4th AESOP Sustainable Food Planning Conference

Berlin
November 1st - 3rd 2012

Evolving places processes products.
Changing food systems in an urban world

Book of Abstracts

In cooperation with AESOP

Chair of Landscape Architecture and Open Space Planning
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Dear delegates,

it is with great pleasure that we welcome you to the 4th AESOP Sustainable Food Planning Conference, co-organized by the Technical University of Berlin. We are especially pleased to be able to host this annual meeting of an interdisciplinary group researching urban food systems and their transformation over time but also, most importantly, striving to design strategies; new planning approaches and develop concrete interventions.

Sustainable food planning is an increasingly significant and multifaceted field combining empirical and theoretical research. With the three tracks of the conference places, processes, products we hope to be able to show the wide range of issues examined within it. Our aim is to extend our scope beyond our familiar territory, focussing on the food systems not only in the global north but rather in the rapidly urbanising global south. This new perspective can be useful in unsettling long held assumptions about the role of planning and design disciplines in addressing questions of food security and sustainability.

We owe a special thanks to the chairs of the conference sessions Leah Ashe, Prof. Katrin Bohn, Pamela Dorsch, Xenia Kokoula, Prof. Kevin Morgan and André Viljoen. We would also like to thank Lulu Dombois for her valuable assistance with organising this conference as well as Mareen Leek, Anna Neuhaus, Maike Nolte, Sebastian Proksch and Frederik Springer for their support.

On behalf of the Technical University of Berlin we are delighted to host this conference in cooperation with AESOP and especially the Sustainable Food Planning thematic group coordinated from Prof. Kevin Morgan. We look forward to stimulating discussions and a fruitful exchange of knowledge so that we can, together, envisage the future of sustainable food planning.

Professor Undine Giseke
Christoph Kasper

TU Berlin, Chair of Landscape Architecture and Open Space Planning
**Thursday 1st November 2012**

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| 11:15 - 13:00 | Parallel Tracks                                                        **Places**  
                          **Undine Giseke, Christoph Kasper** |
| 11:15 - 11:45 | 30’ Two major stakeholders of the food system facing a new demand: processes and stakes of reconnection between Lyons urban region (France) and its hinterland through food  
                          **Dirk Wascher** |
| 11:45 - 12:15 | 30’ Food Planning and Innovation for Sustainable Metropolitan "Regions"  
                          **Marie Markman** |
| 12:15 - 12:45 | 30’ Traffic Island EDIBLE LANDSCAPE                                     |
| 12:45 - 13:00 | 15’ Discussion                                                          **Undine Giseke, Christoph Kasper** |
| 13:00 - 14:30 | Lunch                                                                    |
| 14:30 - 15:30 | 60’ Plenary Session - Keynote 2 - "Urban Food Security"                **Dr. Jane Battersby-Lennard** |
| 15:30 - 15:45 | 15’ Coffee Break                                                        |
| 15:45 - 18:00 | Parallel Tracks                                                        **Places**  
                          **Xenia Kokoula, Undine Giseke** |
| 15:45 - 16:15 | 30’ How to feed the metropolis: Assessing the role of periurban agriculture in urban sprawl in Rome  
                          **Aurora Cavallo** |
| 16:15 - 16:45 | 30’ Planning to improve rural-urban linkages in sustainable food systems  
                          **Alison Blay-Palmer** |
| 16:45 - 17:15 | 30’ Attributes of urban agriculture to distinguish it from agriculture in urbanised areas: implications for food system planning  
                          **Ina Hartmann / Regine Berges** |
| 17:15 - 17:45 | 30’ Chaordic Design of collaborative structures for urban food and farming: reflections on Amsterdam and Almere  
                          **Gaston Remmers** |
| 17:45 - 18:00 | 15’ Discussion                                                          **Xenia Kokoula, Undine Giseke** |
| 18:00        | End of the Day                                                          |
| 19:00        | Dinner at Markthalle neun                                               |
Processes
Leah Ashe, Kevin Morgan

Rositsa Ilieva / Arnold van der Valk
The challenge of integrating sustainable food systems and spatial planning: strengthening the European research agenda

Xin Wang
The Status Quo and the Reasons for the Emergence of Agricultural Landscape in Intra-urban Space in Beijing

Jess Halliday
Governance and institutional theory: tools for understanding barriers and enablers to effective urban food strategies

Discussion
Leah Ashe, Kevin Morgan

Products
Katrin Bohn, André Viljoen

Craig Verzone
The Food Urbanism Initiative - Strategic Sites and Parallel Design Projects

Anna Maria Orru
‘Foodprints’ - a project investigating the role of Artistic and Design-based research within urban agriculture

Philipp Feldschmid
Design for Rurban Interaction - The Agri-Cultural-Forum, Kathmandu Nepal

Pamela Dorsch, Katrin Bohn

Howard Lee
A SWOT analysis of hydroponic and aquaponic systems for food security in cities

Susanne Thomaier/Kathrin Specht
The present practice of zero-acreage farming and its contribution to a sustainable city

Axel Dierich
Multiply integrated rooftop greenhouses for resource-efficient production of food and living quality

Pamela Dorsch, Katrin Bohn

Everyday Food Policymaking

A SWOT analysis of hydroponic and aquaponic systems for food security in cities

The present practice of zero-acreage farming and its contribution to a sustainable city

Multiply integrated rooftop greenhouses for resource-efficient production of food and living quality
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**Trip 2**

Jens-Christian Knoll
Landschaftspark Herzberge
Spielfeld Marzahn
With global population predicted to reach 9 billion by 2050 and a degree of urbanization already exceeding 50%, questions of food security and sustainability are gaining ever increasing prominence among researchers and politicians.

