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Lionella Scazzosi • Paola Branduini Editors

AgriCultura

Urban Agriculture and the Heritage Potential of Agrarian Landscape



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Towards a Linkage Between Urban Agriculture and Cultural Heritage

Current Scientific Debate and the Aims of This Book

Urban agriculture (UA), assumed in the wide sense of urban farming and urban food gardening (COST Action: Urban Agriculture Europe) (Lohrberg et al. 2016), is nowadays considered essential to improve the quality of life in cities. This practice can contribute to food quality and security, and to economic and recreational activities (by the multifunctional use of agrarian spaces), the environmental quality of landscapes, and community resilience. On the other hand, a large scientific and technical debate at international level (Scazzosi 2018) concerns the awareness of our rural landscape as a cultural heritage and its importance as a resource to be dynamically conserved, enhanced (ICOMOS-IFLA Principles 2017), and used in the perspective of a sustainable future. We recognise the recent concept of sustainability as founded on the four pillars of environment, economy, society, and culture (CEMAT 2003; UNESCO 2010) because of the strategic role assigned to culture and heritage.

The current scientific debate about urban agriculture mainly concerns the role of agriculture as food and as an ecological, and social, resource. The literature on land-scape architecture considers new landscape design and open space design more than the preservation and enhancement of the characteristics of existing agrarian land-scapes (Gorgolewski and Nasr 2011; Philips 2013). Current work about landscapes as a cultural heritage is especially dedicated to identifying general (Palang and Fry 2003) and exceptional (Mitchell et al. 2009) values and to conserve and valorise the urban landscape (Longstreth 2008). The current literature about urban agriculture is devoted to agro-urbanism and to planning and building a new vision that connects city and countryside (Viljoen 2005), as well as improving food access and social justice (Winkler Prins 2017; Pearson et al. 2016; Thornton 2019).

This book cuts across the existing literature and aims to fills the gaps. Urban agriculture is presented as a tool for the conservation and valorisation of rural heritage in the urban context through careful management of both buildings and landscapes. Provided are experiences that conjugate the opportunity of knowing and enhancing cultural heritage through different forms of urban agriculture. The concept of dynamic conservation is explained as a process looking after the landscape to retain, enhance, and transmit its cultural significance and, at the same time, allowing and guiding its inevitable transformations. Thus, according to circumstances, strategies and actions may include "conservation, repair, innovation, appropriate adaptation and re-use." Frequently a combination of many of these actions is necessary; always, maintenance and management as long-term perspectives are essential (Action Criteria, B.3) (ICOMOS-IFLA Principles 2017). Underlined are the role of the rural landscape for the urban population and metropolitan areas and the importance of multifunctional activity (Action Criteria, C.4).

A specific remark to provide concerns the use of two terms – rural and agrarian – in this book¹: the references taken into account are etymological studies, scientific disciplines, as well as some official documents of international organisations (FAO, ICOMOS, IFLA, etc.). In particular, ICOMOS-IFLA Principles 2017 use the term rural as a sort of umbrella for all possible types of landscapes concerned with the production of food and other renewable natural resources (Principles 2017, Definition).

This book assumes that the "agrarian" (or "agricultural") term is related to sedentary productive activities which usually were, have been, and are connected with stable settlements of populations inside or close to villages and cities. In the present book, the authors sometimes also use the term "rural," emphasising different aspects of food production activities and landscapes and the way of life of the people. The

¹The meaning of world "**rural**," from the Late Latin *ruralis*, an adjective derived from *rus ruris* "countryside" (Encyclopedia Treccani), is relative to the country and to the society living in it (Merriam Webster dictionary). **Rural society** has a low ratio of inhabitants to open land, and the most important economic activities are the production of foodstuffs, fibres, and raw materials (Encyclopedia Britannica). It concerns people and place and the way they live (development, economics, planning, settlements) (Agrovoc dictionary for FAO Organization). The European Commission improves **rural development** (via CAP program 2014–2020), which concerns knowledge transfer, competitiveness, food chain organization, ecosystem preservation and enhancement, resource efficiency, social inclusion, and economic development in rural areas.

