, researchers, and scholars for planning and designing multifunctional and sustainable agriCULTURAL landscapes? Which teaching and learning methods and models are required?

This thematic track invites educators, researchers, professionals, and students to share their experiences of teaching and/or learning with a focus on agriCULTURAL landscapes. We are looking for inspiring teaching and learning models, methods, and outcomes dedicated to or linked to agriCULTURAL landscapes. The aim is to inspire each other and discuss future possibilities within education and pedagogy.

LÁSZLÓ NÁDASY, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
ATTILA GERGELY, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
ILDIKÓ MÓDOSNÉ BUGYI, MSc
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

THE ROLE OF NATURE CONSERVATION WORKSHOPS IN LANDSCAPE ARCHITECTURE EDUCATION IN HUNGARY

At the Department of Landscape Protection and Landscape Reclamation of the Hungarian University of Agriculture and Life Sciences, basics of nature conservation are taught as a foundation course in the Bachelor of Landscape Management and Garden Construction Engineering programme. Since 2007, the teaching of the subject begins with field workshops in early Autumn, where second-year students participate in actual nature conservation management and restoration projects. In past decades, students have been involved in nature conservation projects in a total of 5 municipalities, in cooperation with the Duna-Ipoly National Park Directorate and Főkert, the company responsible for the maintenance of most local-level nature reserves in Budapest. Of particular importance is the nationally important Budai Sas-hegy Nature Reserve, located close to the University campus, where the work of our students has played and continues to play a significant role in the control of invasive species and the restoration of valuable habitats. Additionally, our students have worked in 2 protected areas of national importance and 6 protected areas of local importance in Budapest in recent decades. During the workshops, landscape architecture students learn about the values of protected areas, the factors that threaten them and the work processes required to restore valuable habitats. In addition to the practical outcomes of their work, the first-hand knowledge they gain is invaluable for young landscape architects to understand how ecologically valuable areas can be maintained and restored.

SABINE MÜLLER, Prof. Dr.
Oslo School of Architecture and Design, Oslo, Norway
MIGUEL HERNANDEZ QUINTANILLA, Dr.
Oslo School of Architecture and Design, Oslo, Norway

CREATIVE PEDAGOGIES THROUGH THE STUDY AND TRANSPLANT OF AGRICULTURAL PRECEDENTS

Recent decades have seen an increased interest in the potential contribution of historical agricultural management techniques to the design of more sustainable landscapes (Gali-Izard & Simon, 2005; Hein, 2020). This interest is driven by several factors, including biodiversity and soil fertility, as well as the spatial and aesthetic qualities produced by practices of cultivation that eschew the use of heavy machinery and are therefore closer to the land.

The study and translation of management precedents is employed within the landscape architecture design studio “Hydropolis” at the Oslo School of Architecture and Design to the landscapes of the Oslo region — an area prone to flooding but also characterized by potential freshwater shortage. The study is organised according to the different locations and requirements within an abstract watershed, ranging from water derivation in the upland such as the levada channels in Iberia, to intermediate storage dams such as the *kere* in India, to the Venetian rain wells and the *chinampas* landscapes of Mexico in the lowlands. It is acknowledged that each precedent is the result of a specific climate and culture; therefore, the studies already include an interpretive dimension, focusing on flow, structure and space. The translation of the precedents to sites in the Oslo area is both a “reading lenses” and an open-ended catalytic design experiment. It serves to interrogate the landscapes in question for opportunities of water management and climate regulation connected to the particular spatial qualities of the precedents.

Study and transplant have both archival and instrumental goals. On one hand, they aim at registering and disseminating knowledge marginal to modern technoscientific discourses on land management (Krzywoszynska & Banwart & Blacker, 2020). On the other hand, the results have shown that the exploration of historical agricultural methods triggers optimistic creative processes to face the environmental crisis underway.

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LISA NORFALL
SLU, Alnarp, Sweden
HELENA MELLQVIST
SLU, Alnarp, Sweden
JITKA SVENSSON
SLU, Alnarp, Sweden

FOSTERING CRITICAL THINKING AND CREATIVE PROBLEM SOLVING IN LANDSCAPE ARCHITECTURE STUDIO COURSES

Critical thinking is a fundamental skill in landscape architecture, and an important part of what shapes the profession's ability to address complex spatial, social, and ecological challenges. In studio-based education, landscape architecture students are trained to tackle spatial challenges through practice-based, real-world projects, fostering a deep understanding of landscapes and the ability to translate complex analyses into spatial transformation. Studio-based learning also requires students to navigate the challenge of considering perspectives from multiple stakeholders and develop strategies that integrate both physical interventions and governance frameworks.

This pedagogical project examines how critical thinking and creative problem-solving are cultivated in two landscape architecture studio courses at the Swedish University of Agricultural Sciences in Alnarp, Sweden.Both courses are centred around real-world cases, focusing on large scale development in a municipal context. Students are tasked to interpret and analyse the municipality's landscape conditions, identifying systemic challenges and potentials, and formulating alternative strategies for sustainable development. These strategies include spatial transformations and design interventions, as well as policy shifts, and reconfigurations of governance structures. Through these processes, students are required to question assumptions and synthesize complex information, as well as engage in iterative, creative exploration.

In previous contributions to the ECLAS conference, we explored the potential of flexible studio structures, called "empty schedules", as a means to foster trust, engagement, and exploratory learning in landscape architecture education. Building on this foundation, this pedagogical project investigates how such pedagogical approaches support the development of two fundamental and interrelated competences: critical thinking and creative problem solving. By examining how students develop these skills in parallel, and in a studio setting, we aim to identify and refine teaching strategies that can help strengthen the development of both. These essential competences are crucial for landscape architecture students, enabling them to navigate the profession's evolving demands and contribute to resilient, adaptive, and innovative landscape development. We also recognize that learning strategies differ across generations, and understanding these variations can help us reach both today's students and those of tomorrow. By fostering critical thinking and curiosity, we aim to inspire continuous learning and prepare students to adapt and innovate in the evolving landscape profession.

TAYANA PASSOS ROSA, PhD. Candidate
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
ZSOMBOR BOROMISZA, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

CULTIVATING ENVIRONMENTAL LITERACY THROUGH LANDSCAPE DESIGN: INITIAL EXPLORATIONS AND ITERATIVE LEARNING IN SCHOOLYARDS

Environmental education (EE) is critical for empowering individuals to address the complex sustainability challenges of the 21st century. However, traditional EE approaches often fall short in fostering deep environmental literacy, which encompasses not only knowledge of environmental issues but also the will and capacity to act. This research explores the potential of Design-Based Instruction (DBI), integrated with landscape architecture principles, as a powerful pedagogical approach to cultivate environmental literacy within high school communities. It focuses on the iterative learning process across multiple implementations of the Landscape Design-based Instruction (LDBI) program, highlighting the emerging insights and adaptations that have shaped the program's development. Effective teaching and learning about environmental stewardship requires dynamic, responsive strategies that evolve based on practical experience and reflection.

The program engages students in analyzing, designing, and envisioning improvements for their schoolyards, transforming these often underutilized spaces into living laboratories for learning. This "learning by doing" approach empowers students to become active participants in shaping their environment, fostering a deeper connection to place and a greater understanding of the complex systems that sustain it.

Three main factors shape the program application. First, LDBI should adapt to Diverse School Contexts. The iterations provided valuable insights into how the design process could be tailored to maximize student engagement and collaboration, considering each school's specific resources, constraints, and cultural contexts. Insights are gained about effective facilitation techniques, strategies for fostering collaborative problem-solving, and the adaptations needed to address varying levels of student background knowledge which directly informed the design and implementation of the subsequent iterations. Additionally, the program has been designed to be adaptable to issues of equity and access within different school communities, recognizing that environmental literacy is not equally distributed and that learning experiences must be designed to be inclusive and culturally responsive. Second, Integrating Landscape Architecture Principles for Enhanced Learning and Environmental Action. Landscape architecture concepts were introduced and explored within the LDBI framework, emphasizing the evolution of pedagogical strategies across iterations. The program provided initial experience in introducing concepts such as site analysis, ecological design, and placemaking. Students' approaches to the problems demonstrated how they grappled with these concepts and the challenges encountered in applying them. Third, Fostering a Sense of Place, Environmental Responsibility, and Community Engagement. The impact of the program on students' connection to their schoolyard and their developing sense of environmental responsibility demonstrates the program's contribution to fostering active citizenship. The participatory design process is central to this aspect of the program, empowering students to become agents of change within their own communities.

This iterative approach to program development, driven by practical experience and ongoing evaluation, is a central focus of the research, reflecting the dynamic and evolving nature of effective environmental education. This research aims to offer insights into effective teaching and learning strategies within this context, demonstrating the potential of LDBI to empower students to become informed, engaged, and responsible stewards of their local environments and active participants in shaping a more sustainable future.

ÁGNES SALLAY, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
SÁNDOR JOMBACH, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

HOW CAN A LANDSCAPE ARCHITECT (STUDENT) HELP DEVELOP A SOCIAL ECO-FARM?

The landscapes of Hungary were dominated by 70-80% agricultural area with about 50% arable land in the 20th century. By the first decades of the 21st century the agricultural land use ratio has decreased, while built-up and forest areas have grown. The decrease of agricultural land use intensity has given growth perspective to nature protection and leisure activities. In the plainlands of Hungary, it was partially responsible for a renaissance of farmlands, but more importantly also a transformation of farms with more significant residential functions. Our clients, working at a non-governmental organisation have the goal of preserving the know-how of agricultural land management, and to educate under-qualified young people and young adults in carpentry, masonry and housekeeping in the countryside. The farm that was obtained by the civil organisation provides an experimental ground for the socio-educational and ecological role as well. Over the past 3 years, we have carried out several research and design activities involving BSc Landscape Architecture students to develop the eco-economy: we have conducted landscape surveys, assessed natural and man-made landscape values, designed a greenway to showcase the values and the environment, and created new tourist attractions by designing nature trails. As a result of our work, our client intends to use the documents partly in its own development work and partly for the preparation of application materials.

RICHARD STILES, Prof. em.
Vienna University of Technology, Vienna, Austria
PETER KURZ, Dr.
University of Education Upper Austria, Linz, Austria

25 YEARS OF THE EUROPEAN LANDSCAPE CONVENTION – TIME TO ADDRESS THE CHALLENGES OF 'AWARENESS RAISING'?

While the 25 year anniversary of the international treaty formerly known as the European Landscape Convention is certainly an occasion for celebration, we should not let this feelgood moment blind us to some of the important unfulfilled potentials regarding its implementation.

Perhaps one of the reasons for the successful uptake of the Convention is the way in which it is phrased in apparently unthreatening terms, many of which are not closely defined and thus allow much scope for interpretation by the contracting parties. This paper will focus on aspects of the seemingly innocuous phrase 'awareness raising' by pointing to two areas where the authors feel that there is considerable potential for future development.

The focus will be on awareness raising for school children on the one hand, and awareness raising for the European Commission on the other. Article 6 A of the Convention: *Special Measures – Awareness Raising* can be argued to cover both these groups under the headings of 'civil society' and 'public authorities' respectively, although other provisions could also be invoked.

To make the process of awareness raising for school children more tangible, it is proposed to develop the idea of 'landscape literacy'. This is seen as providing an important counterbalance and indeed a necessary complement to the current preoccupation with teaching digital literacy. Here it will be proposed that landscape is introduced, not just as another subject on the curriculum, but rather as a living medium through which to teach the school curriculum as a whole.

By changing the title of the Convention to the 'Council of Europe Landscape Convention' in 2021, any residual confusion that it might have something to do with the European Union has at least been minimised. This might be interpreted as a symptom of the EU's apparently deep-seated lack of engagement of the concept of landscape. Not just in the school classroom but in the offices of the European Commission there is therefore the need for some serious awareness raising about a concept that has the potential to integrate its policies on the environment, agriculture, biodiversity, as well as the green deal and many other initiatives, but which has been stubbornly ignored, at least since the advent of the Council of Europe Convention.

Both of these awareness raising projects – one addressing a "bottom-up", the other a "top-down"-approach – have the potential to benefit not just the landscape, but also landscape architecture. This suggests that they should be a matter of priority for the organisations representing the landscape discipline and profession. They need to make this an important part of their work plans for the next 25 years of what might once again become the European Landscape Convention.

VERA TAKÁCSNÉ ZAJACZ, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
KATALIN MOHAI, Dr.
ELTE Bárczi Gusztáv Faculty of Special Needs Education,
Institute for the Psychology of Special Needs, Budapest, Hungary
BEATRIX CSAPÓ
Diversity Foundation, Gödöllő, Hungary
JÚLIA CSIBI
Diversity Foundation, Gödöllő, Hungary
IZÓRA GÁL, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

THERAPEUTIC AGRICULTURAL LANDSCAPES IN THE EDUCATION

The negative impacts of urban development (extreme climate, noise, light and sound pollution, alienation from nature, rushing life) have led to a deterioration in the general well-being of city dwellers. This disconnection and alienation from nature has serious consequences, even though research and practice show that being in nature and doing activities in it can have a powerful restorative and healing effect.

Urban planners and landscape architects are working to increase the number of green spaces in urban environments that have been developed for community use, as these spaces have been shown to have a positive climate-changing effect in extreme urban climates, increase biodiversity and have a positive impact on both community and individual well-being. The impact on well-being is provided by the visual impact of green spaces (Ulrich), but active time spent there, such as gardening, enhances the benefits of green spaces for people, leading to the emergence of community gardens and therapeutic gardens in an increasing number of parks, gardens and community green spaces. Therapeutic horticulture, horticultural therapy, reintegrate the agricultural landscape back into the city, builds community, maintains individual and community well-being, and can even have spiritual and physical healing powers. Beyond the obvious physical, mental and spiritual health benefits, community interactions can also provide opportunities to develop social skills.

In order to introduce therapeutic horticulture in Hungary, the ERASMUS+ project has created and launched a therapeutic horticulture training course, in which 19 students have been given the opportunity to obtain the Hortus Medicus “degree” as part of a 120-hour trial training. Several MATE institutes, the Diversity Foundation, the Hochschule für Agrar- und Umweltpadagogik, Vienna, the Universitá degli Studi di Milano and the Foundation for Quality of Life, Farkaslaka, Transylvania, were involved in the training. The programme was supported also by the ELTE Bárczi Gusztáv Faculty of Special Needs Education and the András Pető Faculty of Semmelweis University.

Therapeutic horticulture is an interdisciplinary science, therefore different specialists (psychologist, horticulturalist, agricultural engineer, ecologist, mental health specialist, therapist, landscape architect) worked together in teaching the 5 modules. In addition to the curriculum in Hungarian, English and Romanian, the present training was complemented by e-learning courses available online. A further result of the training is the first therapeutic gardening handbook in Hungarian, which follows the structure of the curriculum, but can be used by all professionals working with people with mental and physical problems, but can also be used by healthy people and communities who want to maintain and improve their mental and physical well-being. The manual is available for download in Hungarian, English and Italian from hortusmedicus.eu.

The success of the training is demonstrated by the fact that graduates are already putting their knowledge into practice months after graduation, achieving measurable results in therapy, and therapeutic horticulture has become a compulsory curriculum in some institutions for children with disabilities, thus contributing greatly to the development of identity, self-awareness and self-esteem of these vulnerable groups.

MARLIES BRINKHUIJSEN, Dr.
Wageningen University & Research, Wageningen, Netherlands
LEI GAO, Dr.
Norwegian University of Life Sciences, Ås, Norway
SOPHIE VON SCHWERIN, Dr.
Eastern Switzerland University of Applied Sciences, Rapperswil, Switzerland

LEARNING FROM THE PAST FOR SUSTAINABLE CULTURAL LANDSCAPES: USING ARCHIVES IN LANDSCAPE ARCHITECTURE EDUCATION

Designing sustainable cultural landscapes for the future requires an understanding of not only present challenges but also the historical evolution of these landscapes. Many of them were agricultural landscapes that have undergone drastic transformations due to mechanisation, intensification and modern planning and design interventions. To link their past, present, and future, it is crucial to study historical design approaches, planning decisions, and their underlying ideas.

Archives provide valuable resources for understanding past landscape transformations, yet their potential in landscape architecture education remains underexplored. This workshop will investigate how archives are used into teaching—whether in design studios, history courses, or research methodologies—to enrich students' capacity for planning and designing future sustainable cultural landscapes.

The workshop aims to explore the role of landscape architecture educators in guiding future practitioners in using archival materials to inform sustainable landscape design. In the workshop we will discuss case studies of cultural landscape transformation supported by archival documents. Participants will share best practices and didactic methods for integrating archival research into design and planning education. The outcomes will contribute to a catalogue of educational approaches and tools that facilitate the use of archives in landscape architecture education.

The workshop is meant for educators in landscape architecture and planning interested in incorporating historical archives into their teaching, for researchers and scholars studying the transformation of cultural landscapes, and for students curious about the role of archives in understanding and shaping sustainable landscapes.

This workshop is an opportunity to engage in discussions on how archives can bridge past and future approaches to landscape design and planning, fostering a deeper understanding of sustainable design principles. It will provide an interactive platform for exchanging pedagogical experiences, methodologies, and tools used in landscape architecture education. By examining examples from European landscape architecture archives, participants will exchange practical strategies for integrating archival research into design studios and history courses and learn from successful case studies of agricultural and cultural landscape transformations.

The workshop is organised by the Working Group 'Education' of the EU-funded COST Action ConnectLAA (Connecting Landscape Architecture Archives to enhance European landscape practice, research, and education) in collaboration with NELA (Network of European Landscape Architecture Archives).

ELKE MERTENS, Prof. Dr.
University of Applied Sciences, Neubrandenburg, Germany

HOW DOES AI TRANSLATE OUR IDEA OF LANDSCAPE INTO TEXT AND IMAGES? IS THERE A GAP IN UNDERSTANDING BETWEEN LAYPERSONS AND PROFESSIONAL LANDSCAPE ARCHITECTS?

