# BOOK OF ABSTRACTS

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

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

## I. SESSION DESCRIPTION

ID: X14

## How food and landscape co-create ecosystem services?

### Hosts:

| | Name | Organisation | E-mail |
|---|---|---|---|
| Host (s): | Marta Derek | University of Warsaw | m.derek@uw.edu.pl |
| Co-host(s): | Sylwia Kulczyk | University of Warsaw | skulczyk@uw.edu.pl |
| | Luis Inostroza | Mendel University in Brno, Landscape Research Institute | luis.inostroza@mendelu.cz |

### Abstract:

In this session we aim to share experiences from research on food within the ecosystem services framework. While food is commonly included as a provisioning service in many ecosystem services classifications, it also serves as an important carrier of other ES –particularly cultural ecosystem services.

Traditionally, food has been deeply embedded in landscapes, shaped by ecological processes, agricultural practices, and social traditions. At the same time, food has influenced how landscapes are managed, perceived, and valued. Exploring this mutual relationship between food and landscape opens new perspectives on how ecosystem services are co-produced through their interaction.

However, as food systems have become increasingly globalised, food has become disconnected – or deterritorialized – from the ecosystems in which it was once embedded. In the process of co-production of ecosystem services (Palomo et al. 2016), the balance between natural and other forms of capitals has shifted, favouring non-natural capitals such astechnological innovations and global trade.

In this session, we invite contributions that explore how the relationship between nature and people is shaped and expressed through food. We welcome presentations that address both environmental and social dimensions, as we believe that bringing these two perspectives together is essential for understanding how food and landscape together co-create ecosystem services
Food for thought:

- Conceptual and methodological approaches linking food, landscape, and ecosystem services
- Natural and social conditions of food production in co-production of ecosystem services
- Food products as linkages between humans and nature
- How local food systems can be integrated into global food supply chains in a sustainable way?
- The sustainability of local food: when is local food sustainable and when is it not?

### Goals and objectives of the session:

To discuss food and landscape within the framework of ecosystem service concept.

## Planned output / Deliverables:

Encourage discussion on food and landscape within the ecosystem services framework; networking and collaboration between researchers interested in this topic.

## Session format:

Lightning Talk Session

## Related to ESP Working Group:

Other

## II. SESSION SCHEDULE

**Room:** A1
**Date of session:** Wednesday 20, May 2026
**Time of session:** 09:00 – 12:30

## Timetable speakers:

| Time | First name | Surname | Organization | Title of presentation |
|---|---|---|---|---|
| 9.00-9.10 | Marta<br>Sylwia<br>Luis | Derek<br>Kulczyk<br>inostroza | Univ. of Warsaw<br>Univ. of Warsaw<br>Mendel University | Intro to the session 1 |
| 9.10-9.15 | Marta | Derek | Univ. of Warsaw | Nature's contribution to food. Is nature valued in local food studies? |
| 9.15-9.20 | Floris | Huyghe | Flanders Research Institute for Agriculture, Fisheries and Food | The place of landscape features in a productive landscape - Analysis of the value creation of landscape feature introduction in an agricultural landscape |
| 9.20-9.25 | Christos | Zoumides | The Cyprus Institute | Co-creating value in mountain agriculture: designing a voluntary quality label to co-produce ecosystem services and rural resilience in Troodos, Cyprus |
| 9.25-9.30 | Julius | Mačiulaitis | Vilnius University | Changes in Co-Produced Ecosystem Services as Consequences of Land Reforms: Integrating Historical Data and Modelling Approaches |
| 9.30-9.35 | Luigi | Servadei | Italian Council for Agricultural Research and Economics (CREA) | Food, landscape, and ecosystem service co-production in rural systems. Evidence from Food Communities and Historic Rural Landscapes in Italy |
| 9.35-9.40 | Frédéric | Joly | Univ. Clermont Auvergne National Research Institute for Agriculture, Food and Environment | Allocating environmental impacts of animal-production to non-provisioning ecosystem services: relative merits of economic and biophysical approaches |
| **9.40-10.30** | **Discussion** | | | |
| **10.30-11.00** | **Coffee break** | | | |