Concerning rural landscape and cultural heritage, the Rural Landscape Principles (Principles concerning rural landscapes as heritage; Delhi 2017), a recent doctrinal text adopted by the International Council of Monuments and Sites (ICOMOS) and the International Federation of Landscape Architects (IFLA), provides a wide definition of "rural landscape" encompassing "terrestrial and aquatic areas co-produced by human–nature interaction used for the production of food and other renewable natural resources, via agriculture, animal husbandry and pastoralism, fishing and aquaculture, forestry, wild food gathering, hunting, and extraction of other resources, such as salt." "All rural areas" continues to "have cultural meanings attributed to them by people and communities: all rural areas are landscapes."

Agrarian as well as **agricultural** (mostly diffused), from the Latin word agrarius, adjective, derived from ager agri "field" (Encyclopedia Treccani), is specific to the fields or lands or their tenure, to the characteristic of farmers or their way of life (Merriam Webster). **Agricultural sciences** are the sciences concerned with food and fibre production and processing (Encyclopedia Britannica). Landscape, structure, policies, and reform are words related to agrarian (Agrovoc dictionary for FAO); the adjective 'agricultural' in some expressions can be substituted by farm or farming.

book has an explicit focus on agrarian landscapes related to the urban context, considering all the current possible characteristics of urban dimension in the contemporary world (urban, periurban, and agricultural areas, especially in metropolitan areas). Specificities about urban dimension and heritage related to agricultural practices, landscape, and lifestyle in those areas are underlined.

This book intends to focus on the link between urban agriculture and the quality of the agrarian landscapes, on the synergies needed to ensure that urban agriculture can promote the conservation of agrarian heritage, guide the recovery of degraded landscapes, and support the development of landscape quality for all areas, both outstanding, ordinary, or degraded, as well as large, small, or fragmented.

The book analyses the conservation and enhancement of agrarian landscapes in territorial policies, in local agricultural policies, and in the governance models of metropolitan areas, underlining potentialities of cultural heritage tangible and intangible permanencies. Several experiences of great significance in European cities and some parts of the world, in both community and entrepreneurial cases, show the cultural potential of urban agriculture.

Some globally renowned voices, attentive towards agrarian landscapes as heritage, state the importance of the historical dimension and the legacy of material and immaterial permanencies in reading landscape: the agrarian landscape is considered as a system of tangible and intangible heritage connected by functional, physical, social, and cultural relationships (Scazzosi 2003, 2015; Scazzosi and Branduini 2014).

The conservation of the historical features of agricultural landscapes is accompanied by their enhancement: this dynamic process can become an economic resource for the maintenance of sustainable landscapes. The knowledge and techniques coming from "traditional" agriculture as intangible heritage, merged into landscape management and construction, can be an opportunity to implement new sustainable agricultural practices that have a lower environmental impact and high biodiversity, and can contribute to an unconventional scientific, technical, and mechanical progress that re-uses and updates the ancient technical knowledge.

Good quality in the maintenance of agricultural landscape and its cultural heritage can become a driving force for tourist opportunities, which improve the awareness and knowledge of visitors about good land management practices. Collaboration between local players, such as farmers, citizens, local associations, public institutions, and stakeholders, can reinforce collective action and the positive effects of good large-scale management. Conservation and enhancement of agrarian landscapes help to reinforce the identity of places and urban communities through their common heritage, reminding us of the role of the countryside and its connection with urban areas, in the history of the city, particularly in metropolitan areas where rapid and deep transformations can cause many social and cultural problems.

This book aims to suggest to scholars, local administrations, professionals, and farmers how to reveal and valorise agrarian heritage through productive, social, cultural, and touristic uses (food and services). The acknowledgement of the cultural potential of agriculture is hidden in some initiatives whereas it is more evident and supported by public policies in others. We assume that conservation and enhancement of the urban–agricultural landscape should occur through a process of

co-construction among farmers, citizens, and policy makers. Accordingly, the book is divided in three parts, following the application stages of the co-construction process.

The Structure of the Book

The First Part

The first part has a methodological character to enlighten the integrated approach between cultural heritage and urban agriculture.