Artificial Intelligence (AI) has significantly influenced our lives and work as landscape architects and teachers. AI can be defined as "(...) technology that enables computers and machines to simulate human learning, comprehension, problem solving, decision making, creativity and autonomy". https://www.ibm.com/think/topics/artificial-intelligence [12-02-2025]
Given this definition, we must ask whether the simulation of a computer is comprehensible for people. Additionally, we need to assess how useful AI is in a professional context and how it supports the visibility of landscape architecture.

AI allows us to produce text, images, videos, and even avatars that can talk and explain. The options and the quality of the outcomes vary, but they are improving at an unprecedented pace, making the results easily perceived as reality. Almost everyone can produce images of landscapes and, with widespread dissemination, influence the perception of landscapes. In landscape architecture teaching, it is crucial to observe the types of images AI software creates, how they shape the expectations of people in the real world, and how landscape architects can address the dissonance between the generated images and the actual landscapes.

Images generated with AI tend to be very idealistic, either as drawings or photorealistic pictures. We can set the style as we wish, and the generation takes only seconds. Images created by OpenArt AI:

Prompt taken from this years' motto of the ECLAS conference: *Please create a landscape with these aspects: This year's theme aims to explore the diverse dimensions of landscapes, including their ecological, cultural, social, and economic aspects, with a special focus on (Agri) cultural landscapes.*

When we discuss the artificial look of image, we may reflect on our current drawings and final images used for competitions or participation processes. In them,we hardly see any rainy weather (except for projects focused on rainwater management due to climate change adaptation), but we use great accuracy and spend a lot of time idealizing the perception of a landscape project using CAD and image processing software. If we use AI to create images, we may have much more time to explain the real landscape behind the always-ideal-looking images. The second image is a rather photo-realistic picture that places us in a scene that appears to be in Asia. Both raise the question of which landscape was intended by choosing the topic and how or if at all they can contribute to this conference.

This paper and presentation will discuss the current methods used to describe and visualize landscape projects, and new opportunities presented by AI technology. It will also examine whether it is necessary to utilize this new technology, it's benefits and challenges, and which landscape are better understandable for laypersons.

SANDRA COSTA, Dr.
Birmingham City University, Birmingham, United Kingdom
VERONIQUE JOUKES, Dr.
Birmingham City University, Birmingham, United Kingdom
CARLA CUNHA DE SOUSA
Independent Researcher, Vila Real, Portugal

EXPLORING IDENTITY AND CULTURAL SUSTAINABILITY THROUGH TRANSNATIONAL EDUCATIONAL COLLABORATION: THE CASE OF THE AGAREZ LINEN PROCESS HERITAGE

The traditional linen process has been a defining characteristic of the identity of Agarez, Natural Park of Alvão, Portugal. However, industrialisation and depopulation led to its decline and is currently at risk of disappearing, if it weren't for group of women weavers who have been the holders of the linen practices and knowledge, and the stewards of their preservation.

This paper presents a transnational collaboration between Birmingham City university (UK), the University of Trás-os-Montes and Alto Douro, and the Parish of Agarez (Portugal). Developed through a hybrid Co.Lab studio based in Birmingham, the project brought together undergraduate and postgraduate students in architecture and landscape architecture, and engaged external partners in Portugal, cultivating continuous collaboration through community knowledge exchange, guest lectures, and participation in design crits.

The project was an initial exploration of two interconnected challenges: 1) the increasing loss of knowledge of traditional rural practices associated with the working of the linen and 2) the increasing vulnerability of landscapes to climate change. The collaboration facilitated interdisciplinary engagement, integrating heritage studies, ecological design, ecotourism and community-centered approaches to empower students to put forward ideas to enhance the heritage and cultural understanding of Agarez's traditional working of the linen through considering their cultural, social and ecology narratives. These were interpreted into proposals encapsulating the idea of a Living Linen Museum involving regenerative strategies for the landscape and the community underpinned by the preservation and valorisation of the linen knowledge, its practices and materiality, installations and ecotourism infrastructure.

This project highlights the transformative potential of international student collaborations. By engaging with a landscape and context different from their own, students expanded and gained a deeper understanding of rural landscapes, had a unique opportunity to explore the complexities of traditional knowledge and intangible cultural heritage and examine the challenges of landscape transformation. This collaboration also broadened students' perspectives on cultural sustainability and resilience, equipping them with skills to address global challenges in heritage conservation and sustainable development that are both locally and globally relevant. Finally, the project further emphasized the importance of small transnational academic partnerships in providing platforms for future cross-border initiatives, in education and research.

SZABOLCS VAJDA, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
ÁDÁM WEISZER, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
MÁTÉ SÁROSPATAKI, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
ALBERT FEKETE, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

APPLICATION OF PHOTOGRAMMETRY METHODS TO DOCUMENT GARDEN STRUCTURES IN A QUALITY THAT MEETS TECHNICAL ACCURACY

In recent years, photogrammetric software (SfM, structure-from-motion software) and smartphone cameras have become so sophisticated that anyone can create 3D models of small building or structures in a garden without any special skills. The resulting models are extremely detailed, and in this respect the results are comparable to those of a professional 3D scanner. But it is also extremely cost-effective, as there is a wide range of open-source software available and many of us already have the right camera in our pockets.

The research sought answers to the following questions:

- Which types of cameras would be suitable for this purpose using open source SfM software that sources describe as best.
- From a technical point of view, how accurate models are possible to produce, and whether these models can be used to produce accurate technical detail drawings, and to document structures accurately.
- What external conditions may affect the success of the method (lighting, weather conditions etc.)
- How the method can be used effectively in training and design practice.

The research involved students, with over 40 students creating a 3D model of a selected structure with their own camera using one of three selected software programs. The software of choice were Colmap, Regard3D and Meshroom. The sample structure was a garden structure of approximately 6x3x2 m size, which was accurately surveyed using conventional geodetic methods, a measuring station and reference points. The quality of the 3D models was checked against this reference and the accuracy of the model was determined in each case.

RESULTS

It is evident that there are differences between the software used, but the quality of the final result depends largely on the quality of the photos. It can be argued that even the camera of a high-end smartphone is up to the task. As was to be expected, the better the optical characteristics of the camera lens, the better the final result. Applied software does not specifically require calibration of the camera, but if you want to use this method safely, you need to test the suitability of your camera and determine the possible degree of accuracy of the model you are using.

By testing the suitability of dozens of different smartphones, compact cameras and SLRs, we found that the accuracy of these models can reach the accuracy levels required by engineers. The best performing models in the study had an error of 3-5 mm/meter, which is adequate for a garden structure.

The effectiveness and usefulness of the method has been tested both in training and in implemented projects. It has proven to be very effective in accurately surveying garden structures in historic gardens and in producing detailed technical drawings, and has been successfully used to produce structural designs for the mechanical stabilisation of mature trees of historic value.

ERIC CASTLE, Dr.
University of Minnesota Crookston, USA
ANAS AL-FATTAL, Dr.
University of Minnesota Crookston, USA

COLLABORATIVE ETHNOGRAPHIC RESEARCH: INTEGRATING MARKETING AND LAND USE PLANNING FOR COMMUNITY IMPACT

This study explores the intersection of land use planning and strategic marketing through a collaborative project aimed at enhancing the trail system of a rural, agricultural community. Conducted by students and faculty from NatR 3344 (Land Use Planning) and MKTG 4800 (Marketing Strategies) at the University of Minnesota Crookston, the project integrates ecological sustainability with community engagement and economic development to create a multifunctional and inclusive trail system.

Using Collaborative Autoethnography (CAE) as a research methodology, this study examines the interdisciplinary collaboration between students and faculty throughout the project. Through reflective journaling, group discussions, and analysis of student reflections, the research captures the motivations, challenges, benefits, and impacts of interdisciplinary teamwork in addressing real-world land use and marketing challenges. This qualitative approach provides deep insights into the learning process, collaboration dynamics, and community engagement outcomes.

The project's objectives include the development of a comprehensive land use plan that prioritizes environmental sustainability and accessibility, alongside a strategic marketing plan to enhance trail awareness, community participation, and economic benefits. The research process incorporates PESTEL analysis, SWOT analysis, survey-based market research, and stakeholder engagement, ensuring an evidence-based approach to decision-making.

From a land use planning perspective, students assess ecological factors such as habitat conservation, erosion control, and accessibility improvements, proposing strategies that align with climate resilience and urban-rural connectivity. From a marketing perspective, students design a branding and promotional strategy that includes social media campaigns, digital marketing, and local business partnerships to increase trail visibility and engagement.

This research provides a reflexive and participatory examination of interdisciplinary learning by applying Collaborative Autoethnography. Student and faculty reflections highlight key themes such as interdisciplinary problem-solving, integration of theoretical knowledge with practical applications, and the role of collaboration in fostering sustainable community development.

The findings suggest that interdisciplinary approaches combining land use planning and marketing can enhance the resilience and multifunctionality of agriCULTURAL landscapes. This study contributes to both academic discourse and practical applications by showcasing how higher education can engage in meaningful, community-driven landscape planning and promotion. The use of CAE as a research tool also provides valuable insights into the processes that facilitate or hinder effective interdisciplinary collaboration in educational and professional settings.

This collaborative project provided significant benefits for both students and faculty. Students were exposed to new tools and methodologies, with marketing students gaining insights into land use planning and environmental assessments, while natural resource students explored consumer behavior analysis and promotional strategies. Faculty benefitted from shared dissemination efforts, allowing for broader academic and community engagement. Additionally, students developed critical collaboration skills, including communication, coordination, and problem-solving, as they worked across disciplines. This hands-on experience enhanced their technical knowledge and prepared them for professional environments that demand interdisciplinary teamwork.

ATTILA TÓTH, Assoc. Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia
JÁN SUPUKA, Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia
ALENA SALAŠOVÁ, Assoc. Prof. Dr.
Mendel University in Brno, Czechia
KATARÍNA KRISTIÁNOVÁ, Assoc. Prof. Dr.
Slovak University of Technology in Bratislava, Slovakia
ZUZANA ŠTEMBEROVÁ, MSc
Czech Technical University in Prague, Czechia
MATOUŠ JEBAVÝ, Assoc. Prof. Dr.
Czech University of Life Sciences Prague, Czechia

FROM AGRICULTURE THROUGH HORTICULTURE AND ARCHITECTURE TO LANDSCAPE ARCHITECTURE: THE EVOLUTION, CHALLENGES, AND FUTURE OF LANDSCAPE ARCHITECTURE EDUCATION IN SLOVAKIA AND THE CZECH REPUBLIC

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Landscape architecture as an academic programme is highly diverse across Europe. Historically, it has emerged from various fields, including agricultural and horticultural schools, polytechnic schools, forestry schools, and art schools. Many landscape architecture programmes in Central Europe were established at agricultural universities (e.g. BOKU Vienna, MENDELU Brno-Lednice, MATE Budapest, SPU Nitra, SGGW Warsaw, ČZU Prague, and others). This has had a significant impact on the identity, structure, and curriculum of the programmes, often with a strong emphasis on natural sciences (such as soil, water, climate, agronomy), plants, and planting design (including dendrology).

Landscape architecture as both a profession and an academic discipline has evolved in response to contemporary issues and challenges, including climate change, ecology, and societal needs. As such, teaching and learning in landscape architecture must become more interdisciplinary, intercultural, and inclusive.

Does agriculture still play an important role in this context? Can landscape architects become key actors in transforming current and future agricultural landscapes into more democratic, socially inclusive, ecologically stable, biodiverse, resilient, and sustainable environments? Is there a potential to rediscover a closer relationship between AGRICULTURE and LANDSCAPE, bridging the gap between agronomists, farmers, and landscape architects? What is the role of programmes with a more technical, art-based, or forestry-focused approach? How can we leverage this diversity at a European scale?

This theme is important to be critically discussed by landscape architecture teachers and programme coordinators at an inclusive and democratic round table in Nitra.

BAGDINÉ FEKETE ORSOLYA, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
KUND KOPACZ
Eszterházy Károly Catholic University, Eger, Hungary
GYÖRGY ZSIGMOND
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
PETRA EMESE DRAGÁN
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
SÁRA SAROLTA JÁNOSSYNÉ PERNECZKY
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

FOSTERING CREATIVE SYNERGY: LANDSCAPE ARCHITECTURE AND NATURE ART IN ABANDONED SPACES

The intersection of landscape architecture and the visual arts offers rich possibilities for innovative design, especially when approached through a collaborative, cross-disciplinary lens. This project presents an inspiring collaboration between the Landscape Architecture Institution of the Hungarian University of Agriculture and Life Sciences and the Faculty of Visual Art and Music at Eszterházy Károly Catholic University. The project, situated in the abandoned quarry of Bélapátfalva, seeks to merge two distinct creative practices—landscape architecture and nature art—into a unified, conceptually rich nature art composition.

In the context of agriCULTURAL landscapes, the concept of “nature as art” becomes a vital conversation, not only because it connects with the aesthetic of natural environments, but also because it emphasizes the philosophical exploration of space, time, and nature’s intrinsic rhythms. The abandoned quarry site provides a canvas ripe for exploration, reflecting both human intervention and the natural reclamation process. This intersection between post-industrial landscapes and creative practice offers the potential to rethink and reinterpret the value of such spaces, particularly in their relation to agricultural lands and their roles in ecological systems.

The project’s primary objective is to facilitate a collaborative learning environment where 20 students— 12 landscape architecture students and 8 nature artists—work side by side. The students engage in the process of developing a shared understanding of the quarry site, conducting site analysis, and exploring how their distinct skill sets can merge to create a collective design that both respects and revitalizes the landscape. The involvement of the Faculty of Visual Art and Music enables students to explore the integration of artistic expressions into landscapes, bringing a rich dialogue between conceptual art and physical design.

The project will be executed in phases: initial attunement between the two disciplines, collaborative site-specific research and interpretation, and the creation of the nature art installation. Throughout the process, the students and tutors will engage in joint fieldwork, discussions, and hands-on experimentation, ensuring that both artistic and architectural elements are thoughtfully integrated.

This collaboration challenges traditional boundaries between artistic and architectural disciplines and introduces students to a multidisciplinary approach to design. It also emphasizes the importance of ecological thinking, as the nature art composition will be created one material: the stone of the mine, that ensures minimal impact on the surrounding environment, but the conceptual installation might influence the emotions of the viewer and provoke questions to open discussions.

By fostering dialogue between landscape architecture and nature art, this project promotes creativity, sustainability, and an interdisciplinary approach. Ultimately, it aims to demonstrate how collaboration between different fields of study can result in innovative, site-specific interventions that merge aesthetic, ecological, and cultural considerations, creating a lasting impact on the viewers and the communities that engage with it.

NEVENA VASILJEVIĆ, Prof. Dr.
University of Belgrade, Belgrade, Serbia
SANDRA MITROVIĆ, MLA
University of Belgrade, Belgrade, Serbia
DRAGANA ĆOROVIĆ, Assoc. Prof. Dr.
University of Belgrade, Belgrade, Serbia
SUZANA GAVRILOVIĆ, Dr.
University of Belgrade, Belgrade, Serbia

TEACHING LANDSCAPE CHARACTER BY GEODESIGN: THE CASE OF SURČIN MUNICIPALITY LANDSCAPE PLAN

This paper presents an educational approach to a landscape character assessment, planning and design within a Master course of Landscape architecture at the Faculty of Forestry, University of Belgrade.

Through a case study of the Municipality of Surčin, an agricultural landscape within the metropolitan area of Belgrade, students are introduced to the principles of the European Landscape Convention (ELC) and the methodology of Landscape Character Assessment (LCA) and IGC, applying tools for the sustainable landscape planning of agricultural areas.

As a territory of the Surčin municipality is historically shaped by agriculture, it has undergone significant transformation due to urban transformation and infrastructure development. These changes present the main challenge in balancing between preserving cultural heritage and ensuring multifunctional landscape planning and development. That's why we embrace problem-based learning, actively involving students in applying Landscape Character Assessment to identify the unique qualities of a landscape and guide its appropriate protection and design. With this approach, students are enabled to address contemporary challenges and develop an innovative solution for biodiversity conservation, climate resilience and spatial planning.

Using Geodesign as a decision-support tool, students are able to integrate spatial analysis and scenario-based landscape planning where we also simulate negotiation process within stakeholders in order to develop sustainable strategies in the planning processes.

The paper argues that preparing future professionals must involve engaging with landscape character through Geodesign and IGC, as this approach enhances students' ability to understand agricultural landscapes as living heritage. By doing so, we equip students to plan and design resilient, multifunctional agricultural landscapes that harmonize tradition with modernity.

KAMILA ADAMCZYK-MUCHA, Dr.
University of Life Sciences in Lublin, Poland
BARBARA SOWIŃSKA-ŚWIERKOSZ, Assoc. Prof. Dr.
University of Life Sciences in Lublin, Poland
MALWINA MICHALIK-ŚNIEŻEK, Dr.
University of Life Sciences in Lublin, Poland

EDUCATION THROUGH PLAY – SERIOUS EDUCATIONAL GAMES FOR STUDENTS

Education through play is often the fundamental method of conducting classes at the early stages of education. At the academic level, using tools like games, quizzes, group activities, card games, or board games is not common practice. Elements of play are one of the tools for team-building, learning cooperation, and adopting roles similar to those in professional life. Besides this value, there can be added substantive value, specialized knowledge based on simulating real problems and their solutions. There are possibilities for combining mechanisms of group work development and presenting students with knowledge about the relationships between volumetric objects, elements of technical infrastructure, blue-green infrastructure, or nature-based solutions.
A well-prepared game is also a universal educational tool understandable for similar cultural circles or interdisciplinary groups. A game is an educational tool for various user groups, both space recipients and officials. It can be a platform for communication, an introduction to difficult dialogue, social discussions, participation, and negotiations. It is a method of creating natural engagement among players.