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|---|---|---|---|---|
| 11.00-11.05 | Marta<br>Sylwia<br>Luis | Derek<br>Kulczyk<br>Inostroza | Univ. of Warsaw<br>Univ. of Warsaw<br>Mendel University | Intro to the session 2 |
| 11.05-11.10 | Anabela | Paula | Univ. of Coimbra | How wild edible plants and mushrooms have been approached within the ecosystem services framework: a systematic review |
| 11.10-11.15 | Weronika | Karsznia | Univ. of Warsaw | Local food and food heritage in European Union food policy |
| 11.15-11.20 | Grzegorz | Budzik | Wrocław Univ. of Environmental and Life Sciences | Urban food security and self-sufficiency informing urban food policy in moderate risk-prone areas |
| 11.20-11.25 | Sophia | Philipp | Univ. of Kassel | The role and potential of product marketing in preserving traditional cultural landscapes |
| 11.25-11.30 | Krossy | Mavakala | École Régionale postuniversitaire d'Aménagement et de gestion Intégrés des Forêts et Territoires tropicaux (ERAIFT) | Creating a Wildlife Policy that Integrates Conservation and Extractive Industries |
| 11.30-11.35 | Paula | Bernasconi-Barrios | Univer. de los Lagos<br><br>Univ. San Sebastián | Community gardens as co-produced provisioning ecosystem services in primary healthcare settings |
| 11.35-11.40 | Valasia<br><br>Vassilis<br><br>Lia<br>George N.<br><br>Daniel C.<br>Klervie<br>Viviana<br>Efthalia V. | Iakovoglou<br><br>Litskas<br><br>Van Wesenbeeck<br>Zaimes<br><br>Diaconu<br>Tocze<br>Capurso<br>Zaimes | Democritus Univ. of Thrace<br>V.L. Sustianbility Metrics LTD.<br>Vrije Univ. Amsterdam<br>Democritus Univ. of Thrace<br>Univ. din București<br>Vrije Univ. Amsterdam<br>Udine Univ.<br>Oklahoma State Univ. | Urban Gardens for Sustainable Resilient Cities |
| **11.40-12.30** | **Discussion** | | | |

## III. LIST OF ABSTRACTS

*The first author is the presenting author unless indicated otherwise*

### 1. Nature's contribution to food. Is nature valued in local food studies?

***First author***: Marta Derek
***Other author(s)***: Sylwia Kulczyk, Luis Inostroza, Ada Górna, Alina Gerlée
***Affiliation***: University of Warsaw
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Local food products constitute material links between nature and humans in landscapes, where natural capital is crucial in every local food product that has been grown, cultivated, or bred. In this paper, we analyse an existing body of knowledge on local food studies to ascertain the role of nature within this established research area. We use ecosystem services framework and the IPBES assessment (2022) to examine whether natural capital, in the form of specific landscape elements, are included in the research and how. We also verify what methods and indicators are used within those research.

Our results show that statement- and behaviour-based valuation methods are more widely used in local food studies, over nature-based valuation methods. Despite the fact of food being one of the most fundamental services provided by ecosystems, limited attention is given to the role of nature in local food related studies, a fact arising from the local food definition as a socially constructed concept. Local food studies is an important research area holding a great potential to provide the necessary knowledge towards transformative change. Enriching local food studies by using ecosystem services science, explicitly valuing and measuring nature's contributions to food can provide powerful scientific evidence towards sustainability.

***Keywords***: local food, landscape, ecosystem services, IPBES values assessment

## 2. The place of landscape features in a productive landscape - Analysis of the value creation of landscape feature introduction in an agricultural landscape

***First author***: Floris Huyghe
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Agricultural landscapes are one of the largest ecosystems in Europe and will play a pivotal role as both a hotspot for production and ecosystem services. By introducing and maintaining high-diversity landscape features in agricultural ecosystems a large step can be taken without compromising the vital production component.
While these LF already provide various benefits, the interplay between landscape features and the bioeconomy still has a lot of untapped potential. It is projected that the bioeconomy will need more and diverse resources. For this growing industry, biomass, will equally have to be grown on the same area of land as food and biodiversity, making multiple-use, intercropping and cover crops almost inevitable. This is where landscape features possibly come in.
To this date, LF (re)introduction and maintenance is considered mostly as solely biodiversity, heritage and cultural landscape preservation performed by the land managers. It is therefore a cost and the land managers are compensated for that, usually with public means. So the question is, can LF become a source of income rather than being a cost? By identifying an extra income through landscape features, they and their land can become more resilient in uncertain times.
To identify new revenue streams, a survey was conducted across Europe within the Horizon EU project LAFERIA. Project partners contributed trough a questionnaire a diverse set of initiatives in which LF are reintroduced or maintained. The survey focused specifically on initiatives supported by market or alternative financing mechanisms instead of standard public subsidies. In total 250 initiatives were gathered. To get a deeper understanding of these initiatives, 80 phone call interviews were conducted by the partners. Both sets were analysed and pathways to alternative revenue models mapped. These pathways could then be translated into a spatial component. Leading to more insight in the logistics of these value chains within the landscape.