At the same time that urbanisation has increased the importance and power of urban areas, it has generated a decoupling of production and consumption that poses serious challenges to cities’ food systems. In such a context, issues such as food sustainability, security and sovereignty have risen to the fore. Indeed, because food systems are quintessentially multi-functional, they have become ideal media through which to explore more general questions of sustainable urban design, structuring, and place-making. This changing context makes it imperative that planners and designers consider urban food systems in relation to conditions and issues such as the following:

• Urban growth dynamics and development have often occurred at the expense of valuable agricultural land, making land use conflicts unavoidable.
• Large segments of the population in cities are becoming ever more dependent on an increasingly globalised food market, with its numerous fluctuations in price and supply creating growing vulnerability to food security. This situation has triggered considerable debate about the significance, character and potential of more regionalized supply chains.
• Increasing urbanisation has led to questions concerning the sustainable re-structuring of urban-rural relationships and a new urban-rural metabolism. Systems approaches have attempted to incorporate spatial-structural as well as functional, economic, and socio-cultural perspectives.

For planners, attention to food production in urban and regional (and, in particular, in well-connected urban-rural) contexts has become centrally important. The trend of urbanisation is still ongoing, but with different speeds in the global north and the global south. On the one hand this gives urban areas more importance but on the other hand it also means that the decoupling of production and consumption are challenging for the city’s food supply, mainly affecting the food sovereignty of urban regions. Because of its multi-functional character, urban food systems are an ideal medium through which to discuss and design sustainable urban structures and places.
Urban Agriculture ranges from community-based rooftop farming using flagship high-tech green architecture and technology to informal backyard growing and subsistence peri-urban production. In recent years, multifunctional urban agriculture and systemic approaches has emerged as important topics in debates on the future of urban food systems, and its numerous different forms and divergent character in the North and South make it an issue rich for contextualisation and debate. Planning for sustainable food production, distribution and consumption is an increasingly important issue for policymakers, planners, designers, farmers, suppliers, activists, businesses and scientists alike.

Building upon the stimulating debate and compelling scholarship produced during the first three Sustainable Food Planning Conferences in Almere (2009), Brighton (2010) and Cardiff (2011), this conference will promote cross-disciplinary discussions between active researchers and practitioners in response to these and related issues. Working at a range of scales and with a variety of practical and theoretical models, the conference will review and elaborate approaches to and definitions of sustainable food systems, and continue to define ways of achieving, implementing and institutionalising them. This conference is focussing on 3 different tracks to contribute to the discussion on ‘sustainable food planning’: (1) Places, (2) Processes, and (3) Products.
Keynotes

Keynote 1: "Urban Food Trends"

Prof. Dr. Friedrich von Borries, architect and design theorist
Hochschule für Bildende Künste Hamburg, Germany
Raumtaktik - office from a better future; Berlin, Germany

Keynote 2: "Urban Food Security"

Dr. Jane Battersby-Lennard, urban social and cultural geographer
University of Cape Town, South Africa
AFSUN - African Food Security Urban Network; Cape Town, South Africa

Keynote 3: "Urban Food Policies"

Clare Devereux
Policy Director at "Food Matters", Brighton, Great Britain

Keynote 4: "Urban Food Systems"

Dr. Maria Gerster-Bentaya, rural sociologist
University of Hohenheim; Stuttgart-Hohenheim; Germany
Examining changing food systems in an urban world requires first and foremost contextualising them to understand their spatial configurations and social practices. In particular, distinctions between North and South are extremely relevant, with very rapid urbanisation in many low-income countries creating urban food system dynamics quite different from the urban food movements seen in richer countries. At the same time a lot of similarities within these upcoming food movements can be identified. Up to now, there have been three primary modes of new urban food production models, each with specific relation to the urban fabric in which it occurs:

- Community-based urban gardening
- Building-integrated approaches (e.g., vertical farming)
- Approaches emphasising the multifunctional and/or resource-efficient transformation of traditional agriculture in city-regions.

Contributions within this work stream might address such issues as:

- What are the spatial configurations of urban food systems, and who are the actors?
- Where do food production, valorisation and distribution take place?
- What are the specific conditions and spatial forms of the urban fabrics, and the food systems and food movements they yield, in the global North and the global South (and to what extent can these even be generalised)?
- Are there examples of the three modes of production as part of the urban food system and what are the interfaces (understanding the system)?
- Are there (systemic) methods useful for characterising the spatial dimension of urban food systems?
- Are there new concepts, methods or practical approaches useful for measuring or stimulating the multi-functional or resource-efficient transformation of traditional agriculture in city-regions?
Catering societies facing a new demand: processes and stakes of reconnection between spaces and stakeholders in Lyons urban region (France) through food

Caroline Brand; Université de Grenoble, UMR PACTE-Territoires, Institut de Géographie Alpine; carolinebrand@hotmail.fr

To achieve real outcomes of food security and sustainability and in the perspective of integrating food matter to the making of the urban regions (Steel, 2009, Morgan, 2010), there is an accurate need for the city planners to understand the professional culture, the characteristics and logics of the major stakeholders of the food system that literally feed the city (Pothukuchi & Kaufman, 2000, Brand & Bonnefoy, 2011). Otherwise, only a small percentage of the whole food system will be addressed by the food policies. In this sense we have decided to study a major stakeholder of the food system that hold a great responsibility in feeding the city and are the catering societies which account for a great number of meals in public and private establishments. As other stakeholders, catering societies represent a major lever for food policies.