The presentation aims to introduce the teaching method through the use of educational games, along with the presentation of selected educational games related to landscape architecture.

INNOVATIVE LANDSCAPE PRACTICES

CONFERENCE TRACK 5:
THEMATIC TRACK
OVERVIEW AND OBJECTIVES

Landscape architecture goes beyond aesthetics, addressing environmental, social, cultural, and economic challenges at various scales. Some of today's most pressing tasks are tackling climate change, biodiversity, and building ecosystem resilience, while designing functional, inclusive spaces.

EU initiatives such as the European Green Deal, the Nature Restoration Law, the 3 Billion Trees Pledge, and the New European Bauhaus provide a framework for sustainable transformation, combining climate action with social and cultural innovation.

These initiatives, along with the attention to the regenerative landscapes approach, encourage practices that restore ecosystems, support biodiversity, and promote resilience across all contexts. They also highlight the need for integrating aesthetics, functionality, and community well-being into landscape solutions.

This track seeks to explore key questions:

- *What defines innovative practice in landscape architecture?*
- *In which areas are new solutions, tools, and practices most urgently needed?*
- *What barriers exist to implementing innovative actions, and how can they be overcome?*
- *How can landscape architects foster cross-sector collaboration to maximise impact?*

This thematic track welcomes researchers, practitioners, educators, and activists to share their experiences, showcase successful case studies, and debate the future of innovative landscape practices. It aims to create a platform for inspiration, dialogue, and actionable ideas.

YANXIN LIU, PhD. Candidate
Victoria University of Wellington, Wellington, New Zealand
VICTORIA CHANSE, Dr.
Victoria University of Wellington, Wellington, New Zealand
FABRICIO CHICCA, Dr.
Victoria University of Wellington, Wellington, New Zealand

INVESTIGATING THE ROLE OF URBAN AGRICULTURE TO POST-DISASTER FOOD SECURITY IN WELLINGTON, NEW ZEALAND

Wellington, New Zealand's capital, faces significant risks from natural disasters, particularly earthquakes. Despite the critical role of food systems in urban resilience, food-related planning remains underexplored. This research identifies gaps in Wellington's food system and the limited integration of disaster-resilient strategies. It investigates the potential of urban agriculture (UA) to enhance post-disaster food security, using urban self-sufficiency as an analytical framework under post-disaster scenarios. Findings indicate that, although the current capacity of UA to ensure post-disaster food security is limited, there is substantial potential for UA to serve as an alternative emergency food source. Realising this potential will require targeted strategies to support UA development. Further research is needed to explore opportunities for landscape architects to integrate UA into urban landscapes, planning, food systems, and post-disaster preparedness.

HENRIK SCHULTZ, Prof. Dr.
Osnabrück University of Applied Sciences, Osnabrück, Germany
LEA NIKOLAUS, PhD. Candidate
Osnabrück University of Applied Sciences, Osnabrück, Germany

SPONGE REGION. UNDERSTANDING AND DESIGNING COMPLEX BLUE-GREEN AGRICULTURAL LANDSCAPES

In the context of climate change adaptation, the capacity of agricultural landscapes to retain water has become increasingly significant. Historically, water management in Central European agriculture emphasized drainage and rapid runoff. However, drier summers now necessitate strategies that prioritize water retention within the landscape. “Sponge regions” address these challenges by focusing on water storage and retention during periods of excess and evaporation, cooling, infiltration, and utilization during periods of scarcity (Nationale Akademie der Wissenschaften Leopoldina 2024, Fluhr-Meyer & Krauss 2024).

Transforming a region into a sponge region to enhance its buffering and storage capacities presents significant challenges and asks for innovative landscape practices. Ambiguous responsibilities, competing land-use demands, and, most critically, the willingness of landowners to engage in transformative practices often hinder progress. A fundamental barrier is the limited understanding of the dynamic interrelations that define blue-green agricultural landscapes. How can sponge regions be understood in their complexity and co-creatively further developed with farmers and other stakeholders?

A research project in the Braunschweig Region, Germany, explores strategies to transform blue-green agricultural landscapes. These strategies operate on two levels. First, they address regional stakeholders, examining who can assume specific roles in establishing a sponge region. Second, they develop accessible representations of complex landscape transformation processes, fostering regional consensus on buffering and storage functions and their implications for land use.

This research uses transdisciplinary research methods collaborating closely with regional practitioners, including the Braunschweig Regional Association as a coordinating authority as well as project developers experimenting with pilot initiatives. The research is designed as an accompanying study that supports project development through participant observation and expert interviews while analyzing the projects’ impact on regional development. The projects’ role as catalysts for establishing a blue-green regional infrastructure is analyzed.

Findings suggest that an integrated approach is essential for effective sponge regions. Sustainable, multifunctional landscapes must be developed in processes of co-production (Bovaird & Loeffler 2012, Watson 2014), and represented as interconnected systems (Langner 2019), balancing water management with habitation, biodiversity, and cultural experiences. Only through the close integration of agricultural land with these additional sponge-related functions can regional agricultural landscapes achieve their full potential. This integrated approach also provides sufficient points of engagement for diverse regional stakeholders to undertake the demanding transformation process as a coordinated effort.

FLORIAN OTTO, Prof. Dr.
University of Kassel, Kassel, Germany

LEARNING FROM AGROPOLIS - 15 YEARS OF AGRIPRODUCTIVE RURAL - URBAN INTERACTION

(Agri)cultural landscapes and their contribution to food production can be understood from a systemic or individual perspective. Food, of course, is a basic need, but also an intense area of individualisation and identification in urbanised modern societies. From organic and vegetarian we have moved on to vegan, paleo, fair trade, regional and many other diets.

Over the last two decades, urban gardening and urban agriculture have established some links and contributed to sustainable and alternative urban lifestyles. In addition to their productive ideas, these initiatives promote democratic understanding, integration and social action, as well as creating biodiverse and ecologically beneficial spaces. These movements have led to greater reflection on responsible food consumption, taking into account production conditions, food quality, food- and biodiversity and transport.

A spatial link between food and the landscapes in which it is produced is in some ways obvious, especially when thinking about regional supply and closed cycles of energy and matter, but it has not yet been addressed much in landscape architecture.

However, the establishment of closer ties between cities and their agri-productive surroundings holds considerable potential for the enhancement of ecological and economic synergies. One of the resulting benefits may be the establishment of trust, transparency and experience, aspects that are vital to food and inherent in the landscape.

The author joined a series of projects at intersection of research and practice over the last 15 years: At the Technical University of Munich (TUM) the Chair of Landraum developed an interdisciplinary initiative in 2009 to qualify the citydevelopment of Munich with the concept “AGROPOLIS - the rediscovery of harvesting in everyday urban life”. The collaboration between architects, sociologists and landscape architects was awarded the open scale award, a project of the German national urban development policy and the federal BBSR Institute.
https://www.nationale-stadtentwicklungspolitik.de/NSP/SharedDocs/Projekte/NSPProjekte/Baukultur/Ideenwettbewerb_Open_Scale.html

In the aftermath of this initiative, a series of experiences, designs, installations and research approaches have been undertaken to explore the nexus between food production, cityscapes and urban societies.The author has engaged in professional practice, research and teaching in this domain and seeks to provide a comprehensive overview of the experiences and insights gathered from diverse perspectives over the past 15 years.

The Agropolis Munich project inspired a series of corporate initiatives and actions in the metropolitan area of Munich, including a temporary open-air supermarket by bauchplan).(as a tool for city development on the city outskirts, inner-city urban gardening campaigns, and regional developments of solidarity agriculture.
https://www.freiluftsupermarkt.de/

This knowledge has been upscaled and transferred to agricultural landscape park developments in Zurich, Switzerland, and Heidelberg, Germany, where an agricultural park was part of International Building Exhibitions (IBA) 2012-2022.
https://iba.heidelberg.de/en/projects/agricultural-park

Presently, the Institute of Landscape at the University of Kassel, Germany, is undertaking research in this area through its Department of Landscape Architecture and Engineering. This research involves the examination of further aspects of urban gardening and the potential integration of urban seed systems in Switzerland, as well as the analysis of urban agriculture practices in Argentina and the comparison of European concepts.

MARTIN VAN DEN TOORN
Delft University of Technology, Faculty of Architecture, Delft, Netherlands
The Budapest School of Landscape architecture, Budapest, Hungary

THE CONTENT AND ROLE OF LANDSCAPE PLANS IN RURAL LANDSCAPE DEVELOPMENT IN THE NETHERLANDS; FORMER EXPERIENCE AS BASIS FOR FUTURE DESIGN APPROACHES

In the planning and design of new agricultural landscapes in the Netherlands after WWII, landscape plans have played a key role in rural landscape development in the long run. In this paper we investigate the role of landscape plans in giving form to development of rural landscapes.

In the planning and design of new agricultural landscapes, the experience of making landscape plans is an important source of design knowledge in this domain. In this paper we focus on the Dutch situation, although also in other countries in Europe, landscape plans have been developed and used.

The general research question is how to develop a design approach for the developing of landscape plans by making use of design knowledge from earlier projects. The research methods are mixed and largely based on the case study approach. The analysis of plans by means of precedent analysis forms the core. For the future we consider the landscape as a system and the point of departure is the European Common Agricultural Policy (CAP) as a basis. Research material comprises realised landscape plans, fieldwork, relevant literature.
In the first part we will give a brief analysis on the state of the art on landscape plans; both in realises plans and in references on the issue.
In the second part we make an overview or the design backgrounds and principles of the results from the first part.

In the last part we investigate how these design principles can be applied in the context of the new challenges for landscape architecture in the context of climate change.

One of the conclusions is that the new challenges demand first of all on a strategy for the landscape development in the long run based on systemic approach of the landscape in general. The design knowledge based on the landscape as system forms a firm basis for an integrated approach for rural landscape development.

DANIEL MÜNDERLEIN, Dr.-Ing.
RWTH Aachen University, Aachen, Germany
NATHALIE PSZOLA, M.S.Arch.
RWTH Aachen University, Aachen, Germany

AGRICULTURAL PARKS AS SUSTAINABLE DRIVERS OF AGRICULTURAL LANDSCAPES

This contribution aims at highlighting the potential of Agricultural Park as a sustainable driver for (agri)cultural landscapes. Firstly, the concept of the Agricultural Park with its origins is explained. Secondly, a case studies from central Europe is presented.

The Agricultural Park model has gradually emerged from the need to deal with the widespread nature of ongoing urbanization. Although not yet formally established, it serves as a valuable tool that emphasizes the development of mutual relationships between urban areas and agricultural land more effectively than other protective measures for peri-urban open spaces. Situated between the converging urban and rural environments, the Agricultural Park has emerged from other park categories. Agricultural Parks are designated areas, which integrate agricultural activities with recreational, educational, and ecological functions. They aim to promote sustainable farming practices while providing public access to green spaces, enhancing biodiversity, and fostering community engagement. Agricultural Parks often serve as buffers between urban and rural areas, facilitating the coexistence of agriculture and urban development.

The original concept of the Agricultural Park can be traced back to Italy and Spain, where a significant grassroots movement led to the establishment of several vast farmland parks. The primary goal was to counteract the ongoing process of land consumption by promoting the presence of traditional agriculture. These early initiatives received formal recognition as territorial parks in 1990s, driven not only by social movements but also by strong involvement from researchers. During the 2000s the idea of protecting peri-urban farmland alongside its agricultural practice got more momentum. Multiple benefits like biodiversity protection, food production, enhancement of the urban environment were officially recognized and goals for Agricultural Parks have been defined. These include the essential role of protective land use policies at both the municipal and supra-municipal levels as well as the necessity to enhance public awareness regarding the significance of peri-urban agriculture and the vulnerability of the areas in which it occurs. The importance of developing a viable and dynamic peri-urban agricultural system resonates within these new legal frameworks. Foreseen participatory bodies for organization and governance in combination with Rur-Urban inter-municipal projects characterize the first official Agricultural Park profile.

On the basis of these concepts, the city of Cologne and neighbouring municipalities are working together with the scientific community on more sustainable land management and a constructive approach to land use conflicts in the region. As the region has enormously valuable soils, agriculture plays an important role as a land user. In order to develop agri-urban visions at regional level, spatial images were developed in a co-creative agri-urban think tank. In addition to the metropolitan concepts, the spatial visions localise the planning instrument of agricultural parks in several areas where both high land values and high settlement pressure prevail.

The ‘AgriPark’ ideas workshop is currently illustrating and discussing various visions for an agricultural park in the surrounding area of Cologne. The aim is to maximise the added value for agriculture, ecology and social life and to collect important building blocks for the design, governance and financing.

BONNIE-KATE WALKER
ETH Zurich, Zurich, Switzerland
STEFAN BREIT
ETH Zurich, Zurich, Switzerland

REGENERATIVE PRACTICES FOR EXHAUSTED LANDSCAPES: THE GARDEN OF THE 21ST CENTURY

The Garden of the 21st Century is an experimental research project which aims to study the capacity of designed land management practices to regenerate soil health and biodiversity, led by Teresa Galí-Izard and the Chair of Being Alive at ETH Zürich. There are five field sites in Switzerland, Spain, Chile, and the USA, each responding to their particular climatic and social contexts. While it is a research project, it is also a garden, which means that it reveals new forms of beauty that respond to the unique opportunities of the site. At the conference, we propose to present our work on the Garden of the 21st Century as an innovative practice-based research strategy which creates connections between land-based research and actual land, between academic and local communities, and between agronomists, scientists, landscape architects, and gardeners.

The Garden of the 21st Century tests how changes in land management systems transform the soil and over time how those changes below manifest on the surface. By exploring the potential of practices which originated in indigenous land management and regenerative agriculture, including rotational grazing, agroforestry, organic matter additions, windbreaks, water harvesting, afforestation, and keyline, the gardens work to direct and concentrate the energies and flows that are already present on the site to stimulate life. At our field site in Senan, Spain, horses are rotated daily on a depleted formerly agricultural landscape to augment grass production and stimulate biological activity. In Til-til, Chile, tree trimmings from local neighbors are spread around a large parcel of city-owned land to retain moisture and create the potential for the growth of vegetation. In New Orleans, USA, young trees are planted densely by a community stewardship team to create a forest-like condition for growing an ecological system on a former housing lot.

Our site-based research also threads through our teaching in our course Regenerative Practices for Exhausted Landscapes for students of landscape architecture and territorial design at ETH Zürich. Through the lens of each field site, we bring our successes and our failures to the classroom. We discuss the potentials of both traditional and pioneering methods,enabling students to learn about key parameters for designing landscapes with the goal of regeneration. The students also learn from direct experience on the Garden of the 21st Century in Zürich, which is located on campus.

While traditional agricultural methods have defined an intimate relationship between humans and their landscapes for centuries, the extractive trajectory of modern agriculture has led to the simplification and poverty of these landscapes which were shaped to support life. Regenerative agriculture has emerged as an alternative path, but the methods are often siloed within the constraints of agricultural production. There is significant potential for the application of these methods as land management practices that respond to the specific ecological constraints in landscape architecture, beyond circumstances which necessitate the production of food. With the Garden of the 21st Century research project, we are employing agro-ecological methods to find the possibility of transformation that is latent in all places.

ANDERS LARSSON, Dr.
SLU, Alnarp, Sweden
AMANDA BÄCKMAN
SLU, Alnarp, Sweden
CHRISTINE HAALAND, Dr.
SLU, Alnarp, Sweden

OVERCOMING BARRIERS FOR IMPLEMENTATION OF REWETTING PROJECTS ON ORGANIC ARABLE LAND – EXAMPLES OF NATURE RESTORATION AND MULTIFUNCTIONAL LANDSCAPE PRACTICES

Rewetting of arable land on organic soils or peatland is important for avoiding further emissions of CO2, and is identified as an important tool for fulfilling the Nature Restoration Law. The Interreg-ÖKS project Land4Climate aims foremost at facilitating implementation of rewetting projects in southern Sweden and Denmark. The Interreg-project includes 17 different partners, whereof 11 are municipalities on each side of the border and some are regional authorities etc. Landscape departments at both Copenhagen University and SLU are responsible for research on tools and methods for working with e.g. issues related to policy implementation, multifunctional land use, GIS-tools and models for stakeholder involvement and dialogue (municipality, landowners, experts etc.). Southernmost Sweden and Denmark have many similarities when it comes to landscape, soil quality and intensive industrial agriculture. They do however also have significant differences related to policies, means for implementation and landscape context. In Denmark there are concrete goals for rewetting of 100 000 ha of land until 2030, while in Sweden there are mainly unspecified ambitions. In Denmark, there are also support schemes for compensating farmers and the municipalities have financial means to buy and exchange land, while in Sweden the municipalities and other partners would most often have to apply for external funding. A third difference is that projects in Denmark almost exclusively take place on agricultural land, compared to Sweden where rewetting has historically almost exclusively taken place on forested land, while wetland construction projects on arable land have predominantly focused on de-nitrification, biodiversity and recreation, not reduction of greenhouse emissions.

A literature review has identified barriers and success factors for implementation of rewetting of organic arable land. A couple of examples of such factors are the lack of or availability of long-term financial support for strategic measures and coherent or fragmented policies and measures. Other examples related more specifically to the implementation process includes monitoring and possibilities for successive improvement or not and existing or non-existing feedback loops between research and practice, plus stakeholder and landowner involvement in the planning process. Our presentation will include findings from the review study, but also discuss rewetting in a broader perspective as an innovative practice for the landscape disciplines, aiming for regenerative and multifunctional land use, increased biodiversity, ecosystem resilience and possibilities for co-existence with e.g. solar farms, recreation, grazing etc.