***Keywords*:** Rural planning, PES, bioeconomy, alternative financing mechanisms, landscape features

## 3. Co-creating value in mountain agriculture: designing a voluntary quality label to co-produce ecosystem services and rural resilience in Troodos, Cyprus

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Food is commonly framed as a provisioning ecosystem service, yet mountain foods also carry cultural meanings and remain tightly coupled to landscape management. In Cyprus's Troodos Mountains, terraced fruit and vegetable farming faces rising costs, land fragmentation, depopulation and drought stress, accelerating abandonment and weakening ecosystem services such as soil retention, hydrological regulation, biodiversity support and cultural landscape values. This study examines how a place-based, voluntary quality label can re-territorialise food–landscape relations by embedding socio-environmental safeguards in value creation, while strengthening resilience across a mountain socio-ecological system.
A three-level co-design process engaged farmers, rural policy authorities and researchers to translate EU and market-based labelling provisions into a locally tailored, multi-criteria protocol. The scheme operationalises four pillars: (i) mountain identity (origin and traceability), (ii) social and entrepreneurial responsibility, (iii) food quality and safety, and (iv) environmental responsibility (including terrace maintenance, water-use efficiency, ground cover and habitat features). Nearly seventy producers iteratively refined a flexible, points-based compliance system, governed by a farmer-led committee and piloted for two years by fifteen farms, linking producer knowledge, institutional rules and ecological constraints in the co-production of ecosystem services.
To quantify territorial spillovers beyond farm incomes, we developed a regional input–output model for the Troodos area, disaggregating agriculture into four farming systems and estimating output and employment multipliers. Scenario analysis indicates that a conservative 5–10% price premium for certified products could increase regional output by EUR 0.9–1.8 million and create 20–39 jobs, with benefits extending to processing, trade and hospitality. The combination of participatory governance with economy-wide modelling offers a transferable framework for linking mountain foods to ecosystem service co-creation. The study can also inform resilience-oriented policy co-design and value-chain strategies in mountain landscapes.

***Keywords***: Mountain agriculture, ecosystem services co-production, territorial quality label, participatory co-design, regional input-output modelling

## 4. Changes in Co-Produced Ecosystem Services as Consequences of Land Reforms: Integrating Historical Data and Modeling Approaches

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***Other author(s)***: Ieva Misiune, Darijus Veteikis, Lina Einenkel, Harald Zepp
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This study compares two approaches analysing how long-term land use change influences the provision of ecosystem services (ES) in the context of political and societal transformations in Lithuania. Among the intentions of land reform and collectivization was to increase food production. Focusing on two contrasting regions — the lowland and the upland area (Skaistgirys, Suginčiai) — we trace landscape changes at a fine scale along 1 km wide and 15 km-long sample areas. Using historical aerial imagery (1950s, 1970s, 1990s) and a national reference spatial dataset (2020s), we reconstruct land use and land cover (LULC) trajectories as a base to identify interactions among ecosystem services (ES). Six ES were selected: crop productivity, habitat suitability for pollination, wood production, carbon sequestration and storage, retention, groundwater renewal.
Here, we contrast the results of an earlier approach using a matrix scoring system Burkhard et al. (2012) with quantitative assessments that we realized with EnhancES (Zepp et al. 2025). The first matrix approach was therefore based on LULC. This land cover interpretation was supported by the descriptive and recognition capabilities of AI-assisted profiling (Misiune 2025). The quantitative assessments were implemented using EnhancES, which utilizes predefined assessment tools.
The two approaches yielded different ES assessment outcomes: the scoring matrix indicated differences in ES provision, whereas EnhancES showed only minimal changes between 1950 and 2020. There is no evidence of significant changes in land use or biotope types, yet on small scale patterns. Their relative proportions have remained stable. This demonstrates that ES trend estimates are sensitive to the approach used for assessment. In our contribution, we discuss the reasons for the discrepancies of the results. We step forward to elucidate what kind of information is needed to produce reliable results on the effects of minor land use change and agricultural practices on the interaction of ES.