"The co-construction of agrarian landscapes," said André Fleury in his contribution, "consists in responding to agriculture with new urban issues, considering the potential and limits of peri-urban agriculture, with the aim of establishing a sustainable city, improving its resilience and its viability (to reduce poverty, enhance food security), and to reduce the ecological footprint, manage water resources and waste and preventing the risk of major accidents. The agrarian landscape is the result of the co-evolution of territorial forms including more and more rural areas, urban society and local agricultural societies; it results in conceiving a re-farmed city as a new autonomous entity." Then, he concludes that "environmental and landscape policies cannot be achieved either without farmers input or against them, but necessarily with them; it is the precise meaning of any co-construction." This text, even if written in 2015, still reveals a remarkable liveliness in the proposal and it has been included because Fleury's work had an important influence on the emergence of the issues discussed in this book. His theoretical research, based on historical and agronomic studies, is supported by a constant and intense practical activity with direct involvement in the co-construction of the urban-rural policies in Île-de-France, close to Paris: this work has been fundamental in the scientific acknowledgement of the cultural and social role of urban agriculture in the contemporary city. Since the definition of the evolution from periurban to urban agriculture (Donadieu and Fleury 1997), agriculture has been freed from a physical place around the city to be based on cultural, economic, and social relationships, regardless of its geographic position. In that sense, agriculture reestablished the historical commercial and cultural relationships with the city that have shaped it since medieval times, as illustrated step by step by Lionella Scazzosi in the first part of her contribution. This text provides some initial and basic historical tools and references to study and understand urban agriculture over the centuries, especially in Western cities, considering the deep lack of knowledge on this topic despite the large numbers of studies concerning urban history. The aim is to discover the historical variety of spaces, functions, and characteristics of urban agriculture in the cities of the past, because it could highlight some potentialities and give suggestions for the current 'new era' of urban agriculture. Scazzosi's contribution also provides, in its second section, the main methodological topics regarding how and where to recognize today the cultural

potential of urban agriculture, in its tangible permanencies and in its intangible meanings. It illustrates also how these become a resource to improve the urban quality of life and an opportunity to strengthen the local identity.

Paola Branduini develops some concepts and suggestions of Fleury on the importance of the mutual involvement of citizens and farmers and analyses the role of the population in UA initiatives and the methods of engagement and participation, using some clear examples. The proposed form of a participatory governance of the urban agricultural heritage could be a continuous and planned commitment of those involved in an urban agriculture initiative (population, farmers, stakeholders, institutions, politicians), could safeguard and maintain agricultural heritage, and could guarantee a tangible heritage over time as well as the transmission of intangible long-term meanings.

The Second Part

The second part exemplifies cases wherein recognition of the importance of the urban-agricultural heritage has occurred but has not yet been translated into concrete action with the involvement of the population and the intervention of politics.

Such are agricultural landscapes of great cultural significance such as the *chinam*pas of Mexico City described by Saul Alcantara: this huge historic area has seen the constant reduction of available water from 1910 onward, and is limited by the increasing expansion of the city and the economic difficulties of the farmers. This landscape has been protected as a UNESCO site since 1987; further, it is still in use for agricultural production, maintaining traditional agricultural techniques, and is known and partially used for recreational activities by the local population. Thus, the *chinampas* is a true historic urban agriculture, an example of a site that could have been lost had a sustainable conservation and management policy not been implemented.

There are also rural complexes that have shaped and organized the countryside around the city, such as the large *cortijos* around Seville, as drawn by Maria José Prados and Jesus Santiago, and the *grandes fermes* d'Île-de-France, such as in Pierrelaye and depicted by Roland Vidal. These complexes have been innovators in agriculture in a pre-mechanization period and have been able to respond to the needs of the city. In the first case, they have been able to resist urban growth processes, and to handle major internal transformations, "surviving with an agricultural activity in a continuous process that has bolstered their ability to provide a wide variety of services and functions" (Prados and Santiago). In the second case, a breakthrough toward non-food production, that is, materials or energy, is needed that can be channelled into agriculture (Vidal).

Domestic gardens too have an important part in the preservation and transmission of intangible heritage, concerning the use of plants, cultivation techniques, and herbal knowledge as well as cultural tradition and habits related to single or groups of families or of people. These gardens are a reserve of food supply as well as a concrete and local knowledge resource for the city, as well illustrated by the contributions on Australia by Jane Lennon and on Belgium by Hubert Gulinck, Valerie Dewaelheyns, and Frederik Lerouge. The latter authors state: "As media of expression, experimentation and creativity at individual or household scale, domestic gardens [...] deserve to be reconsidered as additional substrates and buffers for food production in urban, peri-urban and residential contexts." For these, quantitative and qualitative studies should be implemented to include local gardens in counting of the social benefits for a resilient city.