RIEKE HANSEN, Prof. Dr.
Hochschule Geisenheim University, Geisenheim, Germany
LENA ENDERICH
Hochschule Geisenheim University, Geisenheim, Germany
MCKENNA DAVIS
Ecologic Institute, Berlin, Germany

URBAN NATURE PLANS AS AN INTEGRATED TOOL FOR GREEN SPACE PLANNING

The EU-Biodiversity Strategy 2030 calls on cities with 20,000 and more inhabitants to develop and implement ambitious 'Urban Nature Plans' (formerly 'Urban Greening Plans'). These plans are considered as integrative approaches, contributing to biodiversity conservation as well as environmental and climate protection and the promotion of human well-being. Accordingly, they are supposed to cover a range of activities such as creating new green areas, restoring existing ones, enhancing connectivity and implementing ecological maintenance. In terms of green space types, Urban Nature Plans are supposed to cover public green spaces and urban trees but also agricultural land, forests or private green spaces (EC, 2020).

In our presentation, we introduce Urban Nature Plans as a strategic planning instrument. Based on a research & development project from Germany, we discuss potential pathways for the implementation of this approach. More than 650 German cities of different sizes and with different administrative capacities are candidates for Urban Nature Plans. Many of them already have planning instruments sharing features with Urban Nature Plans.

Through a dialogue process that included government organizations, professional associations, environmental NGOs, municipal representatives and other actors, it became evident that Urban Nature Plans should be understood as ambitious, integrated and flexible strategies which are adaptable to local needs and capacities. A clear commitment from local politicians was seen to play a critical role in increasing the amount and quality of urban nature and accelerating the implementation of related measures. Workshops with municipal representatives and an evaluation of planning documents revealed that existing planning instruments such as open space plans and landscape plans can fulfil many of the Urban Nature Plan requirements, but also have shortcomings such as a lack of integrated working methods, co-design approaches or monitoring mechanisms.

The exchange with representatives of the professional community and the plan analysis created the backdrop for developing a brochure with recommendations for German cities on how meet the requirements of Urban Nature Plans (Hansen, Enderich, & Davis, in prep.). The brochure emphasises that the plans should pursue ambitious goals in order to achieve noticeable improvements in the quantity and/or quality of urban nature. At the same time, they need to be adapted to local needs and capacities. Thus, different types of Urban Nature Plans of varying complexity were suggested ranging from plans that correspond to comprehensive city-wide strategies created in a multi-stakeholder process to simple action plans and programmes.

The insights from Germany illustrate that Urban Greening Plans represent an opportunity to uplift green space planning. They represent a chance for municipalities to action on high-level policies in an integrated manner, including halting biodiversity loss and nature restoration as well as to climate mitigation and adaptation while challenging established municipal planning practices.

EC (2020): EU Biodiversity Strategy for 2030. Bringing nature back into our lives. COM/2020/380 final.

Hansen, R.; Enderich, L.; Davis, M. (in prep.): Urban Nature Plan: Considering quality of life, climate and biodiversity together! A guide to implementing the EU Biodiversity Strategy 2030 in urban areas. [German version available at https://doi.org/10.19217/%20brs241]

TADEJ BEVK, Dr.
University of Ljubljana, Ljubljana, Slovenia

CULTURAL ENERGY LANDSCAPE: DESIGN CONSIDERATIONS FOR SOLAR POWER PLANTS

The increase in renewable energy capacity is among the major drivers of contemporary landscape change—so much so that the term “energy landscapes” is now being used to describe landscapes where energy infrastructure is a character-defining layer. One of the most rapidly expanding renewable technologies are solar power plants, which can cover extensive tracts of land and are highly noticeable in the landscape. While these facilities play a crucial role in reducing carbon emissions and promoting sustainability, they can also present significant environmental, ecological, and aesthetic challenges.

Landscape architecture, as a future-oriented profession, needs to explore how to integrate these facilities into the landscape to both preserve and develop new qualities. The modular nature of solar power panels and their few but strict technical limitations offer ample opportunities to incorporate landscape design into their development. Public surveys show that adapting the design of solar power plants has the potential to increase social acceptance.

Case studies and literature reviews reveal two main approaches to the landscape design of solar power plants. The first simply increases the spacing between rows and blocks of solar panels, creating room for common landscape design elements such as vegetation, topography, and water features. The second, used far less often, treats the solar panels themselves as a design feature, manipulating parameters such as pitch, tilt, rotation, spacing, offset, row length, and width to create aesthetic compositions. Both approaches can also be combined.

Using a research-through-design approach, this presentation will demonstrate the application of these design principles through an example of a solar power plant design and landscape impact assessments. The aim is to provide and discuss design tools available to landscape architects to improve the integration of energy infrastructure within landscapes. Finally, the limitations of current knowledge and the need for further research on the effects of incorporating landscape design into solar power plant development will be highlighted.

A better understanding of how designed solar power plants impact the aesthetic perception of landscapes, social acceptance, and ecological conditions could help landscape architects and decision-makers persuade developers of the need to incorporate landscape design into renewable energy projects.

VERA TAKÁCSNÉ ZAJACZ, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
ANTAL GERGELY
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
SÁRA JÁNOSSYNÉ PERNECZKY
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

URBAN THERAPEUTIC AGRICULTURAL LANDSCAPES

Urbanisation pressures on urban populations, increasing urban sprawl, and the displacement of nature from the city are major contributors to the deterioration of the physical and mental well-being of city dwellers. Urban dwellers have become largely disconnected from nature, the landscape, plants and animals, despite the fact that a great deal of research has shown the healing power of nature, the landscape, farming, plant cultivation and gardening. Ulrich's research has shown that just the sight of nature has healing powers, but that active activities in nature, such as gardening and growing crops, enhance the effects of nature on human well-being.

The urban green system offers a number of places and opportunities where an urban therapeutic agricultural landscape can be implemented, which has a prominent role to play in a number of ways. In addition to being an amenity, these green spaces promote a healthy microclimate, an increasingly important aspect in congested cities due to climate change, increase biodiversity, not only of flora but also of fauna, promote education, provide an experience of nature, maintain and restore the connection of urban dwellers with nature, and have a not insignificant impact on community and individual physical and mental well-being.

In this research, we have categorised urban green infrastructure elements based on community use, and explored where and what types of therapeutic agricultural landscapes can be created. The therapeutic potential of green spaces, urban forests, parks and public gardens, which can be visited without restrictions, is quite different from that of institutional gardens (schools, universities, hospitals, social institutions), residential gardens or even private gardens. In addition to the environment of the place, the target group and the user group also determine the type of urban therapeutic agricultural landscapes chosen and the beneficial effects of these places and the active and passive landscape and garden use they generate. For the analysis we have partly examined already implemented national and international examples, but we have also incorporated the experience of the pilot programmes of the Hortus Medicus project supported by ERASMUS+.

With this research we would like to draw attention to the fact that every agricultural landscape has therapeutic potential, and that only with conscious planning and a conscious choice of landscape architectural functions and elements can an urban agricultural landscape become an urban therapeutic agricultural landscape.

MASOUD BARIKANI, PhD. Candidate
Czech Technical University in Prague, Czechia

THE ROLE OF GREEN-BLUE INFRASTRUCTURE IN LANDSCAPE CONNECTIVITY ENHANCEMENT IN CENTRAL EUROPEAN HISTORICAL CITIES

The exponential growth of urban areas has led to significant landscape fragmentation, reducing ecological connectivity and straining environmental services. This study explores the implementation of multifunctional Green-Blue Infrastructure (GBI) in urban spaces to mitigate these challenges by enhancing landscape connectivity while aligning with Environmental, Social, and Governance (ESG) strategies. The study focuses on integrating underutilized urban spaces into a connected network of green and blue corridors, which foster ecological resilience, urban health, and sustainability.

Green-Blue Infrastructure serves as a countermeasure to the uncontrolled expansion of grey urban parcels. By repurposing fragmented and underutilized spaces, GBI establishes corridors that enhance biodiversity, improve urban climate resilience, and contribute to ecosystem services. The research builds upon prior theoretical frameworks, including Trancik's concept of 'lost spaces' (1986) and recent studies emphasizing the role of urban green networks in mitigating climate change and supporting biodiversity (Azhar et al., 2020). Furthermore, GBI elements such as constructed wetlands, bioswales, and permeable pavements offer multifunctional benefits, including flood mitigation, carbon sequestration, and improved water quality.

The research employs a multidisciplinary methodology incorporating digital design workflows, computational analysis, and automation techniques. A hybrid approach utilizing machine learning is proposed to analyze spatial data and identify optimal sites for GBI interventions. By integrating Geographic Information Systems (GIS), remote sensing, and parametric design tools, the study aims to create a scalable framework for assessing landscape connectivity. The research also examines the socio-economic and environmental implications of GBI adoption, highlighting its role in fostering resilient and sustainable urban environments.

Case studies, such as Prague 5, provide empirical validation of the proposed framework. The study evaluates the efficacy of digital modeling tools in landscape architecture, assessing how GBI contributes to climate adaptation, urban cooling, and flood management. The integration of computational analysis enhances the precision of landscape planning, enabling data-driven decision-making in urban development policies.

The findings underscore the necessity of strategic spatial planning to reinforce urban ecological networks. By transforming unused and fragmented spaces into functional green-blue corridors, cities can enhance environmental resilience, social well-being, and economic viability. This research contributes to the growing discourse on sustainable urbanization by presenting an innovative approach to landscape connectivity, leveraging technology to optimize ecosystem services and urban sustainability. The study aligns with contemporary ESG frameworks, emphasizing the importance of nature-based solutions in mitigating the adverse effects of urban expansion.

JULIAN SCHÄFER, Dr.
Technical University of Munich, Germany

COLLAGE LANDSCAPE – WALKABLE LANDSCAPE

CULTURAL LANDSCAPES FOR PEOPLE

In my dissertation *Collage Landscape* (2023), I examined the transformation of landscapes in Central Europe, which have been significantly altered by land consolidation projects since the 19th century. My approach is based on the transposition of *Collage City* (1978) to rural spaces: I have transferred the entire argumentation of *Collage City* by Colin Rowe and Fred Koetter to rural landscapes to reframe questions about rural spaces and cultural landscapes from a new perspective, describing them on an equal level as urbanistic discourses on cities. The central question is: How can cultural landscapes be not only agriculturally productive but also serve as the basis for public space for people?

COLLAGE CITY AND COLLAGE LANDSCAPE

Just as Rowe and Koetter criticized the destruction of urban texture in the 1970s, a similar situation can be observed today in agricultural landscapes. Large-scale land consolidation has largely removed spatial structures such as edges, hedges, or rows of trees. This has weakened biodiversity and climate resilience while also creating landscapes that are unattractive to people. At the same time, still, many residents of rural regions increasingly use these landscapes in their daily lives for recreation, sports, and leisure – even though they were not designed for these purposes. Therefore, I primarily interpret ecologically effective structures as elements that enable a human scale in the landscape, making them socially effective structures as well.

TEXTURE OF THE LANDSCAPE

A central concept of my work is the texture of the landscape, understood as a spatial network of structures such as watercourses, rows of trees, topographical features, and pathways. This largely lost texture can be restored between agricultural fields, creating multifunctional spaces. This approach strengthens biodiversity while also improving people's well-being. The concept of *Collage City*, where modern and traditional structures are not merely placed side by side but interwoven into a cohesive texture, can also be applied to cultural landscapes.

FROM PRODUCTIVE LAND TO PUBLIC SPACE

This discussion goes beyond aesthetics. As lifestyles in villages and cities increasingly converge, there is a growing disconnection between towns and their surrounding landscapes. Agricultural work, once a defining activity, is disappearing and being taken over by large, distant farming enterprises. Yet, the landscape remains a central part of everyday life. A conscious and publicly co-managed design of these spaces can strengthen the population's connection to their environment and raise awareness of ecological changes. In a democratic society, it is essential to collectively rethink these processes and actively involve the public.

TRANSFORMING THE LANDSCAPE INTO A WALKABLE COLLAGE

Landscape elements such as hedges, rows of trees, or avenues along pathways protect from wind, sun, and rain and, therefore, enhance the attractiveness of the landscape, making it more *walkable*. They transform open, unstructured spaces into a dynamic, ever-changing collage that offers recreational value amidst agricultural fields. The pathways in cultural landscapes should be understood as publicly accessible spaces that enrich social life and foster human interaction.

LINDSAY BURNETTE
Colorado State University, Fort Collins, USA

AGRICULTURAL IMAGINARIES

The creation of an equitable and sustainable food system will continue to be one of the most pressing resiliency challenges we face, particularly as our global population approaches 8 billion people and arable land declines, natural disasters become more prevalent, populations shift, fisheries collapse, and water shortages increase. In the United States, nearly 5 billion dollars is invested each year in agricultural research to address these challenges. As we race towards promising solutions including everything from agrivoltaics to bee-vectoring and drone-based remote sensing, it's worth considering what this rapidly developing future will actually look like, not only from an aesthetic lens, but from economic, ecological, and cultural perspectives. What will be the culture of agriculture in 2050, and how can landscape architects take a more active role in shaping this enigmatic future?

The Agricultural Imaginaries project works to envision and illustrate multiple speculative futures aimed at stirring the public's imagination around food system topics. Through interviews, illustrations and speculative board game creation, this project sources input from designers, agricultural researchers, K-12 students and community members to explore potential changes to agricultural landscapes by 2050. Although we cannot predict what technologies will succeed or take hold, or what policies will be put in place, it is vital to visualize the directions we're headed. In many ways these visualizations work to challenge established norms about future agricultural conditions and to raise questions, rather than provide specific answers. To be resilient as a society, we must understand where we're headed and what the alternative paths are. This presentation introduces the initial documentation and findings for the long-term Agricultural Imaginaries project, which aims to develop evolving public imaginaries around our future food system.

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KATHARINA HEINLEIN, B.SC.
Dresden University of Technology, Dresden, Germany
SINA-ZOE HANKE, B.SC.
Dresden University of Technology, Dresden, Germany

STRUCTURAL CHANGE IN HOYERSWERDA: REUSE OF URBAN BROWNFIELD SITES

The city of Hoyerswerda is located in the Lusatia region in eastern Germany and was developed into a socialist model city with large housing estates as part of the lignite mining industry since 1950s. Over the following three decades, the population grew from 13,000 to approximately 74,000 inhabitants. After the political changes of the 1990s and the end of lignite mining, a drastic population decline set in. To counteract increasing urban decay, numerous residential buildings were demolished. Today, around 32,000 people still live in Hoyerswerda, with an average age of nearly 53 years, making the population significantly older than the national average.

In response to these developments, Hoyerswerda is repositioning itself to become a sustainable and, inclusive city[NJH1] . Therefore, it serves as an example for many structurally weak regions. A key challenge lies in the repurposing of urban brownfield sites, for which innovative concepts are being sought.

This paper examines the concepts of urban agriculture and urban succession for their feasibility in Hoyerswerda. Urban agriculture refers to the cultivation of agricultural products in inner-city areas, including vertical farming, arable farming, animal husbandry, and community-oriented agricultural projects. The advantages of urban farming include strengthening the local economy and reducing transportation distances.

Urban succession describes the natural process of various ecosystems emerging in urban spaces over time. This process can be integrated into landscape architectural projects to promote long-term ecological dynamics. Urban succession areas enhance residents' connection to nature and contribute to public health. Both concepts can be implemented cost-effectively and help foster a sense of identity, thus improving the city's reputation.

However, there are challenges to implementation. Public acceptance is a major obstacle, particularly due to the conflict between human use and ecological regeneration. Community-oriented projects often lack long-term commitment, while legal, economic, and developmental hurdles add complexity. Urban succession areas offer a cost-effective alternative to green spaces but must balance ecology and usability. Citizen participation and a clear communication of the experimental nature of land use are crucial.

Despite the availability of large brownfields in Hoyerswerda, project sites must be carefully selected based on size, location, and their current vegetation. Citizen proposals need also be considered and implemented. Community-based projects in urban agriculture have proven particularly valuable, as they provide social benefits and serve as meeting places, an aspect that has been lost in Hoyerswerda due to structural changes. Other forms of agriculture are difficult to implement in this context. Succession areas are easier to integrate due to their similarities to conventional green spaces. The main challenge here is ensuring their usability while maintaining their ecological benefits through minimal human intervention.

Provided that solutions can be found for the aforementioned challenges, urban succession areas and community-oriented urban agriculture projects offer promising opportunities for repurposing brownfield sites in Hoyerswerda. Since there is currently little research on similar projects in regions undergoing demographic and structural change, the findings from these initiatives could be highly relevant for cities facing comparable urban and social challenges.

SIMON BELL, Prof.
Estonian University of Life Sciences, Tartu, Estonia
University of Edinburgh, United Kingdom
MANA TAHERI TALESH
Estonian University of Life Sciences, Tartu, Estonia

THE DIGHOMI FLOODPLAIN RESTORATION PROJECT, TBILISI, GEORGIA: RESTORATION OR REHABILITATION?

In 2023 the Asian Development Bank- funded a project to prepare plans for the restoration of the Dighomi floodplain along the banks of the River Kura which flows through the middle of Tbilisi, the capital of Georgia. The Australian firm of SMEC International PTY (Georgia) was awarded the contract and a team of local and international experts was assembled to prepare plans which were completed and presented to the clients in July 2024. A series of surveys was undertaken – hydrological, ecological, pollution etc - as a basis. What became clear early on was that in no way could the project be termed restoration of the floodplain for the simple reason that enormous semi- or illegal dumping of landfill on most parts of the 300ha site, on both sides of the river, had raised the level of the land by between2 and 7 metres, burying the original soil and vegetation, which had once (only 10-15 years ago) been fields, orchards and gardens. The landfill materials mainly comprised demolition rubble and excavated materials from new building projects and was luckily inert and posed no serous pollution problems except in a few instances. The dumped material was also generally unconsolidated and uncompacted, with a very uneven surface and lumps of concrete protruding from it. However, in many places it sloped steeply, at the maximum angle of repose, down to the river. In addition, a hydro-electric plant was under construction across the river. The territory comprised a number of different areas of varying character, topography, ownership, accessibility and degree of dumping.