The aim of our inquiry is to understand the new processes in which those stakeholders are involved. How do the economic logics face the new social demand (Morgan et al., 2006)? How is it impacting their strategies and ways of functioning, particularly from the supply-chain view, and with which consequences concerning the Lyons urban region? The inquiry shows that the consumer demand (Charvet, 2008, Fumey, 2010) and the new political will concerning the food supply in public catering (Morgan & Sonnino, 2008) are acting on a re-territorialization process that influence those economical stakeholders and contributes to their re-anchoring. Those evolutions create a “sense of place” (Cresswell, 2005) reconnecting the spaces and the stakeholders in the urban region of Lyons.

The catering societies are clearly facing a new public demand. Through the Grenelle 1 Law, the French State has put forward the objective of 20% of biological products in the scholar meals for the year 2012. But as that biological demand was somehow in contradiction with environmental concerns as the biological production is really low in France (3,5% of the agricultural productive French land in 2012), this target of the State turned the public demand toward the integration of local products into the meals (Darly & Boivin, 2010). As a result the catering societies are passing this demand on their organization which contributes to change the professional identity of the major catering companies. A reconnection to the heart of the meaning of the profession (feeding and specialist of the product) is observed and the supply-chain adapts to this demand recreating connections with the rural hinterland of the city. Also, a new relationship between food system stakeholders who used to have limited contacts can be noticed which leads to an emergent feeling of inter-dependency, territorial solidarity and responsibility in a regional environment opening the path to a new local food governance.

Without falling into the “local trap” (Born & Purcell, 2006), those evolutions show a cross-road where the sector-based logic could meet the territorial logic giving a new dimension to the strategies integrating food as a planning component of urban regions and expressing the territorial benefits of intertwined local loops into global circuits (Vanier, 2011).
The project ‘Food Planning and Innovation for Sustainable Metropolitan Regions’ (short FOODMETRES) strives to assess the environmental and socio-economic impacts of food chains with regard to the spatial, logistical and resource dimension, as well as questions of food safety and quality in their relevance for food planning and governance. Recognizing that food production and consumption is not only linked via food chains in a physical-logistic way, but above all via value chains in terms of social acceptance, FOODMETRES is designed to combine quantitative and evidence-based research principles with qualitative and discursive methods to address the wider dimensions of food chains around metropolitan agro-systems.

Most forms of the large-scale agro-food industries deny the involvement and proximity of urban consumers within the production, processing, trade and valorisation of food. Mainly addressing productivity and profit, current concepts of innovation are targeted mainly at the techno-economic ‘spaces of flow’ rather than at the socio-spatial ‘spaces of place’. However, making agro-food chains more sustainable and more transparent, requires to re-define the role of the consumer, the goals of innovation and the meaning of space in a regional context. The definitions of what spatially constitutes a metropolitan region are manifold. For FOODMETRES we will – in cooperation with local stakeholders and authorities – perform regional agricultural resource assessment in order to characterize each of the six case studies (Ljubljana, Rotterdam, Milano, Berlin, London and Nairobi). These metropolitan regions will comprise existing and potential agricultural lands in the direct (city boundary) and wider (depending on the footprint) proximity of urban centres.

Rather than operating in the existing set of system boundaries, FOODMETRES will explore the spatial characteristics and opportunities for (future) metropolitan food clusters, agro-parks and rural transformation centres by stimulating a ‘creative research by design process’ (co-design). The objectives of shortening food chains between producers and consumers and of reducing the number of processing links can be directly related to the impacts of these consumption patterns on natural resources. Due to the length of many food chains, reaching from European urban centers to production sites in other countries in Europe and the world, many food items have relatively large ecological footprints – hence large impacts on our planet. We expect that detailed and targeted assessments of the ecological footprint on the basis of product LCA, broken down for issues such as energy, water, fiber, chemicals and land demand will add substantially to strengthen the impact assessment as well as the communication with the stakeholders. Given the many different performance, environmental and governance indicators which are going to emerge from the different methods, the ecological footprint is considered to play the role of a common currency for the many different aspects of food chain impacts.
Increasingly the consequences of modern life force us to develop new approaches to the function and shaping of public space. Problems manifest themselves in a variety of ways depending on economic, geographic and social circumstances. An urgent issue is how transport and transportation facilities increasingly override ecological considerations, i.e. the circulation of enormous quantities of food between different parts of the world.

Nørreport is a 3-lane road with heavy traffic in the middle of the city of Aarhus, Denmark. This road area is a junction for several traffic lights and for soft and heavy traffic: each day thousands of road users pass through the area. This means that Nørreport is an important and highly visible public space for pedestrians, cyclists, cars and trucks. On a traffic island in the middle of the road, flowering plants form a long strip of approx. 100 square meters. The landscape does not consist of beautiful ornamental flowerbeds, but of edible plants that we know from our kitchen garden, such as berries, herbs and vegetables.