The Third Part

The third part discloses cities in which a process of co-construction of the urbanagricultural landscape has been initiated or has been going on for years: here policies have recognized the cultural, environmental, and social meanings of urban agriculture.

Emblematic of the liveliest and most recent situations is the case of the Vega of Granada and the strenuous defence of agricultural heritage by experts and citizens (Mataran and Castillo). In Milan (Branduini et al.) and Barcelona (Zazo Moratalla et al.), multiple and varied experiences have led in the past two decades to a broad awareness of the role of agriculture in the city, starting from the recognition of its cultural value. Based on the achievement in designating protection of agricultural spaces since the 1990s, groups such as farmers, environmentalists, and civil society hold the key to the future conservation of agricultural landscapes, involving public administration also.

The story of Geneva helps us to understand, in the long term, the effects of a dual attitude towards urbanization of agricultural areas and the enhancement of urban–agriculture initiatives (Nelly Niwa and Joelle Solomon Cavin).

Two "protected" agricultural areas, at different stages of protection, are Île Bizard in Montreal and Belvedere Agricultural Park in Cologne. The Canadian example is a proposal of management of a "humanized landscape" based on a historical balance between agricultural techniques and high biodiversity: Gerard Domon and Sabine Courcier affirm that its uncertain future could be founded only on stakeholders' dialogue and interest convergence. The German example of Belvedere Agricultural Park, presented by Axel Timpe, has been made possible through regional landscape policies and the cooperation of several stakeholders: a workshop for designing multifunctional processes was set up to optimise different land use interests. It has become a laboratory for combining the heritage of agricultural land use with the emerging demands and practices of urban landscapes.

Finally, Raffaella Laviscio explains the positive results of the long-term English dedication to the conservation of rural landscape and to the transmission of knowledge, specifically from the charitable organisation Historic England. She concludes that "heritage awareness and care can generate income: work on a historical site of high value is not a disadvantage but an opportunity to increase revenue." Moreover, "regeneration has several benefits improving the perceptions of local areas, increasing civic pride and sense of identity, improving social interaction, increasing community safety, enhancing the landscape."

The positive results encourage the defence of agricultural heritage: what emerges is that only through the sense of belonging, attached to these landscapes, can people protect them from urban encroachment.

Some Transversal Lines

Many transversal lines can be found in the contributions provided by the book, such as these.

Following the suggestions given by Scazzosi, several papers highlight the continuity of the relationship between city and agricultural activity between past and present. In the contributions about Granada, Seville, Paris, Belgium, and Mexico City and in major Australian cities, continuity consisted mainly in fresh horticultural production for self-consumption and for selling in the city markets. The historical analysis of those cities implies that the role of urban agriculture was multifunctional in the past as well; and that it included recreational activities, food security, and water purification as well as urban agriculture as it is required to be today.

The importance of equally recognizing and enhancing the tangible and intangible heritage aspects of agricultural activities and landscapes as integral parts of the cultural heritage is underlined by the authors in European examples (Mataran, Castillo, Vidal, Laviscio) as well as in worldwide examples (Lennon and Alcantara Onofre). Heritage is perceived as a resource for a more sustainable life, not as a passive remnant of the past.

As a final and relevant remark, many authors are directly involved in safeguarding and defending urban agricultural heritage (Mataran, Castillo, Zazo Moratalla, Callau Berenguer) as well as in conservation and enhancement projects (Branduini, Scazzosi, Timpe) and in political initiatives supporting public institutions (Scazzosi). They carry forward several battles for recognizing the value of this heritage with passion and dedication; their scientific activity is based on action-research, through which they test out the problems of the territory and are committed to finding solutions, immersing themselves in continuous dialogue and exchange with the population and stakeholders, becoming spokespersons of culture and expertise, but also immersing themselves in a commitment shared with other people. It is a characteristic of academics who work on the so-called third mission and of professionals who connect scientific with professional activity. A cross-disciplinary attitude is their driving force, and research-action in the research method they apply. Department of Architecture, Built Environment and Construction Engineering (A.B.C.) Politecnico di Milano Milano, Italy