The project brief called for ecological restoration, pubic access with walkways along both banks and a range of facilities such as a local park. Protection and management of otters was also important. When developing the landscape plan and discussing it with stakeholders at a series of meetings, it was necessary to change the- general concept from restoration to regeneration; since it was impossible to remove the landfill e. So the concept became one of creating and restoring habitats through a combination of the following principles: 1. “landforming” (modifying the profile of the dumped materials where these were too steep and uneven without any surface compaction), 2. treating the landfill as “soil-forming material” as it was inert, coarse textured and posed no problems for plant rooting and growth apart from low nutrient content, and 3. proposing ecological restoration based on planting native pioneer woodland species which would start the process of natural succession. The plan followed a zoning concept of units and sub-units where the general approach was defined in more detail according to the specific characteristics of each unit. A comprehensive path network was included, utilising the new HEP dam to create some riverside paths and a new crossing. The implementation of the plan will take place in phases according to a series of projects. A management organisation, an educational centre and opportunities to gain access to and from the river are also incorporated.

NAUSICA D'ANDREA
Sealine Research Center - University of Ferrara, Italy
FEDERICO PLACUZZI
Sealine Research Center - University of Ferrara, Italy
GIANNI LOBOSCO
Sealine Research Center - University of Ferrara, Italy
LORENZO TINTI
Sealine Research Center - University of Ferrara, Italy
FRANCESCO AXEL PIO ROMIO
Sealine Research Center - University of Ferrara, Italy

EMBRACING THE DESERT. A LANDSCAPE DESIGN APPROACH TO RESILIENT AGRICULTURE AND BIODIVERSITY IN THE SIMETO RIVER BASIN, SICILY

This contribution addresses the pressing challenges facing agricultural landscapes, specifically focusing on desertification processes in the Simeto River Basin, Sicily. Characterized by diverse morphologies and intensive agricultural practices, the Simeto basin is experiencing increasing environmental degradation due to climate change, unsustainable land use, and water scarcity. Rather than resisting this transition, the research project explores adaptation strategies that embrace the emerging desert landscape as a new ecological reality. The objective is to govern the inevitable transformation of the environment and extract potential benefits in terms of agricultural sustainability and enhanced biodiversity within a system currently dominated by monoculture.

Desertification, affecting over 30% of the Earth's surface, is a key concern. This study moves beyond conventional mitigation strategies by proposing a design framework that integrates desert-adapted solutions into the existing agricultural matrix. The approach acknowledges the "intrinsic fragility" of ecosystems altered by urbanization and pollution and emphasizes the need for adaptation rather than outright prevention.

Through a comprehensive environmental analysis, the study identifies three key macro-areas within the Simeto basin: the Next Desert Area, the Arid Crops Area, and the Oasis Area. The Next Desert Area includes regions with high susceptibility to desertification and hilly morphology. Here, interventions focus on water retention through weir systems that encourage spontaneous vegetation growth, alongside experimental agricultural practices to identify drought-resistant crops. The Arid Crops Area consists of fertile flatlands currently subjected to intensive monoculture. To improve resilience, the study promotes crop diversification by introducing species such as prickly pear, which require less water, along with the implementation of underground basins for rainwater harvesting. The Oasis Area corresponds to ecologically valuable environments along seasonal watercourses, which require protection and enhancement. In this case, interventions prioritize the removal of agricultural activity to foster native vegetation, creating riparian woodlands and wetlands that contribute to increased biodiversity.

A central element of the project is the establishment of ecological connections between these macro-areas, fostering a resilient landscape capable of adapting to increasing aridity. The proposal also integrates flood management strategies, viewing flood events as opportunities for ecological growth through controlled inundation and nutrient redistribution.

Additionally, the study advances three key objectives. First, it promotes biodiversity by encouraging the use of native and drought-resistant species, creating a more sustainable ecosystem. Second, it respects the cultural significance of existing agricultural heritage, ensuring traditional practices are integrated into sustainable methods. Finally, it enhances community well-being by improving long-term food security and economic resilience through diversified agriculture.

The study adopts a scenario-based approach, projecting the landscape evolution to 2050 under both current trends and the proposed interventions. Without intervention, projections indicate a 24.4% increase in desertified areas within the Simeto basin. However, the implementation of the proposed strategies aims to reduce this increase to 14%, while simultaneously mitigating the exposure of agricultural and oasis areas through a more biodiverse and structurally resilient landscape. By embracing the concept of "arid cultural landscapes" and integrating them into a functional and sustainable ecosystem, this project provides a replicable model for regions facing similar environmental challenges.

BETTINA LAMM, Prof.
University of Copenhagen, Denmark

LANDSCAPES OF CULTIVATION - HOW CARING FOR LAND, GROWING FOOD AND BUILDING COMMUNITY CAN (AND SHOULD) GO HAND IN HAND

Through the industrialized era, food production has been optimized into large-scale monocultural agriculture zones removed from human habitation. These farming areas take up large parts of our rural landscapes but often give little in return in terms of creating biodiversity or habitations for humans or others. In the current ecological and climatic crisis, it is evident that something about how we live with and off the landscape must shift.

In this paper, I will dive into the perspectives and specific case samples of how alternative approaches to farming land and growing food jointly can benefit both land and humans. I will draw on case studies of community gardens and urban farming initiatives, iterative placemaking through temporary use projects, and regenerative agriculture projects that integrate ecological stewardship with social well-being. These examples illustrate how localized, small-scale food production can foster biodiversity, enhance soil health, and create resilient communities through care, regeneration and cultivation approaches.

By examining these case studies, I will explore how a shift toward more inclusive and multifunctional landscapes—where placemaking, cultivation, and habitation coexist—can lead to more sustainable and inclusive environments. This paper argues that integrating food production with social and ecological care is not only a necessity in the face of climate change but also a powerful strategy for reconnecting people with the landscapes they depend on.

ATTILA TÓTH, Assoc. Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia
KATARÍNA SLOBODNÍKOVÁ, PhD. Candidate
Slovak University of Agriculture in Nitra, Slovakia
SOŇA BELLÉROVÁ, Dr.
Slovak University of Agriculture in Nitra, Slovakia
MAREK HUS, Dr.
Slovak University of Agriculture in Nitra, Slovakia
MIROSLAV ČIBIK, Dr.
Slovak University of Agriculture in Nitra, Slovakia
MÁRIA BIHUŇOVÁ, Dr.
Slovak University of Agriculture in Nitra, Slovakia

INNOVATIVE LANDSCAPE PRACTICES IN SMALL MUNICIPALITIES AND RURAL SETTLEMENTS OF SLOVAKIA

ACKNOWLEDGEMENT
Results presented in this paper are outputs of the international project Erasmus+ 2023-1-CZ01-KA220-ADU-000164978 LANDSCAPE IN FOCUS - Tools For Small Municipalities For Sustainable Landscape and national projects KEGA 004SPU-4/2023 and VEGA 1/0535/24.

Slovakia is predominantly a rural country, with more than half of its population residing in rural areas, including villages and small towns. Over 95% of Slovakia's 2,927 municipalities are made up of villages and small towns. Agriculture and forestry together account for around 80% of the country's total land cover, with agriculture alone covering approximately 40%. As such, agriculture is a key landscape feature in Slovakia. Nearly 82% of rural municipalities have fewer than 5,000 inhabitants, while around 1,500 municipalities have fewer than 2,000 inhabitants. Small municipalities typically have limited economic and human resources for governance, meaning that innovative and contemporary projects are more commonly found in cities and larger towns. There is a need for examples of best practices and active support for local governments and mayors of small municipalities to encourage the implementation of innovative landscape practices in rural areas.

Within an international research project, best practices have been mapped, visited, and documented. The most iconic and inspiring innovative landscape practices identified in municipalities with fewer than 5,000 inhabitants include, among others: the implementation of blue-green infrastructure and nature-based solutions for stormwater management (Vlčany, south-west Slovakia); the transformation of an abandoned granary in an agricultural cooperative into an innovative and inclusive ecological centre (Moravské Lieskové, north-west Slovakia); proactive nature protection and the enhancement of the riverfront through high-quality wooden architecture (Zálesie, west Slovakia); innovative, low-impact housing development based on permaculture and forest pedagogy principles (Mlynica, north Slovakia); and the conservation of historical and agricultural heritage through the preservation of traditional cherry orchards (Brdárka, central Slovakia).

This paper will present the above-mentioned innovative landscape practices in more detail, highlighting sustainable and nature-based solutions. It will also discuss the importance of creating a brochure and platform to inspire, encourage, and support local governments in implementing more sustainable landscape solutions and practices.

MÁRIA BIHUŇOVÁ, Dr.
Slovak University of Agriculture in Nitra, Slovakia
DOMINIKA DANADOVÁ
Slovak University of Agriculture in Nitra, Slovakia

LANDSCAPE-ARCHITECTURAL PROPOSAL OF ŠAĽA CITY CADASTER, SLOVAKIA

ACKNOWLEDGEMENT
Results presented in this paper are outputs of the scientific research project VEGA 1/0681/24, cultural and educational projects KEGA 004SPU-4/2023 KR:EK:IN and project EU NextGenerationEU through the Recovery and Resilience Plan for Slovakia under the project No. 09I03-03-V05-00018

Green infrastructure is defined as strategically planned network of natural and semi-natural areas, designed and managed to deliver a wide range of ecosystem services, while also enhancing biodiversity and leads to the protection and creation of the urban or open landscape greenery. Elements of green – blue infrastructure have great potential to mitigate negative impacts of the environment in the cities, their surrounding and landscape. The main goal of green infrastructure is to connect isolated natural areas and create a network that provides social, economic, ecological and environmental benefits and contributes to social well-being and health. Green infrastructure also plays an important role in adapting to climate change.

The cadastre of the city Šaľa has a flat character, with the dominance of agricultural land (approximately 73% of the total area of the cadastre). The largest part of agricultural landscape is on the southern side, where industrial and agricultural production is located. The river Váh is an important landscape element. Another types of greenery in cadastre are elements of non-forest woody vegetation, alleys in the agricultural landscape and the vegetation at river banks. Wetland vegetation is rare and significant in the territory, forming local biocentres (Malá Lúčina, Vráble) and the regional biocentre Mlynárske domčeky. The biocentres of local importance include the old Arms of river Váh, the forests above the railway bridge and the Amerika tailings ponds - which, despite their unnatural origin, are currently creating an important locality especially for waterfowl.

In accordance with the spatial plan, we proposed the development of green infrastructure in the cadastral territory of the city Šaľa. The main aim of the landscape architectural proposal was to focus on the existing natural elements and join them, which will create an ecological network that not only connects the urban zones with the surrounding landscape, but also brings benefits to society in the form of ecosystem services. These interactions also help to reduce the fragmentation of habitats in the territory and enable the migration of either plant or animal species. The most important bio corridor passing through the city of Šaľa is the river Váh, which we can consider as the skeleton of our proposed network. Intensive agricultural land use leads to subsequent wind and soil erosion. Therefore, we designed the green lines in the form of windbreaks, which connect natural areas and create the biocorridors. In some parts of the territory, it is necessary to increase the proportion of non-forest woody vegetation, which will be contributing to the strengthening of ecological stability in the given territory.

The region has potential and suitable conditions for the development of cycling tourism and green ways.

EVA JENIKOVA, PhD. Candidate
Czech Technical University, Prague, Czechia

URBANIZATION AND BIODIVERSITY: INTEGRATING NATURAL AND SOCIAL VALUES IN URBAN PLANNING

The dynamic process of urbanization and associated lifestyle changes contribute to a rapid decline in biodiversity, negatively impacting ecosystem stability. At the same time, the quality of life of urban residents is decreasing as they lose direct contact with the natural environment. Research suggests that biodiversity in urban environments may be higher than species diversity in the surrounding open landscape, making cities important refuges for various plant and animal species, including endangered taxa.

Urban nature areas play a crucial role in this context, encompassing fragments of original biotopes as well as islands of natural and semi-natural vegetation, such as sloping terrains or riparian vegetation. In addition to these traditional biotopes, newly emerging spontaneous semi-cultural ecosystems, such as transition zones, vague terrains, and other landscape interfaces, are also considered ecologically valuable. The value of these areas is assessed based on multiple criteria, with biodiversity being one of the key factors.

However, a comprehensive understanding of the urban landscape requires an analysis of not only ecological aspects but also the interaction between biological and social diversity, as well as the relationship of urban residents to urban nature areas and their perception of aesthetic value. This synthesis is crucial for sustainable planning and management of urban ecosystems.

SOŇA BELLÉROVÁ, Dr.
Slovak University of Agriculture in Nitra, Slovakia
KATARÍNA SLOBODNÍKOVÁ, PhD. Candidate
Slovak University of Agriculture in Nitra, Slovakia
ATTILA TÓTH, Assoc. Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia
MAREK HUS, Dr.
Slovak University of Agriculture in Nitra, Slovakia

TRANSFORMING CONVENTIONAL AGRICULTURAL LANDSCAPES THROUGH LOW-IMPACT DEVELOPMENT TO SUSTAINABLE LIVING ENVIRONMENTS

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Results presented in this paper are outputs of the international project Erasmus+ 2023-1-CZ01-KA220-ADU-000164978 LANDSCAPE IN FOCUS - Tools For Small Municipalities For Sustainable Landscape.

Sustainable rural development, as compared to the conventional development approaches, is currently the subject of intense scientific debate. The project ‘Krásne Sady’ in Mlynica (High Tatras, North Slovakia) presents an inspiring example of a holistic approach to rural landscape and settlement that is based on the principles of permaculture and low impact development (LID). These concepts have been the background for the development of a comprehensive zoning plan of ‘Krásne Sady’. It contained detailed land-use regulations, building restrictions and recommendations to ensure sustainable development, in accordance with the principles of an ‘ecovillage’. This approach integrates aesthetic and functional aspects that lead to a harmonious and sustainable living environment. The permaculture methodology of the project is not limited to partial solutions but is applied as a comprehensive landscape development strategy. This approach is reflected by the preservation of local identity of the original rural lifestyle, while generating synergies between cultural heritage and contemporary climate and ecological challenges. The aim of this project was to create a residential area that is fully integrated in the environment and landscape, enhances biodiversity, manages stormwater, supports regenerative agriculture, and provides facilities for community initiatives. The paper focuses on the aesthetic expression of permaculture, its impact on the quality of life in rural areas and its potential contribution to sustainable local and regional development. We will discuss how sustainable landscape development concepts and strategies can influence and form the future of the Slovak countryside and provide a more sustainable and environment-friendly alternative to conventional development approaches.

OUTI TAHVONEN
Häme University of Applied Sciences, Hämeenlinna, Finland
ANU KOPONEN
Häme University of Applied Sciences, Hämeenlinna, Finland

FROM GARDENS TO CARBON RESERVOIRS – A TYPOLOGY-BASED APPROACH

Low-density housing (LDH) has long been regarded as a land use type that fails to utilise urban space efficiently, with its ecological value being considered uncertain. In accordance with contemporary trends of urban densification aimed at hindering urban sprawl, low-density residential areas are being targeted for redevelopment with increasing frequency (Rubiera-Morollon et al., 2020). However, individual plots within these areas comprise a diverse mosaic of resident needs, land use functions, and vegetation. A common feature of these plots is gardening and yard maintenance, which involve both supporting plant growth and managing biomass, such as grass clippings, leaf litter, and pruned branches (Ariluoma et al., 2023). These processes play a key role in carbon cycling at the plot level.

The plot-level carbon cycling includes both carbon sequestration in woody vegetation and organic matter processing, such as composting of leaf litter and plant residues. Carbon sequestration in biomass proceeds into soil carbon storage through decomposition processes, thus urban soils have a high potential for carbon storage where horticulture managements practices promote soil organic matter accumulation (been recognized as potential carbon reservoir in urban context (This study aims to Shanghua et al., 2012). The central research question guiding this study is as follows: How can zoning and land-use practices contribute to the support of gardening-based biogenic flows, sequestration and storage of carbon?

This study investigates the typologies of residential plots with a view to identifying spatial and functional configurations that optimally support carbon-smart garden landscape. It employs design-based research by typologies. The study demonstrates the efficacy of decisions made in urban design in the context of overall densification objectives. Concurrently, the gardening practices influence biomass flows and carbon storage within the gardens.

Garden size and sub-soil connection emerge as key factors affecting plant growth, biomass accumulation, and organic matter recycling. This factor is pivotal in determining the potential for plant growth, biomass accumulation, and organic matter recycling. The research posits that future urban planning should prioritise plot designs that maximise green space and enable sustainable flows of organic material, thereby promoting both ecological and cultural sustainability.

Findings suggest that existing urban planning approaches could better consider the carbon cycling potential of residential landscapes by fostering the space for sub-soil connected long-living vegetation. In addition, many common maintenance practices, such as composting, can easily support the garden-scale carbon cycling.

This research provides insights into how urban planning could rethink the role of low-density housing areas in carbon storage. Examining carbon cycling at the plot scale can facilitate the identification of slow and fast carbon cycles. The slow cycles pertain to the cultivation of a long-lived tree stand, while the fast cycles may encompass composting and cropland management practices. These practices can offer insights for the management of community gardens or public green spaces to enhance city-scale carbon-smart practices.

JAMES MELSOM
University of Technology Sydney, Australia

CONVERSING WITH THE SUBAK SYNTAX

The Balinese Subak system, a centuries-old cooperative water management network, intricately weaves hydrology, agriculture, and cultural practices, presenting a resilient model for sustainable landscape management. However, this system now faces significant challenges due to rapid socioeconomic shifts and climate change. Ongoing research since 2022 has pioneered an innovative approach to studying this traditional system by integrating machine learning with high-resolution spatial analysis in order to address these issues.