An Edible Landscape is a physical manifestation that raises questions on how we can solve contemporary challenges of modern life in the western world, i.e. ecological, economical and social challenges. Local actors and/or passers-by are invited to participate in the maintenance of the landscape and in different public events. But to the large daily number of passers-by, An Edible Landscape is first and foremost an image, a mirage - it, in other words, insists on visually engaging the passers-by on the level of ideas.

The familiar plants grown in an unusual context create an unfamiliar aesthetic. The nutritious plants and their edibility is a paradox in this junction of heavy traffic. Specific questions such as the amount of pollution in our environment, and whether we can actually eat vegetables grown in between heavy traffic merge with the purely visual aspect of the landscape. The paradox created by An Edible Landscape contributes to discussions that are increasingly concerned with the shaping of the public space, of seeing spaces of possibilities where edible plants - perhaps grown locally - could also play a much more central role. By its purely visual appearance, An Edible Landscape raises the question: could this be an actual solution to the lack of fresh food or to the invasion of roads and traffic in urban spaces due to the extensive circulation of food?

Based on the experiences gained by the establishment and maintenance of An Edible Landscape (April – November 2012) this paper discusses how temporary landscapes by the use of simple means, such as An Edible Landscape, can stimulate transformation and contribute to the elucidation of complex problems related to global issues, among others, the infrastructure of our food systems. It emphasises that within this conceptual approach there is an ability to create ‘images’ that give us new ways to relate to subjects and/or places, which are foreign and fairly abstract to us.
How to Feed the Metropolis: Assessing the Role of Periurban Agriculture in Urban Sprawl in Rome

Based on theoretical concepts about urban sprawl, such as land consumption and population density, this study aims to provide a methodology for defining models of urban development and dynamically analyze the changes that have occurred in the patterns of urban and periurban agriculture. We argue that there is a need to develop conceptual and methodological tools, in order to understand, explain and plan for these aspects of the Mediterranean metropolitan areas in comparison with Northern Europe countries periurban regions.

Recent studies (Salvati et al., 2012) argued that in Mediterranean Region sprawl increased over the last decades not only in low-quality fringe areas, such as low-intensity agricultural areas, degraded pastures or abandoned fields, but also in high environmental quality ones such as for instance vineyards, olive groves and woodlands. The main goal of this research is to define the morphology of urban and periurban agriculture within the framework of food sustainable planning in the metropolitan areas focusing on the Rome case study. The changing socio-spatial facets of the settlement development process in these areas are investigated by focusing primarily on the agriculture and land use distribution as well as on changing population and housing dynamics. The paper discusses a conceptual approach, applied to the identified case studies, in order to deepen the idea that polycentric urban systems are more efficient, more sustainable and more equitable than either monocentric urban systems or dispersed small settlements (EEA Report, 2006), also exploring the role played by the changing in land use and of the role agriculture.

The case of Rome is interesting due to several reasons. First, Rome is the largest in Italy (Camagni, 2001), in terms of surface area and population, and was the largest agricultural municipality in Europe until 1992, when the municipality of Fiumicino separated itself from Rome. The special features of the case of Rome also concern the extent and size of the settlement developments characterizing the area: two thirds of the urbanized surface areas have been built up in the last fifty years, occupying mostly agricultural land (Bianchi and Zanchini 2011, ISTAT, 2011). The food network behind agriculture in the city, within a number of integrated social agrarian cooperative, who represented an alternative big food production system and landmark for many initiatives carried out by the civil society, associations, cooperatives, volunteer and school sectors. Moreover most of them are within the perimeter of the protected areas of the city covering a considerable surface. At the same time, despite are not available official data, also due to the fact that all of this phenomena area characterized by informal and spontaneous dynamics, the community gardens in Rome are estimated in more than 2500 sites on a surface of 90 hectares (Dell’Orco, 2010). The urban-planning instruments over the years, and the regulation plan, in force since 2008, have not expressed a territorial set-up strategy linked to the environmental, productive and landscape factors of the Rome area agricultural ecosystem for the environmental and agricultural system (Palazzo, 2005, De Lucia, 2010, Magnaghi 2011).
Planning to improve rural-urban linkages in sustainable food systems

Alison Blay-Palmer; Wilfrid Laurier University; alison.blaypalmer@gmail.com

The complexity of problems such as climate change, food and nutrition insecurity, high rates of food related disease, and escalating rates of unemployment requires the adoption of a broad-based sustainable food systems perspective. At the same time, there is increasing evidence that we need to explore different community based problems and solutions using a place-based approach so we help communities define what works for them. Against this background, this paper will focus on three initiatives:

1. Findings from a survey in Ontario, Canada of over 350 community projects, including 21 case studies. The research project has resulted in the creation of a toolkit that captures best practices from the region and includes recommendations about the role of planning in creating more sustainable food systems.

2. The FAO paper 'Food, Agriculture and Cities', which promotes a people centered approach with increased collaboration among stakeholders and the application of territorial planning and legal frameworks for resilient food systems.