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References

- CEMAT. (2003). European rural heritage observation guide. Strasbourg: Council of Europe.
- Donadieu, P., & Fleury, A. (1997). De l'agriculture péri-urbaine à l'agriculture urbaine. Le Courrier de l'environnement, 31, 45-61.
- Gorgolewski, M., & Nasr, J. (2011). *Carrot City: creating places for urban agriculture*. New York: Monacelli Press.
- ICOMOS-IFLA. (2017). *Principles concerning Rural Landscapes as Heritage*. ICOMOS Doctrinal text, Delhi 2017) (in English, French, Spanish, Chinese; Available from www.worl-drurallandscapes.org and from ICOMOS website).
- Lohrberg, F., Lička, L., Scazzosi, L., & Timpe, A. (Eds.). (2016). Urban agriculture Europe. Berlin: Jovis.
- Longstreth, R. (2008). *Cultural landscapes: balancing nature and heritage in preservation practice*. Minneapolis: University of Minnesota Press.
- Mitchell, N., Rossler, M., & Tricaud, J.-M. (2009). World heritage cultural landscapes: a handbook for conservation and management (World heritage papers, vol 26, UNESCO). Paris: World Heritage Centre, UNESCO.
- Palang, H., & Fry, G. (Eds.). (2003). Landscape interfaces. Cultural heritage in changing landscapes. Berlin: Springer.
- Pearson, C., Pilgrim, S., & Pretty, J. (2016). Urban agriculture: diverse activities and benefits for city society. Abingdon-on-Thames: Routledge.
- Philips, A. (2013). Designing urban agriculture: a complete guide to the planning, design, construction, maintenance and management of edible landscapes. Hoboken: Wiley.
- Scazzosi, L. (2003). Le paysage, un document et un monument/the landscape: A record and a monument. In: "Naturopa" (Europe Council's Journal n. 99/2003 (pp. 30–31). Memory of the heritage/Memoire du patrimoine (English and French)
- Scazzosi, L. (2015). Preservare la machina agraria. Per una lettura e una valutazione del paesaggio rurale storico. In P. Cornaglia & M. A. Giusti (Eds.), *Il risveglio del giardino. Dall'hortus al paesaggio, studi esperienze, confronti* (pp. 318–331). Lucca: Maria Pacini Fazzi Editore.
- Scazzosi, L. (2018). Rural landscape as heritage: reasons for and implications of "Principles concerning rural landscapes as heritage ICOMOS-IFLA 2017.". *Built Heritage*, *3*, 39–52.
- Scazzosi, L., & Branduini, P. (2014). *Paesaggio e fabbricati rurali. Suggerimenti per la progettazione e la valutazione paesaggistica* (Ministero dei Beni e delle Attività Culturali e del Turismo). Sant'Arcangelo di Romagna: Maggioli Editore.
- Thornton, A. (Ed.). (2019). Urban food democracy and governance in north and south. (International political economy series). Basingstoke: Palgrave Macmillan.
- UNESCO. (2010). The power of culture for sustainability. Paris
- Viljoen, A. (2005). *Continuous productive urban landscapes*. Minneapolis: University of Minnesota Press.
- Winkler Prins, A. (2017). Global urban agriculture. Baltimore: Johns Hopkins University Press

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Hubert Gulinck has a PhD in Agricultural Sciences (1980). He is Professor Emeritus (2013) at the University of Leuven, where since 1989 he has taught courses in Landscape Analysis, Rural Planning, and Land Use Monitoring. He has been active in research in the application of remote sensing in landscape ecology, concepts of planning and management of rural and open spaces, sustainable agriculture, landscape impact studies, domestic gardens, and resilience of land use systems. Until recently he was a member of academic and policy working groups on strategic planning, rural development, and agricultural history. He promoted and co-edited a book on the interfaces of landscape and land use, published in 2018. He is still active in local projects on landscape and agricultural heritage, and in an international network on the preservation of the environmental and cultural values of the Cerrado savannah of Brazil.