The research builds upon the foundational research of Dr. J. Stephen Lansing and Dr. Wayan Windia, who each, in alternate forms, postulate the Subak as a complex system that can be understood as a sophisticated landscape machine with associated logics and functions based upon the close relationship of spiritual tradition and the environment. In partnership with local stakeholders, including Udayana University and the agro-tourism organization Astungkara Way, extensive academic fieldwork was conducted within an 80-hectare Subak near Abiansemal. Detailed point cloud models were generated using unmanned aerial vehicles (UAVs) and LiDAR technology, capturing the region's complex topography and land-use patterns. These models enabled the identification of various agricultural typologies and the development of hydrological simulations that mirror the dynamic interactions between natural and human systems.

By applying machine learning algorithms to the amassed spatial data, the research extrapolated the Subak system's functionality to a broader territorial scale. This analysis offers valuable insights into how traditional water management practices can inform contemporary strategies addressing pressing issues such as climate change, biodiversity loss, and ecosystem resilience. The fusion of local ecological knowledge with advanced technological tools exemplifies a holistic approach to landscape transformation.

A significant aspect of this project involved the active participation of landscape architecture students from the University of Technology Sydney (UTS). Through global studio programs, students engaged directly with the Subak landscape, applying cutting-edge technologies and methodologies in real-world settings. This hands-on experience not only enriched their academic learning but also fostered a profound appreciation for the integration of traditional ecological knowledge with modern technological tools. Such immersive educational opportunities are instrumental in preparing future landscape architects to address complex environmental challenges with innovative and culturally sensitive solutions.

The research is grounded in the aim to better understand the complexity of the existing Subak system and its potential for recalibration. Rather than introducing external solutions, the mechanisms of the Subak itself may be able to address many of the territorial challenges facing Bali. The methodologies developed provide scalable solutions for sustainable landscape transitions, highlighting the role of innovative practices in overcoming implementation barriers and fostering resilience across diverse contexts. The collaborative efforts of researchers and students exemplify how the integration of traditional knowledge and modern technology can lead to transformative landscape practices, contributing meaningfully to the discourse on sustainable development and ecological stewardship.

ALICE LEWIS, Dr.
RMIT University, Melbourne, Australia

DOCUMENTING TEXTILE WASTE LANDSCAPES

A novel landscape typology is emerging across Earth: a landscape with soils made of discarded textiles and waterways resembling thick soups of corroding, tangled cloth. These 'textile terrains' are the result of massive, unregulated over-production and consumption of textile products in wealthy countries, and the parallel practice of exporting discarded clothing and textiles to the Global South. A drastic increase in used-textile export and reduction in original production quality now renders between 30-40% of the imported textiles as un-sellable. Without the infrastructure to cope with this amount of waste, un-sellable textiles are dumped in any publicly accessible space available to the importing communities, often along waterways and on beaches, producing complex post-human ecologies as waste infiltrates natural systems. While these sites are beginning to attract the attention of global media, they are not yet classified as either landfills, landscapes or any named environmental condition, nor do they appear in spatial data sets. This invisibility means that they do not currently feature in policy developments seeking to regulate environmental impacts of fast-fashion, while the growing 'textile terrains' degrade the local environments of importing communities.

There is an urgent need to identify, name and document these emerging landscapes to address their impact and ensure the resilience of the ecosystems they have infiltrated. Alice Lewis, along with RMIT Master of Landscape Architecture students, is addressing this gap; using spatial forensics, Open-Source Intelligence (OSINT) and landscape architectural representation to fill the critical lack of spatial data and document these sites.

Focusing on Old Fadama in Accra, Ghana, as a case study site, forensic investigations work to produce up-to-date topographic, soil and infrastructural spatial data, as well as information regarding biodiversity and human inhabitation of the site which sees people continually deposit waste, grazing cattle and mining of the textile-aggregate site. The documentation of this landscape typology at a local scale provides the spatial data necessary for the development of localised action and design propositions that support resilience of the local environment, and the human inhabitants and agricultural practices they support. This work plays a key role in giving presence to these sites, as classifying them as emergent landscape conditions, and beginning work towards ensuring the resilience of the agricultural and ecological systems they are infiltrating.

This work demonstrates how landscape architectural knowledge, tools and methods can be employed to document emergent conditions and address data inaccuracies. The workflows and methods developed will be useful as extreme and unpredictable weather events create gaps in existing spatial data, and globalisation produces distributed ecological impacts. This opens to a new frontier for landscape architects, to provide the groundwork for rapid response to ensure resilient ecosystems.

IVA RECHNER DIKA, Dr.
University of Zagreb, Croatia
MIROSLAV POJE, Dr.
University of Zagreb, Croatia
DARIO KREMER, Dr.
University of Zagreb, Croatia
JANA KIRALJ LACKOVIĆ, Dr.
University of Zagreb, Croatia
INES HRDALO, Assoc. Prof. Dr.
University of Zagreb, Croatia

PRIVATE COURTYARDS SUSTAINABLE TRANSFORMATION – CITY OF ZAGREB CASE STUDY

Numerous EU initiatives and regulations encourage, support and even make it imperative to transform the city by applying generally accepted sustainability principles. The application of green policies has today become an indisputable fact and one of the basic prerequisites for the survival and development of cities. Although Zagreb, according to the European Environment Agency, is the greenest capital city in the European Union, the city administration is continuously working to improve the quality of urban areas and foster environmental awareness of citizens.

One of the city's EU-funded projects is "Activating Green Yards for Carbon Neutrality" (ActGREEN), which aims to improve the quality of urban areas and promote an sustainable conscious lifestyle. The project partners are: the City of Zagreb (leader), the University of Zagreb Faculty of Agriculture, the Croatian Society of Landscape Architects and ODRAZ (Sustainable Community Development).

The goal of this project is to transform private and semi-public courtyards by implementing sustainable and environmentally friendly solutions (planting trees, increasing green areas, replacing impermeable surfaces with permeable ones, NBS, etc.).

A key aspect of the project is the involvement of citizens and the local community as the main stakeholders both in the implementation of the project and in shaping the city's policy. Citizens are actively involved in the process through various interdisciplinary educations and workshops (topics in the field of environmental psychology, NBS, sustainable maintenance of green areas, appropriate plant species selection with enhancement of biodiversity, landscape design etc.) with the aim of developing guidelines for the courtyard landscape design projects. In the activities carried out so far, citizens have shown an extremely high interest in participating in the project.

The implementation of the project started in mid-2024. and it lasts until 2026. In this lecture, we will present the project structure, applied methodology, results achieved so far, the shortcomings and implementation barriers observed as well as the future events and expected results. Encouraging and financing of private and semi-public courtyards redesign and adapting them to climate change from the city budget is considered an innovative approach of the City of Zagreb, which plans to continue with this initiative even after the completion of the project.

As the final product of interdisciplinary and cross-sector collaboration in the project, it is expected to develop a methodology and a policy proposal that would standardize the approach of this pilot program for climate-neutral, green courtyards, so that it can be applied in other cities, even at the national level.

DAGMARA STANGIERSKA-MAZURKIEWICZ, Dr.
Warsaw University of Life Sciences - SGGW, Warsaw, Poland
BEATA FORNAL-PIENIAK, Prof.
Warsaw University of Life Sciences - SGGW, Warsaw, Poland

URBAN GREEN SPACES AND WELL-BEING: QUALITY OF LIFE AND STRESS IN WARSAW AND OTHER POLISH CITIES

Urban green spaces are vital for enhancing the physical and mental well-being of city residents. This presentation combines insights from two empirical studies conducted in Poland that explore the role of urban greenery in shaping quality of life and stress levels.

The first study, carried out in Warsaw, assessed residents' satisfaction with urban infrastructure (SUI), including green spaces, and examined how this satisfaction affects perceived quality of life using the WHOQOL-BREF questionnaire. The findings revealed that residents' contentment with the quality, aesthetics, and functionality of green spaces significantly influenced their perceived quality of life, particularly in the environmental domain. This influence was notably stronger than the impact of the actual amount of greenery available. Furthermore, satisfaction with green areas was identified as a critical factor in shaping residents' perceptions of their neighborhoods as ideal places to live.

The second study, which spanned multiple cities in Poland, focused on the relationship between satisfaction with green space attributes (SGSA) and perceived stress levels, measured using the Perceived Stress Scale (PSS-10). Results indicated that higher satisfaction with specific green space characteristics—such as cleanliness, aesthetic appeal, and accessibility for children—was linked to lower stress levels. Additionally, residents with lower stress levels were more likely to engage in outdoor activities, particularly walking. This underscores the importance of accessible and user-friendly green infrastructure in promoting relaxation and mental well-being.

Together, these studies highlight that both subjective satisfaction with green spaces and their practical accessibility are crucial for enhancing citizens' well-being. The findings stress the need for designing urban green infrastructure that is not only aesthetically pleasing but also multifunctional, accommodating various recreational activities. By focusing on both the quality and usability of green spaces, urban planners and policymakers can develop strategies that enhance the livability of cities and foster healthier, more resilient urban populations.

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PAULO FARINHA-MARQUES, Prof.
University of Porto, Portugal
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
JOSÉ MIGUEL LAMEIRAS, Prof.
University of Porto, Portugal
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
FILIPA GUILHERME, Dr.
University of Porto, Portugal
RITA ARAÚJO, MSc
University of Porto, Portugal
MANUEL GENTIL REBELO, MSc
University of Porto, Portugal

A SYSTEMATIC FRAMEWORK FOR CITY - SCALE STREET TREE PLANTING: OPTIMIZING TREE INTEGRATION BASED ON STREET WIDTH AND FUNCTIONAL REQUIREMENTS

Urban street tree planning is pivotal in fostering sustainable and resilient cities, offering diverse benefits such as enhanced air quality, microclimate regulation, stormwater management, and biodiversity support. However, the multifaceted nature of urban streets presents significant challenges to effective tree integration, requiring innovative approaches to landscape practices. This study addresses these complexities by developing a systematic framework for street tree planting based on street width and essential functional requirements.

This framework introduces a methodology for determining the ‘minimum street suitable for tree planting’ – the minimum width required to accommodate trees while ensuring pedestrian and emergency vehicle access, optimized for Portuguese standards. Based on this minimum width, the framework proposes models for optimal tree positioning and size, maximizing ecological benefits without compromising street functionality. This methodology is based on the spatial and functional characteristics of streets, making it broadly applicable in diverse geographic and cultural contexts.

Application of this framework to the urban areas of Matosinhos and Leça da Palmeira in Portugal demonstrates its utility. The methodology involves measuring the width of all streets within a study area and classifying them into distinct width categories, each corresponding to specific tree planting models. The study emphasizes the importance of selecting species well-adapted to local environmental conditions, particularly spatial constraints, and integrating tree planting seamlessly into the initial stages of street design.

By adopting this innovative and systematic framework, urban planners and policymakers can implement a scalable street tree planting model that enhances the sustainability and liveability of urban environments at the city- scale.

JOSÉ MIGUEL LAMEIRAS, Prof.
University of Porto, Portugal
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
PAULO FARINHA-MARQUES, Prof.
University of Porto, Portugal
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
JOSEPHINE HENDRIKSEN, MSc
University of Porto, Portugal
MANUEL REBELO, MSc
University of Porto, Portugal
RITA ARAÚJO, MSc
University of Porto, Portugal
FILIPA GUILHERME, Dr.
University of Porto, Portugal

DIGITAL LANDSCAPE TWINS AND BIM: TOOLS FOR ECOLOGICAL SIMULATION AND INNOVATION IN LANDSCAPE PRACTICE

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As landscape architects respond to the challenges of biodiversity loss, climate change, and urban transformation, new digital tools are redefining the way we design, simulate, and manage landscapes. This abstract presents an emerging body of innovative practice that integrates Digital Landscape Twins and Building Information Modelling (BIM) into the core of landscape architecture.

Digital Landscape Twins offer real-time, data-rich models that simulate ecological processes, plant growth, seasonal dynamics, and environmental performance. When paired with BIM—used to organise spatial, botanical, and material data into a coherent system—they enable a form of landscape practice that is predictive, iterative, and grounded in ecological intelligence.

This approach supports a new generation of multifunctional and responsive landscapes. Practitioners can simulate a planting strategy's evolution over time, test species combinations for biodiversity gains, or evaluate microclimatic effects through seasonal leaf cover. By modelling plant behaviour (e.g., shading, evapotranspiration, root depth, flowering cycles) within digital twins, designers can anticipate how landscapes perform in time—not just how they look at the moment of completion.

Moreover, this method allows for design at eye level. Using real-time visualisation tools (e.g., Unreal Engine, Rhino, or Twinmotion), designers can inhabit their proposals, testing spatial experience, perception, and accessibility. This immersive dimension enhances human-centred design, reinforcing the social and cultural relevance of ecological interventions.

Digital Landscape Twins are not just representational—they are operational. They enable dynamic collaboration between disciplines (e.g., ecology, engineering, architecture), allowing design teams to coordinate complex landscape systems with precision and foresight. BIM-based workflows structure the project from concept to construction and maintenance, linking spatial form to performance data, materials, and life-cycle costs.

Across Europe, these tools are now being used in public space redesigns, agroecological projects, climate parks, and biodiversity corridors. They are particularly powerful in scenarios where multiple futures must be imagined and tested—such as urban flooding, habitat fragmentation, or soil regeneration. In each case, the combination of digital twin simulation and BIM-driven design opens space for experimentation, iteration, and dialogue.

In sum, the integration of Digital Landscape Twins and BIM in landscape architecture marks a shift from drawing-based to system-based practice. It enhances our capacity to intervene in complex, living systems with clarity, rigour, and imagination—pushing the boundaries of what landscape architecture can do in an era of planetary urgency.

OPEN TRACK

CONFERENCE TRACK 6: THEMATIC TRACK OVERVIEW AND OBJECTIVES

The five thematic tracks have been designed with the idea of providing an integrated discussion about agriCULTURAL landscapes and the role of landscape architecture and related disciplines in designing the transition. Do you have a perspective on the topic that does not fit well to any of the five above themes? Then this ‘open theme’ section is the right place for you. However, make sure you are referring to the conference overall theme and responding to the four cross-cutting questions. This is also the place for discussing planning and design projects with a very practice-led approach, or design studio work.

ENGY FARRAG, Dr.
Alasala, Dammam, Saudi Arabia

SHAPING COMMUNITY WELL-BEING: THE INFLUENCE OF (AGRI)CULTURAL LANDSCAPES ON HEALTH AND SOCIAL COHESION

Agricultural landscapes, often primarily viewed through the lens of food production, offer a range of ecosystem services and cultural values that contribute significantly to human well-being. This study explores the multifaceted influence of these landscapes on community well-being, examining the complex interplay between environment, health, and social cohesion. This research investigates how agricultural landscapes, encompassing both cultivated fields and associated natural elements, shape physical and mental health, foster social connections, and contribute to a sense of place. Employing a mixed-methods approach, the study examines the relationship between access to and engagement with agricultural landscapes and indicators of well-being, such as physical activity levels, mental health status, social interactions, and community attachment. Preliminary findings suggest a positive correlation between proximity to and active participation in agricultural activities and improved well-being outcomes. Furthermore, the study identifies key factors influencing these relationships, including landscape characteristics, community demographics, and cultural values. By elucidating the mechanisms through which agricultural landscapes contribute to community well-being, this research aims to inform policy and planning initiatives that promote sustainable agricultural practices and enhance the social and environmental benefits derived from these vital landscapes.

MENGYANG NI, PhD. Candidate
University of Edinburgh, Edinburgh, United Kingdom

ACCESSIBILITY AND DAILY USE OF LANDSCAPE FOR THE FLOATING POPULATION - AN ENVIRONMENTAL JUSTICE INQUIRY IN BINJIANG DISTRICT, HANGZHOU, CHINA

Consideration of environmental justice allows us to investigate the inequality that may be present in different residents' living environments. Much of the environmental justice research to date concerns environmental 'hazards', such as pollution or flooding, rather than 'benefits'; the right of access to potentially beneficial urban landscape resources has been given relatively low priority. Further, while researchers have paid particular attention to some socially disadvantaged groups, such as disabled people and low-income groups, there has been less attention paid to the 'floating population' of internal migrants moving to find work within China. Such populations are living and working in cities other than their officially registered place of residence. This population movement has increased considerably between cities in recent years, and these 'floating' people may suffer unfairly from variations in access to landscape and its use. For a deeper understanding of this dimension of environmental justice, it is essential to investigate the situation of the floating population in obtaining urban landscape resources. The research established a hypothesis that the floating population suffers environmental injustice in cities when they obtain or try to obtain benefits from the landscape environment through visits to public green spaces. Based on the distribution of landscape resources and population, this research first used GIS mapping to find the spatial difference between floating and registered groups, then explored the potential inequality of obtaining public green spaces by applying a modified technique called two-step floating catchment area - with improvements of entrance, travel time and diversity (2SFCA-ETF). It was originally used in the medical field by Luo and Wang in 2003, then some scholars have extended its application to landscape research. 2SFCA-ETF based on distance analysis, quantified both the public green spaces' impacts and users' requirements through two times calculations. The results show that unbalanced distribution of public green space, and a clear inequality in obtaining the benefits of public green spaces for the floating population. Secondly, through the questionnaire survey, the evaluations from both floating and registered respondents indicate different opinions on the use of public green space. The questionnaire also counts the two groups' preferences for using public green space (favourite functions), which are compared with the data from on-site observation - activities and behaviours. The result is that public green spaces do not meet the requirements of the floating population in most cases. The investigation found different tendencies of function use and potential spatial isolation between the two groups. Finally, the research discussed perceptions and practices in relation to public green space planning, design, and management with professional landscape architects and government specialists. The findings offer support for the hypothesis of environmental injustice and explore possible improvement measures.