3. The results of the discussion that took place at the World Urban Forum 6 Side Event ‘A Conversation about Linking Farmers to Local Buyers: Opportunities, Challenges and Successes’, which involved a mixed group of participants from policy, practice and academia. The three areas of interrogation defined by the group using a World Cafe knowledge-brokerage method were:

   1. Who will produce food under the process of urbanization?
   2. How can labour can be incentivized to stay (or take up?) food production and remain in rural environments?
   3. Adopting a multi-stakeholder perspective, what is the role of the private sector in urban food security? How can public and private interests be reconciled?

Common themes from the three projects will be identified as they point to overlapping concerns and places where food planning can build important synergies for collaboration, learning and solidarity.
What makes urban agriculture different to peri-urban agriculture: attributes and implications for food system planning

In the recent decade, urban agriculture (UA) has reached an increasing relevance in the debate about food system planning in developed countries. But until now, the term ‘urban agriculture’ has been used to describe a broad variety of farming and gardening structures, practices and institutional settings. Facing the phenomenon of emerging new initiatives within urban centres, particularities become apparent that differ from traditional agricultural forms. Still, in discussions in context of science or planning, clarity about the term ‘urban agriculture’ is lacking. Accordingly, a more concise definition is needed to elaborate the characteristics of urban and peri-urban agriculture (PUA) beyond a purely geographical distinction. The objectives of the presentation are to identify specific attributes of UA, to analyse how it differs from PUA and to derive implications for food system planning.

Reviewing literature focussing on UA in developed countries, it is identified how UA is adapted to the urban spatial, ecological and socio-economic conditions. From this result, three specific attributes of urban agriculture are introduced:

(i) the flexibility in dealing with space and time,
(ii) the emancipation of site conditions and
(iii) the socio-economic niching. In the study we verify the applicability of the attributes based on international practice examples.

To carve out the entity ‘urban agriculture’ we compare it with agriculture in peri-urban areas regarding spatial and organisational structures, involved actors and forms of stakeholder interactions. Although PUA is dealing with the close neighbourhood and connection to the city, it differs from UA in terms of professionalism, organisation and land management. Considering the specific urban conditions, constrains and adaptations of UA we deduced implications for policy and planning aiming at the integration of food production within cities as an important component of a sustainable food system. The explored implications range from considerations about the applicability of diverse policy instruments and the related opportunities and challenges as well as their practical implementations.
European cities are currently witnessing an impressive blossoming of all kinds of initiatives in the realm of urban food and farming. These initiatives emerge in a context of severe economic, ecological and social crisis; uncertainty about the future is currently quite palpable throughout Europe. The present appears as messy, fuzzy and complex, and more than ever the future seems to escape from any paradigm of makeability. It is unknown territory; it may even be that the fundamental position of not-knowing is the only valid attitude or learning mode while constructing the future.

The contribution of the recent urban food and farming initiatives to urban challenges such as urban health, climate mitigation, quality of public green, social empowerment, economic development, food safety etcetera, is much acclaimed, yet far from being realized. There seems to be tremendous scope for creating collaborative and synergizing structures and procedures, that catalyze and align resources, and produce order out of chaos. Yet, given the complex and fuzzy living conditions we are in at present, what workable governance models, collaborative structures and instruments are appropriate? Food Policy Councils operating in cities like Vancouver, Toronto, and Brighton are but one example; however, the diversity of urban dynamics is so big that we probably do better to investigate further.

This paper explores, in an ethnographic fashion, the recent dynamics of synergizing efforts in the realm of urban food and farming in the Dutch cities of Amsterdam and Almere. Even though only 25 km apart, they have a completely different identity: Amsterdam as a well know international cultural hotspot with over 700 years of history, and Almere, a new town constructed only 35 years ago on reclaimed land. The point of departure is not a certain governance paradigm or theoretical framework, but precisely the understanding that the world is inherently fuzzy, chaotic and uncertain. We document the understanding of urban initiatives of, and their response to, the fundamental uncertainty of our times, and especially the relevance for and impact on their actions to create synergy. This paper provides an descriptive account of participant observation in the emerging food and farming networks in both cities.
In this paper I will present preliminary results from my dissertation project on street markets in Hamburg. From the beginning, the food system of Germany’s largest port city has always been influenced by its proximity to international trade, but also by a close linkage of urban worlds of consumption with intensively used horticultural areas on the city fringe. In spite of the global connections of Hamburg’s economy, parts of the city’s food system have retained a distinctive local embeddedness which merit a closer examination. Over 60 street markets play an important role in this system, as they are an important retail channel for the farms on the urban fringe, and are an example of urban demand meeting producers without the mediating influence of retail.

In literature, „the market“ is considered a distinct feature of the medieval city, and the history of some markets in Hamburg can indeed be traced back to the middle ages. A boost to the development of street markets did, however, not occur until the early postwar years with the administration’s attempt to regulate the informal street trade taking place in the widely destroyed urban areas, and to provide food security and competitive prices for the population. In this way, the markets provided the direct and flexible supply of the city by small periurban farms and paved the way for the rapid expansion of the mass consumer society of the 1950s and 1960s. Even though increasingly sophisticated supply chains, storage capacities and shopping typologies have led to a concentration of shares in diverse forms of stationary retail, the seemingly archaic street markets remain a common feature of the urban fabric until today.