Raffaella Laviscio is an Architect, PhD, and Adjunct Professor at Politecnico di Milano (Italy) where she carries out research on the protection and enhancement of Cultural Heritage and Landscape in the context of national and international research programs. She is a member of ICOMOS Italia and the ICOMOS-IFLA International Scientific Committee on Cultural Landscapes (ISCCL). She is responsible for the scientific and organizational secretariat of the "World Rural Landscapes Initiative." She is an expert member of several Landscape Commissions in the Milan metropolitan area. She participated in national and international conferences on the theme of Cultural Heritage and Landscape. She is the author of publications on the issues of knowledge and evaluation of cultural heritage.

Jane Lennon is an historical geographer with a PhD on cultural landscape conservation from Deakin University. She is an honorary professor at the University of Melbourne in the Faculty of Architecture, Building and Planning, specialising in heritage landscapes. Jane is a founding member of Australia ICOMOS, an elected member of ICCROM 1999–2003, Australian Heritage Commissioner (1998–2004), Australian Heritage Councillor (2004–2008), and Queensland Heritage Council member (2008–2010). She has worked in national park planning and historic site management and as a heritage consultant in Brisbane. She has published extensively, especially on cultural landscapes and their management, and is convenor of the Australian group working on the World Rural Landscapes.

Frederik Lerouge is a bioscience engineer in Land and Forest Management (KU Leuven, 2005). He has a broad interest in landscape ecology and spatial analysis, and in human–nature interactions, in particular in the framework of transformations within social-ecological systems. He has done research on the potential implementation of ecosystem service concepts in adaptive and resilient spatial planning and is currently completing a PhD on this topic. At present, he is lecturing on data analysis, landscape ecology, and ecosystem services at PXL University College, Hasselt.

Alberto Matarán Ruiz holds a PhD in Environmental Science in the University of Granada (2005), and from 2003 has been Professor of Regional Planning and Environment at this university. His interest in local self-sustainability and social participation is the basis for his research projects around urban and periurban agriculture and the question of food at a bioregional level.

Josep Montasell-Dorda is currently retired. He was head of the Baix Llobregat Agrarian Park for 15 years, a technician at the Sustainability and Territory Unit of Barcelona Provincial Council, and a Member of the Catalan Studies Institute, Agroterritori Fundation, and Intervegas Federation. His dedication to periurban farmland preservation, management, and planning has led him to be part of multidisciplinary teams for the drafting of local plans, collaborating on international projects for the preservation, development, and management of agricultural spaces. He has participated as teacher of several degree and master's programs on regional and urban planning and on landscape at the Universitat Politecnica de Catalunya and Universidad de Girona.

Nelly Niwa is an architect and urban planner, director of the Interdisciplinary Centre for Sustainability at the University of Lausanne. She completed a doctoral thesis in environment on urban agriculture in Geneva (Switzerland) and Tokyo (Japan). She led the Vaud 2030 research project (*www.vaud2030.ch*), which proposed a prospective approach to agriculture, and the Volteface collaborative research platform on the social aspects of the energy transition (*www.volteface.ch*).

Valerià Paül has been, since early 2015, Interim Lecturer at the University of Santiago de Compostela. His main research interest are regional planning and management, focussing on open spaces, protected and mountain areas, and development; historical and cultural geography of landscape; agriculture, food, and rural studies; political geography; and tourism (specifically, cultural, natural and rural tourism, and in protected areas). He has participated in a dozen projects earned by public competitive applications, usually working on interdisciplinary rural and regional studies. These projects have been funded by the European Union and the Australian, the Spanish, the Galician and the Catalan governments. He has published more than 20 papers in peer-reviewed journals (classified in JCR SSCI or SCOPUS), and he has presented more than 100 papers at national and international conferences, including several keynote addresses.

María-José Prados is a Professor at the University of Seville. She holds a Doctorate in Geography, a Postgraduate Degree in Rural Planning and Ecology from the ITC (NL), and a degree in Regional and Urban Planning from the IAP (SP). She is currently coordinating the project H2020 MSC RISE Planning and Engagement Arenas for Renewable Energy Landscapes (PEARLS) and is lead researcher of the Spanish TERRYER project (Territorial Sustainability of the Low-Carbon Energy Model: Regions and Renewable Energies). Her research topics include territorial planning and management processes in rural areas of Southern Europe. She is especially interested in new population settlement patterns in the European rural environment with a chain of interlinked factors with urban areas. She also took part on the Spanish Committees of the Cost Actions Urban Agriculture in Europe (TD-1106 UAE) and Renewable Energy and Landscape Quality (TU-1401 RELY).