***Keywords***: EnhancES, ecosystem services assessment, land-use transitions, food production systems

## 5. Food, landscape, and ecosystem service co-production in rural systems. Evidence from Food Communities and Historic Rural Landscapes in Italy

***First author*:** Luigi Servadei
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The research analyzes the role of Food and Biodiversity Communities of agricultural and food interest and rural landscapes of historical interest as integrated socio-economic and environmental systems capable of generating and maintaining multiple ecosystem services. The underlying hypothesis is that food and landscape are not simply interrelated but are transformed together through agricultural practices, institutional structures, and cultural processes that contribute to the joint creation of ecosystem value.
Food and Biodiversity Communities, established in Italy by Law No. 194/2015, can be seen as places of interaction between food, natural capital, social capital, and local knowledge, in which biodiversity is not only an object of conservation but also a resource incorporated into local food systems.
Instead, historic rural landscapes, recognized by the Italian Ministry of Agriculture, Food Sovereignty and Forestry in the National Register of Rural Landscapes of Historic Interest (Decree No. 17070-2012), are the result of long-term evolutionary processes, shaped by land uses, agricultural practices, and local traditions that have given rise to complex and functional ecosystems.
This paper proposes to interpret these two tools as complementary territorial levels of the same process of co-production of ecosystem services. Communities influence the social, cognitive, and organizational dimensions, while historic landscapes reflect the spatial, ecological, and symbolic dimensions of co-production.
In this context, food becomes a connecting element between people and nature, capable of activating cultural, regulatory, and support ecosystem services, in addition to those of provisioning.
The research offers an integrated reading of food and landscape to reflect on the territorialization of food systems and overcome sectoral approaches to the evaluation of ecosystem services.
The analysis highlights how recognizing the interdependencies between food communities, biodiversity, and historic rural landscapes strengthens understanding of co-production and opens new perspectives for the sustainability of rural social and ecological systems.

***Keywords*:** Ecosystem services, Food and biodiversity communities, Historic rural landscapes, Co-production, Territorial food systems

## 6. Allocating environmental impacts of animal-production to non-provisioning ecosystem services: relative merits of economic and biophysical approaches

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Life cycle assessment (LCA) and ecosystem services (ES) can provide distinct evaluations of animal-production systems, which highlights the need to integrate them. To this end, economic allocation methods have been used to split LCA impacts between provisioning and non-provisioning ES, based on their monetary values (e.g. income from animal products and subsidies). Here, we applied a biophysical allocation method, initially developed for crop systems, to allocate impacts between provisioning and regulating ES (PES and RES, respectively). PES represents the supply of human-edible protein, to which LCA impacts are usually fully allocated, whereas RES represents the supply of regulating ES, such as erosion prevention.
We applied it to a sample of contrasting animal-production systems and found that 33%; 45% and 90% of the LCA impacts per kg of protein could be allocated to RES, for systems producing monogastric meat, milk, and ruminant meat, respectively. These differences were driven by the RES supplied by grasslands, more or less present in our systems. Substantial proportions of impacts can therefore be allocated to non-provisioning ES, and these proportions are higher than those reported in previous economic allocation studies. Average LCA impacts were the highest for ruminant meat but once they were partially allocated to RES, more than half of these impacts became the lowest (e.g. use of fossil energy).

Integrating the substantial contribution of meat ruminant systems to non-food functions can thus mitigate LCA impacts of animal products. The biophysical approach we used is insensitive to market price fluctuations, but it lacks the ability to account for the social-economical demand of society for non-provisioning ES, e.g. through eco-schemes. The allocation method should thus be chosen cautiously. However, one should bear in mind that environmental assessment should ultimately help reduce impacts of multifunctional systems as a whole, and not minimize impacts of an isolated function.

***Keywords***: Life cycle assessment, meat, milk, eco-schemes, regulating ES

## 7. How wild edible plants and mushrooms have been approached within the ecosystem services framework: a systematic review

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The diverse historical and traditional uses associated with wild edible plants (WEP) and wild edible mushrooms (WEM) make them good examples of natural resources associated with both provisioning and cultural ecosystem services (ES). However, how these resources have been studied and mapped under the ES framework remains unclear. This systematic review aims to fill this gap and identify the methodologies used to study these resources. It also intends to understand whether there are negative impacts associated to foraging and if sustainable practices are being adopted. The research question was based on the PEO framework (Population, Exposure, Outcome), and the search followed the PRISMA protocol. The review was based on the 42 articles that met the defined inclusion criteria. The in-depth analysis of each study assessed how the ES framework was approached and whether there was any associated mapping. Whenever benefits associated with WEP&M were described, they were categorised according to the Common International Classification of Ecosystem Services (v5.1), and five provisioning and eleven cultural ES were associated with these wild resources. However, half of the studies only acknowledge its importance as ES but do not discuss the obtained data under the ES framework, and only four studies mentioned ES classification systems. Some impacts regarding foraging activity were identified, although. most studies mention sustainable practices and do not consider foraging a threat to species conservation.