In my paper, I will give a short account of the history of Hamburg’s markets, their current governance structures, and the networks in which market vendors are connected with periurban spheres of production. Another focus will be laid on the performative effects that specific market images have on market stakeholders’ actions and, thus, the cultural and socioeconomical construction of markets. These market images have a considerable impact on the development possibilities of Hamburg’s street markets, as they diffuse into the everyday practices of vendors, customers, and members of the administration alike. All aforementioned influences – history, governance structures, urban-rural networks, and the performativity of market images, give us the background in order to reflect on the existing, as well as the possible role of street markets as an anchor point of different types of locally embedded and community-centered food economies.
An Approach to Stimulate the Multifunctional Use of Peri-Urban Areas and the Development of Welcoming Tourists to the Farm: Case Ouled El Maleh valley-Mohammedia – Morocco

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This study is part of an action research (field study) pertaining to the Moroccan-German pilot program „Peri-Urban Agriculture and Tourism in the Oued El Maleh valley - Mohammedia“ The proposed study seeks to generate strategies for the multifunctional use of the space around the valley. The valley contains enough tourist attractions less valued by the farmers of the valley. The influx of visitors to the valley benefits a limited number of households with the exception of the direct sale of agricultural products by local women. Agricultural activities are the main occupation of the inhabitants of the valley, yet constitute an unsatisfactory source of income due to the small size of the farms. Thus, the study is an attempt to attract farmers to diversify their sources of income and generate values to their agricultural products. Equally important, the study tries to approach two main components related to the same issue: Predisposing farmers to welcome tourists to the farm and increase the value of local products through processing and direct sales methods.

The methodology consists of an interview with a cluster of 100 household farmers on their inclination to welcome tourists to their local farms. Likewise, 100 women are encouraged to direct the focus of their culinary expertise (typical recipes of the valley) and their susceptibility to prepare different local recipes for sale purposes to prospective tourists. Two interviewing guides are designed for data collection. SPSS (a statistical tool) is used to enter and analyze data.

The study aims at generating interesting results on the perspective of developing tourism by welcoming tourists to the farm. The development of this kind of tourism will use multifunctional space in the valley in order to better promote local products through the direct sale of both raw and processed state, therefore creating better employment opportunities for part of the labor force available in the area in question.

Recommendations of the study are implemented through the creation of a local debate on welcoming tourists to the farm and producing a working circle composed of farmers in favor of welcoming tourists to the farm, and also taking part in assisting fellow farmers to organize themselves into associations. This support will also reach out to local women along the valley who will be engaged in the improvement of their sales prospect. The study also targets the enhancement of products sold through small-scale processing in the aim of strengthening the capacity of local fellow farmers to be better able to organize themselves by means of creating a special organization through the initiative of the project team.
In Western Africa, urban agriculture plays a crucial role in income generation for many families, and in the supply of food to urban centers. Whereas this activity is marginalized in most African cities, in some of them, thank to the impulse of international agencies, there is a try to protect it. However, urban planners have little knowledge about the spatial and social configuration of urban agriculture and its protection is often restricted to one activity perceived positively by urban authorities: its interactions with other places, actors and activities are not considered in the urban planning.

Our contribution questions the role played by social and spatial interactions in the sustainability of urban agriculture and their participation to the emergence of places of agri-urban complementarities. These complementarities are a good basis to design an integrated urban food strategy linking places, actors and activities.

Taking the case study of the city of Bobo-Dioulasso (Burkina Faso) the city-agriculture interactions are analysed at three levels:

- Interactions in the process of urban production
- Interactions among actors at the local level
- Interactions through institutional projects

After describing the different types of urban agriculture found in Bobo-Dioulasso and their interdependences at the city level, we focus on one specific case study: the interactions between market gardens and pig breeding. Both activities play an important role in food provision for the city. On the one hand, market gardens are perceived positively by urban dwellers, and the urban authorities are interested in protecting them because of the benefits they have for the city (food provision, income generation etc.). On the other hand, pig breeding is perceived negatively by urban dwellers because of its nuisances, and it exists a law that prohibits this specific livestock production within the city. Here we take the example of their interactions through the acquisition of organic manure and we demonstrate that: 1) these activities are strongly connected and interdependent, 2) these interactions are essential for market gardeners to produce vegetables and thus to continue to provide food for the city, 3) these interactions rely on a spatial and social proximity.

However, these interactions are not considered in the urban planning: the future city development might deconstruct these existing links by forcing the pig breeders to stop their activity or to move to the hinterland. This misreading might have consequences regarding the sustainability of urban market gardens.

This contribution underlines that places of agri-urban complementarities exist through local practices; these places are part of the global urban food system and participate to its sustainability. Nevertheless, the urban food production is only partly promoted by urban authorities: only markets gardens are taken into account in the urban food strategy, whereas it is the whole agri-urban system that should be considered.

To conclude we question the interest 1) to consider the local interactions at farmers’ level to develop an integrated food strategy based on agri-urban complementarities, and 2) to link the local level of interactions with institutional programs.
More a directionality than a status, food system sustainability – and, with it, food security – intersects with countless processes of transformation. 'Everything' is changing: demographic and climate dynamics; governance and power structures; technology and knowledge systems; diets and lifestyles; and the discursive constructs that frame all of these. In this sense, questions of why and how food system change happens become extremely relevant – not least of all because understanding the answers to these questions (to the extent that we might answer them at all), bears centrally upon our capacity to achieve real outcomes of food security and sustainability.