Joëlle Salomon Cavin is an urban geographer and senior lecturer in urban geography at the University of Lausanne–Switzerland. She specializes in the study of urban–rural and city–nature relationships analysed in terms of geographic imaginaries and territorial practices. Her research studies revolve around three major topics: the origins and consequences of anti-urbanism, the urban models of conservationists and natural scientists, and the rise of urban agriculture in Switzerland. She has recently edited, with Mary Corcoran, a special issue on Urban Agriculture and Civil Society in *Nature and Culture* (2018).

Jesús Santiago Ramos is a lecturer in Human Geography at the Pablo de Olavide University in Seville. He holds a degree in Environmental Sciences and a Doctorate in Human Geography. His main field of work is the study of the relationship between the city and its natural and rural surroundings, both from the perspective of spatial analysis and from the practice of spatial planning. Currently, his work focuses on two topics: the analysis of urban green infrastructures as a source of ecosystem services and a key factor for the improvement of environmental quality in urbanized areas, and the study of territorial heritage – natural and cultural – as a resource for local development.

Lionella Scazzosi Architect, PhD in 'Conservation of Cultural Heritage' (1991), and Full Professor at Politecnico di Milano (Italy). She is Head of the PaRID Lab (Research and International Documentation for Landscapes, Dept. ABC, Politecnico di Milano), leading research for Public Administrations; and Scientific Director of National and International Research on gardens and landscapes conservation: theory, methodology, strategies, management, and enhancement, recently with special focus on rural landscapes. Since 1998 she has been a consultant for the Italian Ministry of Cultural Heritage for the development of landscape policies, since 2005 an expert of the Council of Europe for the European Landscape Convention (Florence 2000), and since 2007 a member of the ICOMOS-IFLA International Scientific Committee on Cultural Landscapes (ISCCL) and responsible for the World Rural Landscapes Initiative. She is Vice-Chair of the European COST Action

TD1106 "Urban Agriculture Europe" (2012–2016) and author of more than 160 national and international scientific publications.

Axel Timpe Dr.-Ing. is a landscape architect trained at Leibniz Universität Hannover and Centre d'Études Supérieures d'Aménagement in Tours. He started his professional career at lohrberg stadtlandschaftsarchitektur in 2003 and has been a research and teaching associate at RWTH Aachen University since 2010. He completed his doctoral degree "Designing Productive Parks – history and current practice of biobased production in European parks" in January 2017. Axel Timpe had a coordinating role in COST Action Urban Agriculture Europe and is coordinating the transdisciplinary national research CoProGrün and Horizon2020 Innovation Action "Productive Green Infrastructure for Post-Industrial Urban Regeneration (pro-GIreg)." His research focuses on Green Infrastructure functions of Urban Agriculture and Urban Forestry and the potential to co-design and co-produce these with local stakeholders.

Roland Vidal is a research engineer at the National School of Landscape in Versailles (ENSP) with a PhD in Environmental Sciences. He leads the Collective of teaching and research in agriurbanism and territorial project (CERAPT) and is associate researcher at INRA-SADAPT (group proximity). His areas of research and teaching focus on the relationships between city, agriculture, and landscape, a theme he addresses in partnership with the School of Architecture of Versailles and AgroParisTech, where he is an associate professor, and also with other schools of architecture, agronomy, town planning, or landscape, in France, Italy, Mexico, and Tunisia. His publications are available on the CERAPT website: *agriurbanisme.fr*.

Ana Zazo-Moratalla has been since 2016 a lecturer at the Universidad del Bío-Bío in Concepción, Chile. Her main line of research is focused on the analysis and definition of territorial innovative models of periurban agricultural systems and the analysis of their mechanisms: management, planning, and governance. She has also focused on the inclusion of these spaces in the urban agri-food cycle through sustainable, resilient, and democratic agri-food planning. In the professional field she has worked in the architecture and planning sector, collaborating with several companies, governments, and NGOs in Spain, Chile, and Mexico. In the academic field, she has worked in three national competitive research projects, a European COST-ACTION network, and several technology transfer projects. In addition, she is the Editor-in-Chief of *Urbano*, the journal of the Urban and Planning Department at Universidad del Bío-Bío.