***Keywords***: Ecosystem services; Foraging; Sustainability; PRISMA protocol; Wild food

## 8. Local food and food heritage in European Union food policy

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Local food and food heritage are increasingly recognised as expressions of both provisioning and cultural ecosystem services, linking place-based natural resources with cultural identity, rural development, and societal well-being. Understanding how these concepts are framed in EU policy is therefore essential for clarifying how ecosystem services related to food are conceptualised, valued, and integrated into broader political agendas.
However, no systematic analysis has examined how EU policy documents actually construct and mobilise these concepts. The aim of this study is therefore to explore how the concepts of local food and food heritage are conceptualised and operationalised in European Union policy documents. This study addresses that gap through a qualitative research design grounded in a constructionist paradigm. Using Qualitative Document Analysis (QDA), twelve EU policy documents published between 2011 and 2025 were selected from a broader corpus and analysed in MAXQDA. The codebook was derived from the literature and refined through pilot testing. The findings reveal a shift in the treatment of local food: while earlier and less formal documents explicitly refer to it, more recent, strategic, and legally binding texts rely on indirect framings, such as “origin” and “value-added” foods tied to the place of production. Food heritage is more consistently present, primarily linked to traditional knowledge, cultural identity, and rural

development. The two concepts intersect most clearly in the system of geographical indications (PDO, PGI), but also in discourses of local branding and rural development. In addition, a set of related concepts, most prominently short supply chains, sustainability, and nutrition, appear frequently alongside the analysed concepts across the documents. The analysis demonstrates that EU policy frames local food to align with wider economic priorities, and that food heritage is recognised as part of the cultural identity of the EU and worthy of protection as such.

***Keywords***: Local food, food heritage, local heritage food, EU food policy, geographical indications

## 9. Urban food security and self-sufficiency informing urban food policy in moderate risk-prone areas

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Urban communities are increasingly more concerned about food security in the abruptly changing times, when global vs local dichotomies are getting stronger. Despite facing multiple challenges both at local and global scales, urban food systems have a potential to become a vehicle for sustainability transitions in cities, supporting all three groups of ecosystem services: provisioning, regulating and cultural. It is argued that urban and peri-urban agriculture enhances resilience and sustainability. To better inform municipal and regional decision making and urban food policy process, we apply the approach of co-creation of scenarios enhancing the understanding of resilience of urban food systems in moderate risk-prone areas. The study area includes a case of Wroclaw Municipal Area (WrOF) in Poland, Central Europe. Results show that WrOF is potentially food self-sufficient (for the year 2020), even when assessing it against three scenarios including business as usual, disruption in global food supplies and climate changes. The assessment considers variants of 3 different diets: standard current diet, planetary diet and pescatarian diet. We argue that potential local self-sufficiency does not ensure resilience and the ecosystem service perspective helps to guide a multifunctional and sustainable urban food system.

***Keywords***: Food resilience, urban, food policy

## 10. The role and potential of product marketing in preserving traditional cultural landscapes

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Traditional cultural landscapes (TCL) in Europe provide a variety of ecosystem services. This kind of landscapes are increasingly under threat, however, and there is growing recognition of the need for measures to preserve them. While consumers can contribute to preservation by purchasing more of the food produced in these landscapes, three main barriers currently limit consumer demand: lack of consumer knowledge about these products' attributes; lack of trust in product information, and limited availability. Bringing systematically together research on products from TCL from different scholarly domains and marketing research, this study develops a conceptual framework explaining the role of product marketing in preserving these sustainable landscapes. The findings show that product marketing can bridge the attitude-behavior-gap between products from TCL and consumers to increase consumer demand. Marketing efforts for these products should aim (1) to highlight their unique qualities, (2) to increase consumers' knowledge of the benefits of these products, and (3) to build relationships and trust through creating closer proximity between consumers and producers and ensuring that products from TCL are available to target groups. In order to motivate consumers to buy products from TCL and overcome the three main purchase barriers and the resulting attitude-behavior gap, marketing management needs to harmonise all four marketing instruments: product policy, price policy, place policy, and promotion policy. Marketing for TCL products would benefit from more interdisciplinary research

focusing on the entire value chain, including innovative farming and processing, to increase consumer value and economic benefits for farmers while promoting sustainable land management.