Contributions within this work stream might address such issues as:

- How have existing food strategies emerged and evolved, whom have they involved, and how have they impacted foodscapes? How might these food strategies be improved?
- How have trans-sectoral food policies been created, which actors have driven the changes, and what conditions have facilitated innovation and transformation? How might communities stimulate innovation and transformation?
- How have economic processes enabled, constrained, or defined the shape of urban food networks? How might these processes be restructured to strengthen regional, urban and rural dimensions of food systems?
- How are lifestyles and diets changing, how do these changes affect and challenge the wider functioning of the food system, and how do food strategies and policies address these changes and their effects? How might innovative food strategies and policy better address them?
- How does food policy ‘get made’ in different contexts? Which actors participate, dominate, or become marginalized or excluded; what are their interests and tactics; and what structures support or inhibit their participation? How might food policy making become more democratic, more representative, or more ‘virtuous’?
- How do larger political discourses and movements (around, for example, sustainability, food security, food sovereignty, or rights) shape the development of food policy at international, national, regional and local levels? How well do these discourses translate between contexts? How might stakeholders transcend single-issue food politics to construct a food movement?
Twelve years after the Pothukuchi and Kaufmann seminal study, the “food system” has not only ceased to be a “stranger to the planning field” (2000), but it has become the trigger for “one of the most important social movements of the early twenty-first century in the global north” (Morgan, 2009): “food planning”. Indeed, in less than ten-years-time: more than hundred articles on the topic have been published in international planning and architecture scientific journals and magazines; leading planning associations on both sides of the Atlantic, as APA and AESOP, have established specific sustainable food planning focus groups (2005, 2009); and a dedicated World Town Planning Day conference was recently held (2010). What is more, this growing research interest did not evolve in isolation, but instead was coupled by an equally relevant statutory engagement: in fact, during the same period, more than thirty urban and regional food system strategies were released by different local administrations worldwide and, importantly, the first planning-department-led one was pioneered in Europe.

By fully acknowledging the relevance of this dynamic food system planning momentum, the present paper will draw the attention to one of its most challenging and hitherto under-researched nodes: the effective integration of the food prism into the spatial planning rationale and field of practices. In order to address this challenge, three emblematic metropolitan contexts – Amsterdam, New York and Milan – and their recent advancements in this direction will be closely explored. In particular, some insights into the analytic, design and organisational dimensions of the integration will be contingently provided. Thus, through the specific case-studies examination (e.g. Five Borough Farm in NYC), the paper will advance the proposition that for further strengthening the European research agenda a twofold approach is needed. On one side, a greater dialogue across the emerging landscape of European food planning experiences should be sought and encouraged, while, on the other, the identification of valuable knowledge-building opportunities ought to span beyond geographical limits.
Chinese used to be famous for their highly intensive urban cropping systems and were largely self-sufficient in food produced on adjacent land areas administered by them. However, in last few decades, under the background of rapid urbanization, the agricultural land in intra-urban space is becoming rare. Nowadays people in intra-urban space of metropolis largely depend on the food produced in suburb and rural area. While in recent years accompanying with the urban transition, self growing of food is gradually evoked in metropolitan intra-urban space; a lot of people begin to make use of the urban vacant land to develop their own productive garden. Although this food strategy is still in its infancy and usually with small area, it could contribute to the sustainability of cities in various ways: socially, economically and environmentally and develops very fast. It is gradually becoming a new type of urban landscape and greatly changing the participants’ diet and lifestyle.

The research studied the status quo of the agricultural landscape in the intra-urban space of Beijing. Through the Aerial photo analysis in Google Earth and the field work, the spatial typologies of the agricultural landscape was mapped. Through interviews with the people who have already involved, the participants’ information, organization form and the relevant policies were studied. Combined with the interviews with the people who are not involved in this new food strategy (the non-participants in the public, the designers/planners and the policy makers), the benefits and the challenges of the agricultural landscape in intra-urban space could be summarized.

Furthermore, Based on the data from literature review and interviews with the people who have already involved, the reasons for the emergence and evolvement of the food strategy in intra-urban space under the context of China was analyzed.
Governance and institutional theory: tools for understanding barriers and enablers to effective urban food strategies

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The need to address the sustainability of food provisioning, from production to consumption, is being recognised by governments at all levels. A number of urban governments in England are formulating and implementing their own food strategies to address the planning and policy needs and means to achieve more sustainable food provision within their local and regional areas. Several commentators have highlighted the risk that the effectiveness of these food strategies will be hampered by governance issues, however, and there is an urgent need for theoretical approaches to make sense of the empirical evidence.

This paper aims to help solve this problem by proposing governance and institutional theory as a framework for exploring the governance of urban food strategies in England. It demonstrates the usefulness of these theories for understanding how urban food strategies are created; which actors drive change; which actors participate, dominate, or are excluded from discussions and decision-making; the origins of actors’ norms and values, and how they are negotiated; what structures support or inhibit participation; and how urban food strategies relate to policy within their urban governance context and in multi-level governance.