MARTIN VAN DEN TOORN
Delft University of Technology, Faculty of Architecture, Delft, Netherlands
The Budapest School of Landscape architecture, Budapest, Hungary

NEW AGRICULTURAL LANDSCAPES; THE ROLE OF LANDSCAPE PLANS IN THE PLANNING AND DESIGN OF RURAL LANDSCAPES

Core of the landscape development in the rural landscape nowadays is the site, its history and the agricultural policy. For Europe the Common Agricultural Policy (CAP) is a dominant influence of how the landscape will look like.

In this paper we investigate landscape development in relation to agricultural use in the past, present and future. The research question is: what has been and what could be the role of landscape architecture in the planning and design of the rural landscape in the long run?

The research methods are mixed and largely based on the case study approach. The research materials comprise publications, landscape plans and fieldwork. The focus is on the Dutch situation with relations to other northwestern European countries. In the first part we will give a brief overview of historical development of agriculture and the rise of the rural landscape. In the second part we will give a short description of the postwar developments in the Dutch rural landscape and what landscape architects contributed in the giving form to landscape development in the rural landscape. In the last part we will develop backgrounds for an approach to landscape development in the context of climate change.

One of the conclusions of this paper is that planning and design of the landscape development in the long run will need to integrate energy transition, improving water management and creating comfort in the daily living environment of people with landscape policy and the site as natural, socio-economic and cultural system. Food production has to be considered in relation to both the rural, the urban and infralandscapes in an integrated approach. Landscape architecture and landscape design form an essential contribution to such an integrated approach.

MONICA VERAS MORAIS, PhD. Candidate
Delft University of Technology, Delft, Netherlands
SASKIA DE WIT, Dr.
Delft University of Technology, Delft, Netherlands

HARNESSING SOCIAL PROCESSES: EXPLORING DESIGN, GOVERNANCE AND CHANGE IN SHARED RESIDENTIAL GARDENS

Recognising the inseparability of humans and nature, urban landscapes are increasingly understood as social-ecological systems, where social and ecological processes are deeply intertwined. However, how design can sustain these systems over time remains uncertain and the capacities of social processes are often overlooked. Gaining insight into how social dynamics shape urban environments while embedded within natural systems is a crucial step in leveraging their potential to inform landscape design, necessitating an interdisciplinary perspective.

This contribution navigates the intersection between landscape design and governance as a means to understand how social dynamics, alongside ecological ones, can enrich the design process. To that aim, it explores the learning potential of gardens shared among multiple residents in housing developments. These gardens are subject to continuous change, negotiated between human and non-human actors in a somewhat controlled environment—making them ideal landscape laboratories.

A qualitative analysis method is developed to examine three Dutch housing developments: (1) Lanxmeer (Culemborg, Gelderland), an ecological neighbourhood where multiple shared gardens are integral to its urban design; (2) Kersentuin (Leidsche Rijn, Utrecht), a development where shared gardens intersperse five housing blocks across private and public realms; and (3) Vrijburcht (Steigereiland, Amsterdam), where a single enclosed shared garden is embedded within a mixed-use residential and working complex. In these cases, long-term community collaboration with municipal authorities has played a key role in governing public, semi-public, and private green spaces for over two decades.

The methodology to analyse the evolving interaction between design and governance across time and varying levels of complexity focuses on the changes the gardens have undergone since their implementation, including the location and timing of modifications, as well as the motivations, actors, and interactions driving these transformations. This methodology integrates design composition analysis, stakeholder analysis encompassing both human and non-human actors, and decision-making analysis, examining both formal and informal interactions. Data collection is based on detailed observations made during recurring site visits, and interviews with key informants, complemented by maps, satellite imagery, design plans, and governance documents.

By comparatively analysing the three cases, design principles for shared residential gardens are formulated, offering insights into how spatial design can provide a framework that supports ongoing changes driven by social processes, within which ecological dynamics continue to unfold.

HELOISA ANTUNES, MSc
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Porto, Portugal
ISABEL MARTINHO DA SILVA, Dr.
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Porto, Portugal
SANDRA COSTA, Dr.
Birmingham School of Architecture and Design, Birmingham, United Kingdom

MAPPING PRODUCTIVE LANDSCAPES OVER TIME: A METHODOLOGICAL APPROACH TO IDENTIFYING AND CLASSIFYING FOOD PRODUCTION AREAS

The significance of mapping productive landscapes to comprehend the sustainability of urban food systems has been increasingly highlighted in recent years. This emphasis is reflected in methodologies (e.g., *The CPUL Opportunity Mapping Method*, Bohn & Tomkins, 2024.) and case studies (Pulighe & Lupia, 2016) that contribute to the advancement of this essential practice in supporting urban resilience strategies.

This study aimed to map the productive landscape of Matosinhos, a municipality in the Greater Porto area, in northern Portugal. Matosinhos presents an interesting territorial configuration, comprising a consolidated urban core, followed by a belt of dispersed urbanization, while maintaining an agricultural area dedicated to dairy production. In a pioneer initiative among Portuguese municipalities, the planning professionals of Matosinhos began mapping agricultural fields to incorporate them into the municipal green infrastructure (GI) plan, classifying them under the categories of *Agro-parques* (agricultural parks) and *Hortas Urbanas* (institutional allotment gardens). This initial effort reflects the municipality's intent to safeguard land with food production potential against urbanization pressures, ensuring the preservation of a public reserve of arable land.

Building upon the municipal GI plan, initial studies have been conducted to identify suitable green areas for planning food-productive spaces (Antunes, 2024). To enhance the understanding of the municipal productive landscape, this study analyzed aerial imagery from the years 2003, 2013, and 2021, exploring the evolution of Matosinhos' productive landscape through a timeline with approximately ten-year intervals. A methodology for interpreting these aerial images based on spatial patterns was developed to identify food production areas, classify them in typologies and quantify the extent of each typology within the territory over time.

The analysis yielded several key insights, notably: the contrast between the total productive land dedicated to food supply for the local population versus the land allocated for fodder production; the presence of numerous community gardens and s*pontaneous food production areas* thriving without any support from the municipal urban agriculture program (*Horta à Porta*), especially during crisis times (2007-2008 Financial Crisis and Covid-19 pandemic), indicating a demand for increased municipal support for local food production; and the loss of fertile land to urban sprawl, particularly in the peri-urban belt adjacent to the urban core.

The results of this study reinforce the importance of a territorial food security strategy that protects and enhances agricultural land and highlights the need to expand this approach to meet the population's demand for new food production areas—an expressed necessity that is already evident in the landscape itself.

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ZHENG WANG, PhD. Candidate
The University of Edinburgh, United Kingdom

DEVELOPING A MULTI-FACETED UNDERSTANDING OF THE OUTDOOR ENVIRONMENT DESIGN FOR THE HEALTH AND WELL-BEING OF NURSES IN UK HOSPITALS

BACKGROUND

The well-being of healthcare workers, particularly nurses, has become a significant concern in the UK due to high levels of work-related stress, burnout, and mental health issues. Research has demonstrated the positive effects of green spaces on physical and psychological health, yet little is known about how outdoor environments in hospital settings contribute to staff well-being. Given that many UK hospitals have campus-style layouts, optimally designed outdoor spaces could serve as cost-effective interventions to improve nurses' health and workplace satisfaction. This study aims to develop an evidence-based framework for designing hospital outdoor environments that enhance nurses' well-being.

OBJECTIVES

- Identify the key health and well-being challenges faced by nurses in UK hospitals.
- Establish the role of outdoor environments in supporting nurses' health and well-being.
- Define design parameters that optimize hospital outdoor environments to maximize well-being benefits.

METHODS

A mixed-methods approach will be employed, incorporating qualitative and quantitative research strategies across three data collection stages. Certain stakeholders will be involved to generate a multi-faceted understanding of the subject.

QUALITATIVE INTERVIEWS

Open-ended interviews with hospital management, and landscape designers will explore their perspectives on workplace well-being, existing outdoor space usage, and design considerations.

OBSERVATIONAL STUDIES

Direct observations and behavior mapping will document how nurses engage with outdoor spaces, identifying preferred locations, usage frequency, and environmental features influencing their choices.

SURVEY STUDY

A questionnaire survey will assess nurses' well-being, workplace factors associated with their workplace well-being, and green space usage patterns.

NATURE-BASED INTERVENTIONS

A controlled study will investigate the short-term psychological effects of outdoor exposure. Participants will complete a structured 20-minute nature walk and complete pre- and post-intervention assessments of their affects and perceived restorativeness.

RESULTS (PRELIMINARY)

Early findings suggest that while outdoor spaces exist in hospital settings, they are often underutilised due to accessibility barriers, lack of seating, and perceived time constraints.

Initial interviews indicate that nurses recognise the potential benefits of green spaces for stress relief but face some barriers to use including accessibility (i.e. not enough seating near them), lack of time (i.e. distance to some green spaces), and weather conditions (i.e. not enough shelters).

Observational data highlight variations in usage based on proximity to clinical areas, environmental quality, work schedules, and user clustering (staff users and public users). The intervention study aims to quantify the immediate psychological benefits of structured nature exposure.

CONCLUSION

This study will provide empirical evidence on the relationship between hospital outdoor environments and nurses' well-being, offering actionable design and policy recommendations for healthcare institutions. Findings will inform hospital planning and policy to optimise outdoor spaces as supportive environments for nurses, ultimately contributing to improved staff retention, reduced burnout, and enhanced workplace well-being.

TAIKA TOMMILA
Häme of Applied Sciences, Hattula, Finland

FROM LAWNS TO SHRUBS: INCREASING BIOMASS-BASED CARBON STORAGE ON ROAD VERGES

Many cities aim for carbon neutrality, which requires both significant emission reductions and an increase in carbon-sequestering vegetation. The larger the vegetation biomass, the greater its carbon storage, since about half of a plant's dry weight consists of carbon. Increasing vegetation in cities is challenging because urban areas are becoming denser. This densification occurs as populations concentrate in cities and new housing must be provided for incoming residents. A key question is how to increase vegetation in the urban fabric when space is limited and many green areas, such as parks, are partly reserved for recreational use.

In this study, road verges were identified as a promising area for increasing vegetation and thereby enhancing urban carbon storage. Road verges refer to strips of land alongside roads. Globally, the total area of road verges has been estimated to be 270 000 km^2— roughly the size of England (Phillips et al., 2020).

The study calculated how much more carbon could be stored if all lawns on Helsinki's road verges were replaced with small shrubs. The area of lawns on Helsinki's road verges was determined using the city's map service data. Vegetation data were filtered to exclude everything except lawns, resulting in a total area of 2 269 944 m^2, which corresponds to approximately 1.1% of Helsinki's land area.

Previous research shows that lawns store carbon an average of 0.15 kg C/m^2 (Davies et al., 2011). Three shrub species approved by the city of Helsinki for planting on road verges were used: *Diervilla lonicera*, *Spiraea japonica* 'Little Princess', and *Stephanandra incisa* 'Crispa'. Their average carbon storage is 3.56 kg C/m^2 (Tommila et al., 2024). When multiplied by the lawn area, the carbon storage is 340 491.6 kg for lawns and 8 081 000.6 kg for shrubs. Thus, replacing lawns with shrubs could increase carbon storage by 23.7 times.

The study found also that shrub species selection and planting density have a significant impact on the total carbon storage. By choosing high carbon-storing species, such as *Diervilla lonicera*, and optimizing planting density, substantial increases in carbon storage can be achieved.

Given the broad extent of road verges, they represent a major opportunity for integrating vegetation into urban environments. While trees are often prioritized in urban greening efforts, shrubs offer an alternative in locations where safety and space constraints limit tree planting. This study demonstrates that small modifications in plant choices and planting densities can yield substantial gains in carbon storage and create new cultural landscapes.

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RICHARD STILES, Prof. em.
Vienna University of Technology, Vienna, Austria
ELKE MERTENS, Prof. Dr.
University of Applied Sciences, Neubrandenburg, Germany

LANDSCAPE ARCHITECTURE: DESPERATELY SEEKING VISIBILITY – WICKED PROBLEMS CALL FOR CUNNING SOLUTIONS

A decade before the authors drafted the 'Visibility Taskforce Manifesto', that forms the starting point for this paper, the very first sentence of Ian Thompson's excellent '*Very Short Introduction to Landscape Architecture*' eloquently set out the challenge with which we are faced:

"Although landscape architecture plays an important role in shaping the everyday places in which many of us live and work, and although it is rooted in practices of manipulating the environment that have a history at least as long as that of architecture or engineering, *in many countries it does not enjoy widespread recognition*."

Thompson, 2014 p.ix (emphasis the authors)

Little has changed – it is still difficult to find many countries in which the profession does find 'widespread recognition'. Whenever landscape architects get together, it is not long before talk turns to the problems of the visibility and the recognition of the profession. This is manifested in many ways, from the lack of credit given to landscape architecture projects and the difficulty in recruiting students, to the apparent ignorance of the very existence of the profession on the part of journalists, politicians and the public in general. We are certainly still a long way from landscape architecture being recognised as "*the most comprehensive of the arts*" as the Jellicoes foresaw in their majestic book '*The Landscape of Man*', half a century ago.

All this suggests we are dealing with what is commonly known as a 'wicked problem' – one that is long-standing, deep-rooted, widespread and complex. So it is perhaps no surprise that little progress has been made in solving it since 1948, when the founders of IFLA, which included Geoffrey Jellicoe, set themselves the goal: "*...to raise universally the prestige of landscape in the public mind*".

The approach proposed for developing a strategy to address the visibility challenge embraces the idea of 'obliquity'. "*Obliquity is the idea that complex goals are often best pursued indirectly. In general, oblique approaches recognise that complex objectives tend to be imprecisely defined. These objectives contain many elements that aren't necessarily or obviously compatible with each other. Furthermore, we learn about the nature of the objectives and the means of achieving them during a process of experiment and discovery*" (Kay, 2010).

A direct approach might involve focussing on writing newspaper articles, taking part in television interviews and posting on social media, but while these can be effective in the short-term, they are quickly forgotten and must be continuously repeated if they are to have an impact. An indirect approach, on the other hand, is based on the belief that successful professions are deeply embedded in their societal context. The first stage in the strategy was, therefore, to look more closely at the structure of the societal context and to consider how the typical professional ecosystem fitted into this. Because the phenomena which characterise the visibility problem are all closely intertwined, a cunning plan is needed to cut through the Gordian Knot and address them one by one.

YOON HAN
Häme University of Applied Sciences, Hämeenlinna, Finland
OUTI TAHVONEN
Häme University of Applied Sciences, Hämeenlinna, Finland

COMBINING URBAN AGRICULTURE METHODS IN DENSE URBAN RESIDENTIAL ENVIRONMENTS USING CIRCULAR PRINCIPLES

Urban agriculture is part of green infrastructure that provides ecosystem services, including provisioning, regulating, supporting, and cultural services. Of these, food production/provision represents the primary service expected from urban farming. However, studies show that other ecosystem services, such as improvement of physical and psychological well-being, regulating environmental conditions, and enhancing community resilience, are perceived to be more important by the public, especially in urban areas in the global north (Zhao et al., 2024). Despite many benefits, urban agriculture tends to compete with other urban green infrastructures for limited urban land space. Such competition requires forms and methods for urban agriculture to diversify.

Urban agriculture has diverse forms, including community gardens (allotments), rooftop gardens, indoor vertical gardens, urban greenhouses, home gardens, and (aquaponic/institutional/underground) farms. In dense urban environments, multiple forms of urban agriculture can be combined maximising their synergies and services, while minimising their trade-offs and disservices. Trade-offs in urban agriculture include water/soil contamination and excessive energy/resource use (Pradhan et al., 2024). To minimise trade-offs, it is necessary to incorporate circular (3R) principles – reduce, reuse, and recycle – when combining multiple forms of urban agriculture (DeJesus & Aguiar Borges, 2024; Kirchherr et al., 2023).

The study intends to explore how circularity can be considered for planning combined forms of urban agriculture in dense urban residential environments. In the initial exploration, different forms of urban agriculture are categorised into three different cultivation environments in which the means of managing growing factors are different: open, confined, and closed. An open cultivation environment allows free gas exchange and soil water movement. A confined environment limits contact with the atmosphere (e.g. tunnels) or subsoil (e.g. podium plantings). A closed environment has no direct soil or air connection, as seen in vertical farming or some greenhouses. The cultivation environment forms an ecosystem involving diverse human and nonhuman actors, including biotic and abiotic actors of natural ecosystems, and sociomaterial actors, such as participants/stakeholders, data/knowledge, technology, or resources. Diverse actors constitute a network of interrelational dynamics, and analysing the network can provide insights (H. Farhangi et al., 2020) into how the cultivation environment categories can be embedded with circular principles. Different cultivation environments generate different networks by different sets of actors with different kinds of dynamics. These networks can assume generic conditions in the initial conception, but each of these networks changes upon implementation following context-specific conditions of the site/case. Here, context-specificity also can present opportunities for combining different urban agriculture methods with different cultivation environments, potentially increasing sustainability with circular principles. According to the observed opportunities, options combining different methods can be conceived, and their networks can be comparatively analysed to assess different options and gain insights in planning phases. The analyses can reveal not only the circularity of the cultivation environment's ecosystems, but also how the circularity can be engendered through interconnected dynamics with sociomaterial ecosystems. The study develops a framework for comparative network analyses, to be applied to the cases for urban agriculture planning in dense urban residential environments.