***Keywords***: traditional cultural landscapes, food, product, marketing, consumption

## 11. Creating a Wildlife Policy that Integrates Conservation and Extractive Industries

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The Ministry of Environment, Sustainable Development, and the New Climate Economy of the Democratic Republic of Congo has initiated the process of drafting the first National Wildlife Policy Document (NDPD). A task force has been established for this purpose. The Ministry has since sought the support of several technical and financial partners, including the European Union through its Sustainable Wildlife Management program, the Wildlife Conservation Society, and the Food and Agriculture Organization of the United Nations (FAO). The FAO is rightly the main actor in the development of this policy, which follows an integrated approach with the One Health nexus as its foundation for reconciling animal, plant, and human environments. A primary role is given to local communities and indigenous Pygmy peoples, who occupy the lowest rung of the Congolese administration (family, lineage, clan), where extractivism is permitted. The policy defines customary or subsistence hunting and establishes community conservation areas, as opposed to Sustainable Commercial Hunting Zones, to guarantee traceability. Extractive industries must therefore reconcile wildlife conservation and economics to promote ecotourism and a development-oriented industry through combating human-wildlife conflict, respecting human rights, and sharing the benefits. The policy also includes a regulatory framework to be reviewed or created, and a financial and monitoring-evaluation mechanism involving the government, local communities, and technical and financial partners.

***Keywords***: Wildlife, fauna, DRC, National policy, lcoal communities

## 12. Community gardens as co-produced provisioning ecosystem services in primary healthcare settings

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Food is commonly conceptualised as a provisioning ecosystem service, yet its role as a carrier of health, cultural practices, and social relations remains underexplored within ecosystem services research. This paper examines community gardens that integrate food crops and medicinal plants as co-produced provisioning ecosystem services, emerging from the interaction between landscapes, everyday practices, and public institutions.
The study draws on a collaborative project developed in a primary healthcare centre (CESFAM) in southern Chile. An initial survey revealed widespread use of medicinal plants among patients, particularly older adults managing chronic conditions. Rather than addressing this practice solely as a clinical risk, the healthcare centre, in partnership with a university and the local community, initiated the construction and collective management of a community garden combining food and medicinal species. The project included participatory diagnosis, garden design and implementation, educational workshops for users, staff, and students, and long-term maintenance by users and staff.
Using an ecosystem services framework, we conceptualise the garden as a socio-ecological system where provisioning services are actively co-produced through the mobilisation of natural capital (local biodiversity), social capital (traditional knowledge and community engagement), and institutional support. Beyond material benefits, the garden functions as an informal educational space, fostering ecological literacy, health-related knowledge, and reflexive understanding of human–nature relationships.
The case contributes to ongoing debates on food, landscape, and ecosystem services by expanding the notion of provisioning services beyond nutrition, and by illustrating how ecosystem services concepts can be embedded in place-based learning processes within public health and community settings. It illustrates

how local, place-based food and medicinal systems can re-territorialise ecosystem services in contexts increasingly shaped by globalised and deterritorialised food systems

***Keywords***: Ecosystem services; Food provisioning; Medicinal plants; Community gardens; Co-production

## 13. Urban Gardens for Sustainable Resilient Cities

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Increased unpredictable abrupt climatic alterations, mainly associated with increased temperatures, pose challenges to sustainably manage ecosystems such agricultural areas. Also, one of the greatest land use alterations is the increased urbanization that reached in 2023 the 76% in EU population leaving in urban settings that further intensifies phenomena like the Urban Heat Island Effect (UHIE). Consequently, factors such reduced agricultural production and increased urbanization result in food security issues. Innovative Green infrastructure approaches such as Urban gardens provide urban food production areas while mitigating the negative impacts of urbanization such UHIE, ensuring food security and further promote climate resilience. FEED4FOOD is an international Driving Urban Transitions project that promotes urban gardening while addressing environmental and social issues by establishing on-the-ground pilot Living Labs (LL). Three LLs were established in Drama in Greece, Strovolos in Cyprus and Bucharest in Romania to study the practice of sustainable urban agriculture with emphasis on food production and greening urban areas for climate resilience while investigating the empowerment and inclusion of vulnerable groups. Consequently, FEED4FOOD provides crucial information in promoting the transition towards low-impact and regenerative urban food systems that provide healthy food, particularly for low-income consumers.

***Keywords***: Biodiversity Community Production Sustainability Urban gardens