ESZTER KARLÓCAINÉ BAKAY, Dr.
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
MARTIN CZIROK
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
ANDREA ORSOLYA WALLNER
Hungarian University of Agriculture and Life Sciences, Budapest, Hungary

SUSTAINABLE LANDSCAPE ARCHITECTURE SOLUTIONS FOR THE CHALLENGES OF INDUSTRIAL ANIMAL HUSBANDRY - A DEVELOPMENT CONCEPT FOR AN EXHIBITION FARM

The creation of a sustainable agricultural landscape and the enhancement of biodiversity are among the most pressing challenges of our time. In addition to ensuring the security of food production, it is essential to establish resilient landscape structures that adapt to the effects of climate change while meeting increasing qualitative and quantitative demands. Achieving these goals requires a new approach to transforming large-scale agricultural systems.

Within the framework of a grant project, researchers from the Department of Animal Husbandry at the Hungarian University of Agriculture and Life Sciences have planned the establishment of an exhibition farm on the university campus in Gödöllő. Concept plans were prepared by master's students from the university's Institute of Landscape Architecture. The project's objective is to create an exhibition space that showcases sustainable solutions for industrial animal husbandry while also serving educational and informational purposes. The primary task of the landscape architecture students was to design the spatial structure and visitor infrastructure of the model farm, with a particular focus on enhancing animal protection and comfort as well as addressing ecological considerations.

As part of the design process, students established enclosures on a 1.17 hectare grassy area, where various cattle and sheep breeds suitable for industrial animal husbandry could be kept for demonstration purposes. The landscape architectural planning focused on several key challenges. Interaction with local wildlife posed a veterinary risk due to the potential transmission of diseases; therefore, appropriate wildlife protection fencing was necessary, designed to blend visually with the landscape. The proper and sustainable management of manure generated during animal husbandry was another critical task. To address this, a storage system was implemented alongside an educational nature trail that illustrates decomposition and recycling processes. Within the enclosures, tree planting and shading structures were incorporated to improve animal comfort. For visitors, observation points and a petting area were designed, separated by a Ha-Ha ditch, a traditional landscape architectural feature. In planning maintenance and visitor pathways, special attention was given to harmonizing mechanized livestock operations with tourism functions.

Thus a sustainable, environmentally friendly exhibition farm can be created that integrates agricultural and landscape architectural aspects. This low-impact solution allows for mechanized animal husbandry while providing an engaging and educational experience for visitors. The project's design experiences highlight that industrial animal husbandry can be made more ecologically sustainable through appropriate landscape architectural interventions. Understanding the challenges of animal husbandry and identifying key points of integration with colleagues were essential to this process. The town of Gödöllő, as a prominent center for hungarian agricultural education, can gain a new identity-strengthening attraction that contributes to strengthening local community ties and expanding the practical elements of education.

IVAN MÁLEK, PhD. Candidate
Slovak University of Agriculture in Nitra, Slovakia
ATTILA TÓTH, Assoc. Prof. Dr.
Slovak University of Agriculture in Nitra, Slovakia

URBAN FARMING ON GREEN ROOFS AND GREEN WALLS

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As urbanization continues to accelerate globally, the integration of green infrastructure into the built environment has gained increasing significance. Among the most promising solutions, green roofs and green walls offer a sustainable approach to mitigating urban challenges, including climate change, air pollution, urban heat islands, storm- and wastewater management as well as food security. We explore urban farming as a potentially important function of these green architectural elements, emphasizing their current and future role in sustainable architecture and urban planning. Green roofs and green walls provide numerous ecological and economic benefits, including temperature regulation, stormwater management, and biodiversity enhancement. More recently, urban farming has emerged as a viable extension of these green spaces, contributing to local food production and resilience against food insecurity as well as promoting the creation of local communities. Through hydroponic, aeroponic, and soil-based techniques, crops such as vegetables, herbs, and even some fruit-bearing plants can be cultivated in limited urban spaces. These systems not only reduce the carbon footprint associated with food transportation but also promote circular economies by utilizing organic waste and recycled water sources. Depending on the scale and type of urban farm or garden, they can also have social and psychological benefits. Architectural and urban planning practices are increasingly incorporating green roofs and walls into high-density cityscapes. In contemporary urbanism, these features are integrated into residential, commercial, and industrial buildings, enhancing both aesthetic and functional aspects. Adding food production to the already impressive portfolio of benefits and services, these green elements could further increase their attractiveness to stakeholders and investors. Despite these benefits, challenges remain in implementing and scaling up urban farming through green roofs and walls. Structural limitations, sustainable water supply management, health risk associated with pollution and policy frameworks require further development to support widespread adoption. Looking ahead, urban farming within green roofs and walls will play a pivotal role in shaping future cities. With continued innovation in agrotech and sustainable design, these systems will become more resilient, adaptive, and productive. We argue that integrating food production into urban architecture is not only an environmental necessity but also a step towards self-sufficient, liveable cities. By reimagining the role of buildings as active components of food networks, urban farming can help create a more sustainable and equitable urban future.

LARS HOPSTOCK, Jun.-Prof. Dr.
University of Kaiserslautern-Landau (RPTU), Kaiserslautern, Germany

‘[C]OMING TO RECOGNISE LANDSCAPE WITHIN THE REALM OF NATURE’: CONCEPTS OF LANDSCAPE IN 20TH-CENTURY GERMAN PHILOSOPHY AND THEIR RESONANCE IN LANDSCAPE ARCHITECTURE AND DISCOURSE SINCE THE POSTWAR PERIOD

This paper begins with a brief overview of the rise of a socio-constructivist understanding of ‘landscape’ in recent decades, then shifts attention to the 20th century and the German intellectual discourse on landscape as a cultural-aesthetic concept. By tracing it back to the influential philosopher of the late German Empire and pioneer in the emerging field of sociology, Georg Simmel (1858–1918), represented in the title above by a fragmentary quote from 1913, the paper outlines key neo-Kantian and culturalist philosophical perspectives on landscape. Apart from Simmel, the focus is on prominent postwar contributions, such as those by philosopher Joachim Ritter (1903–1974) and sociologist Lucius Burckhardt (1925–2003), whose landscape theories were integral to late-20th-century German landscape architecture curricula and still reverberate in contemporary landscape research and even in current policies related to the European (cultural) landscape today.

The paper examines how 20th-century landscape architects may have directly or indirectly drawn inspiration from these philosophical positions in formulating their views on ‘landscape’. The 20th century, the period during which landscape architecture emerged as an academic discipline, also saw the rise of essentialist landscape notions and the development of landscape studies, exemplified by fields like landscape ecology and phytosociology. The question arises as to how these two approaches to landscape – the traditional aesthetic one and the newer scientific one – coexisted, and whether there was a clear separation between them or if they blended in certain contexts. This issue is particularly relevant in two key periods: during the politicisation of the landscape discourse in the context of Nazi ‘blood and soil’ ideology, and in the postwar decades (c. 1950–1970), when a new planning practice sought to distance itself from these ideological foundations while striving to develop a meaningful theoretical framework for modern landscape planning.

Several key figures, whose careers spanned both periods, are briefly examined. Some, like Heinrich Wiepking (1891–1973), promoted a racially charged culturalist perspective that they were compelled to abandon in the postwar period, commonly by strategically shifting to (ostensibly) scientific grounds. Progressive figures like Hermann Mattern (1902–1971), on the other hand, were able to assert their culturally-oriented arguments more strongly than ever, having kept a distance from völkisch justifications during the Nazi era – and thus having no need to renounce culturally-oriented definitions of landscape in the postwar period. In this light, the paper explores how different figures refined or redefined their concept of landscape.

Today, we are facing fundamental changes in our landscapes. At the same time, posthumanist and neo-materialist perspectives reject the nature-culture divide altogether. It seems that the concept of landscape has yet to be explicitly and critically examined within these new frameworks. Given this, ‘landscape’ warrants renewed attention. What questions should we raise, and how should we engage with the positions put forward by 20th-century landscape architecture?

JUANJO GALAN, Assoc. Prof. Dr.
Universitat Politècnica de València
SERGIO PALENCIA, Assoc. Prof. Dr.
Universitat Politècnica de València
ERIC GIELEN, Assoc. Prof. Dr.
Universitat Politècnica de València

FLOODABLE LANDSCAPES AND CLIMATE CHANGE: A MULTIDIMENSIONAL APPROACH IN THE METROPOLITAN AREA OF VALENCIA

The catastrophic floods that took place in the Metropolitan Area of Valencia in the night of the 29th of October 2025, covered more than 300 km2, 25% of which were occupied by residential and industrial areas. Several major infrastructures were affected and around 50000 dwellings and more than 130000 vehicles were heavily damaged or destroyed. The material costs are estimated in more than 25000 million euros and, what is worse and irreparable, more than 220 people died in that dramatic night. Despite floods are an intrinsic risk in alluvial plains of Mediterranean areas, some unavoidable questions have emerged and need urgent answers: How is climate change increasing the frequency and intensity of floods? Are the existing hydrological models and the areas designated as highly floodable adequate for a new climatic scenario? Was the development of urban areas and infrastructures during the last decades aligned with the flooding risks? even more, were the emergency plans and protocols adequate to face this kind of situations? In all this process we seem to have forgotten that it was the repetition of periodical floods what created the fertile plains where now agricultural fields, densely populated towns, industrial estates and infrastructures thrive. Assuming the landscape as any portion of the territory as its is perceived by people and whose character is the result of the action and interaction of natural and/or human factor, an overarching question arises. Was the fast transformation of the landscape during the last decades sensitive to the dynamics of nature? The hypothesis behind this research is that a landscape approach can promote a more resilient spatial planning and a stronger connection between people and place, with the subsequent benefits in risk management and in the avoidance of human and material losses. This hypothesis and all the proposed questions are investigated in the Valencian case through a triple lens. Firstly, the effect of spatial transformations in the risk of flooding in Valencia is evaluated. Secondly, the influence of hydrological planning, be it through hard infrastructures or soft-green infrastructures, is assessed and better connected with spatial and environmental planning. And thirdly, the influence of emergency planning and people's understanding of the specific characteristics and risks of their territory is analysed in order to improve governance models and landscape management practices. Overall, the anticipated results are expected to bring new light on the transformative and adaptive measures that we will need to put in practice to respond to the risks associated to climate change in highly urbanized areas.

MARIANA VELUDO, PhD. Candidate
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Porto, Portugal
CLÁUDIA OLIVEIRA FERNANDES, PhD. Candidate
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Porto, Portugal
CATARINA PATOILO TEIXEIRA, Dr.
BIOPOLIS/CIBIO - Research Centre in Biodiversity and Genetic Resources, Vairão, Portugal
University of Porto, Portugal
MARIA IGNATIEVA, Dr.
UWA Design School, The University of Western Australia, Perth WA, Australia

GOVERNANCE, MANAGEMENT, AND MAINTENANCE ON URBAN GREEN SPACES: A SYSTEMATIC LITERATURE REVIEW

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More than ever cities are dedicated to bringing nature closer to responding to current environmental concerns. Urban green spaces (UGS) are fundamental cultural landscapes for the sustainable development of cities, providing multiple benefits such as climate change adaptation, biodiversity conservation, and improved health and quality of life. Theoretically, more green spaces means that these concerns are addressed, but how many of these spaces thrive or achieve their full potential and functions? Why are some spaces more successful than others? The intentional design of a sustainable UGS is only the beginning. Green spaces are not static elements, these dynamic living environments are always in constant change and evolution. So how can we guide the change for these spaces to work and fulfill our needs?

Governance, Management, and Maintenance of green spaces are fundamental for their life success and cultural significance. With proper, adaptive, and sustainable management and maintenance, we can condition, regulate, and guide these changes to meet our goals. These actions help to conserve these green spaces and to trigger the services they can provide. For instance, inappropriate or absence of maintenance can negatively impact the functions intended for a certain urban green space. Even if understood as imperative for a good, healthy, and prosperous UGS, these three concepts, can be open to different interpretations either by cultural traditions and social values, economic constraints, and priorities, political and institutional organizations frameworks, or even teams' technical level of expertise and capacity. Some cities might depend on municipalities as the agent of governance, others will recur to community involvement to ensure the maintenance of the green space. Although important, these concepts are underexplored in research and rarely analyzed side-by-side.

A systematic literature review was conducted to understand the state of the art regarding UGS governance, management, and maintenance. The literature research was carried out through a search string based on the three main concepts, in databases (WOS, Scopus, ...) to collect references relevant to the topic, such as journal articles and book chapters. In addition, grey literature was also consulted to access and gather more technical documents and policies, usually not published in traditional scientific databases and, therefore, not captured by the search string process. The gathered publications were classified and assessed according to the review goals. The evolution of the three concepts (Governance, Management, and Maintenance) was analyzed and the definitions were further compared to understand the main differences, applications, and scopes. Political frameworks and laws regarding UGS governance were also explored, as well as UGS management and maintenance types, models, and available tools. This research aims to contribute to a better understanding of the dynamic nature of urban green spaces, identifying gaps in current strategies and research opportunities regarding creative, sustainable, and adaptive governance, management, and maintenance of UGS.

ZHEN XU, Prof. Dr.
Nanjing Forestry University, Nanjing, China
YUE DAI
Nanjing Forestry University, Nanjing, China
LINGYUN HAN, Prof. Dr.
Jiangsu Second Normal University, Nanjing, China

TENTS AND TABLES IN URBAN PARKS: EXPLORING THE IMPACT OF INCREASED CAMPING ON PUBLIC SPACE USAGE

In recent years, urban parks have seen a significant rise in self-supplied camping activities, where visitors bring their own tents and tables. While urban camping has been a sporadic activity in city parks, its occurrence has surged in the post-pandemic period, particularly in Chinese cities. This shift has transformed both the physical landscape and the social dynamics within urban parks, introducing new spatial usage patterns and recreational experiences. This study explores how the increase in self-supplied camping activities has reshaped park space usage and social interactions, highlighting the spatial behaviors of campers and the implications for park design and management.

The research was conducted in a large urban park in Nanjing, China, during the spring and autumn seasons, using a mixed-methods approach. Drone photography was employed to capture spatial patterns and the distribution of park users throughout the day, while standardized surveys were administered to over 300 participants to understand the behaviors, attitudes, and socio-economic characteristics of campers and general park visitors. In-depth ethnographic interviews with more than 50 individuals further enriched the analysis, providing qualitative insights into campers' motivations, their social dynamics, and their experiences in these park spaces.

The findings reveal that urban camping, though not set in wilderness environments, offers a "dose of nature" that allows for a more relaxed, less structured recreational experience. The main motivation for camping is the desire to find a balance between the fast-paced urban lifestyle and the need for more intimate, communal outdoor activities. Campers tend to choose open, scenic areas within the park, such as elevated spots or areas near water, with good visibility and spatial flexibility. This spatial choice facilitates social interaction, creating semi-private spaces for family gatherings and informal socialization.

The study also highlights significant differences in how various groups use park space. Women campers, for example, are more attuned to the atmosphere and emotional qualities of the space, while children play a crucial role in creating a dynamic and lively environment, contributing to a reduction in screen time and enhancing the park's overall social vibe. As campers increase in number, park usage patterns evolve, leading to new challenges for park design and management. These changes require a reconsideration of how parks can accommodate the growing trend of self-supplied camping, balancing accessibility with the need to preserve natural aesthetics.

In conclusion, this study emphasizes the importance of understanding the evolving role of urban camping in shaping public park spaces. The increase in self-supplied camping activities presents new opportunities for enhancing social inclusion, fostering community connections, and promoting flexible, adaptive park designs. By examining these emerging patterns, this research provides valuable insights for urban planners and park managers seeking to create more inclusive, dynamic, and resilient public spaces that meet the changing needs of urban dwellers.

MAGDALENA BŁASZCZYK, Dr.
Warsaw University of Life Sciences - SGGW, Warsaw, Poland
KINGA KIMIC, Dr.
Warsaw University of Life Sciences - SGGW, Warsaw, Poland

VEGETABLES IN PARTICIPATORY BUDGET PROJECTS – THE CASE OF WARSAW (POLAND)

A Participatory Budget (PB) is a placemaking tool that empowers residents to directly decide how part of the public budget will be spent. It allows for shaping space in line with the needs of local communities. It is, therefore, considered one of the successful democratic innovations of recent years based on an inclusive approach. Social initiatives implemented in PB concern, among others, projects related to the use of plants and their role in improving the health of residents. Edible landscape is one of the threads appearing in the projects. In addition to extensive interventions in urban green areas based on planting useful plants, smaller local or even niche activities are noticed. These include projects of community gardens using vegetables - initiatives integrating residents in joint work on establishing utility gardens and crop consumption, promoting healthy eating habits. Warsaw Participatory Budget (WPB), with its first edition implemented in 2014 as one of the first in Poland, is still developing and popular. The study aimed to identify initiatives for using vegetables as healthy food in projects submitted, accepted, selected in a public vote, and implemented. The number of 9 completed editions was considered - conducted in the years 2014-2023. The obtained results show that vegetables are included in several types of projects, such as utility social gardens in the housing estate space (4 in total), educational and sensory gardens related to the cultivation and acquisition of food (established mainly at kindergartens, schools, nursing homes) (9 in total), educational and ecological workshops on the subject of healthy food consumption (8 in total), organizations of canteens supporting people in need and healthy food fairs (8 in total), utility green areas (1), eco farms (1). In the 9 analyzed editions of the WPB, only 101 projects from the categories mentioned above were submitted, which, in relation to the total number of 20146 submitted and 4929 implemented projects, is a niche activity. Only 31 vegetable-related projects were implemented out of all selected in the vote (<1%), and the majority (70 projects) were rejected at the verification stage or not chosen in the vote. Despite their high health values, vegetables are rarely selected for cultivation in WPB projects, which may result from the need for a large investment of time and work required to maintain them. It may also mean a low social awareness of the importance of vegetables for proper nutrition. Despite this, the studied initiatives should be appreciated, including, in particular, those supporting health education aimed at different age groups of residents, as well as practical activities (i.e., cultivation) supporting the nutritional needs of seniors and people in need, as well as promoting education and gardening skills among the youngest generation.

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