The intention of the paper is to open up the theories for food planners. Using accessible terms and empirical examples it provides a new set of tools for assessing the governance of urban food strategies – and therefore for developing food policy that is more democratic, representative, and able to meet its objectives to contribute to a more sustainable food system.

The paper first explains governance as a process and a theory, and identifies the steering groups of urban food strategies as ‘policy networks’ – that is, small, stable groups of mutually interdependent actors from the public, private and civil society sectors who come together regularly to address a particular policy problem or programme. It examines the concept of ‘resource dependency’, whereby actors offer up their resources to help advance the network’s objectives. The paper highlights key discussions in the literature on policy networks over issues including steering and management, power, accountability and transparency, and relations between local and central government.

The paper then turns to new institutionalism as a theoretical approach to understanding what informs, constrains, and motivates actors in a food policy network. Institutions are not organisations such as political parties, businesses, or civil society groups, but they are the rules, norms and values influencing behaviour and underpinning human relationships. The paper uses new institutionalism to understand the origins of actors’ institutions, how actors become agents for institutional approaches, and how institutions are negotiated between actors, leading to compromises and the creation of new, shared values. This paper forms part of a project under PUREFOOD, a Marie Curie Initial Training Network funded by the Seventh Framework PEOPLE programme, grant agreement number 264719. Nothing that appears in this paper reflects the opinion of the European Commission.
Everyday Food Policymaking

This paper discusses the concept of “everyday food policymaking,” the efforts of networks of individuals and organizations to reform, restructure, supplant, and in some cases radically transform the food system through a combination of formal and informal policy processes and practices at the municipal level. Based on case profiles of US and Canadian cities, it describes the governance structures cities are developing to accommodate this policymaking process and discusses innovative food policies and programs that have emerged in recent years.

Everyday food policymaking involves government and non-governmental stakeholders, members of the community, and partnerships among agencies, the private sector, and NGOs. It also involves “everyday makers” (c.f., Bang and Sorensen, 1999) people involved in concrete projects that lead to policy innovations, from guerilla gardens to neighborhood compost centers. Everyday policymakers also include community-based entities involved in the co-management of public resources (Emerson, et al. 2011) and oppositional organizations engaged in activities aimed at shaping policy at various scales, including by using “everyday resistances” to existing policies (Wekerle, 2004).

The activities and strategies of different individuals and organizations engaged in everyday food policymaking are often fluid, amorphous, and networked across different interest groups, sectors, and scales. Groups may join together to address particular issues, reconfigure as needed, or disband when problems are resolved. Formal policy processes can respond to informal networks, and networks of advocates can be oppositional while simultaneously participating in formal policy making processes. The policies emerging from these processes are pragmatic, creative, opportunistic, democratic, and tailored to local conditions, yet the results can be replicated and diffused widely from city to city.

Cities are an important locus of everyday food policymaking because they offer physical proximity for elected officials, bureaucrats, activists, entrepreneurs and other stakeholders to interact, fostering food democracy, or the active participation of stakeholders in shaping the food system (Hassanein, 2003). Municipal administrative and policy systems are often more nimble than those of national governments, and cities have key policy responsibilities for public health, education, land use, transportation, sanitation, and other domains that directly affect the food system. They are the physical locations in which much of contemporary food politics is being played out, in struggles for community power, control of public space, consumer-based activism, and engagement with locally controlled institutions, like public schools or water districts, that influence both regional agriculture and national food policies.
"Health" is defined by the World Health Organization (WHO) as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". It is widely acknowledged, that there is a strong connection between nutrition and such a holistic understanding of health.

Urban planners have not yet strongly recognized this connection in planning research and practice. Food systems are touched very basically by the Federal Regional Planning Act (spatial planning procedures, Ger.: Raumordnungsgesetz) by stating that urban planning has to provide and secure spatial requirements for agriculture and forestry as providers of human food and natural material resources (ROG § 2, Abs. 4). In the Federal Building Code (land-use planning, Ger.: Baugesetzbuch) statements concerning nutrition are completely missing. Food security in Germany is looked upon especially in the sense of securing access to food stores and supermarkets in walking distance. Municipal center concepts and retail trade concepts are used, to secure the polycentric fabric of centers and main streets with are mostly the locations of food service infrastructure. Nevertheless experts already speak of a thinned out food service network.

The paper will first describe the US American planning debate on urban food deserts and will present strategies how urban planning fosters community health through local food systems. It will then reflect on fields of action within the German planning practice and research.
What explicit connections exist between farming, food and planning in the development of sustainable urban policies in France? The example of Perpignan Méditerranée Urban Region

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Why do French cities rarely address the food issue, when food is such an important part of French culture? Innovative urban food strategies have emerged in many European cities in the last decade, but in France, the link between food and planning is still weak. As in most developed countries, there is a growing public interest regarding the origin and quality of food. In response, many French cities promote peri-urban agriculture and/or short food supply chain initiatives. Nevertheless, farming, food and planning are rarely connected in an explicit trans-sectorial sustainable policy, which could simultaneously address economic viability, social equity, environmental soundness and public health issues at the metropolitan level.

Do French urban policy makers think that food is a cultural tradition rather than an issue to be addressed? Are cities not the right scale for a food policy in France, given the centralization of public powers at the national level?

In order to understand why French cities have not yet conceived and implemented ambitious comprehensive food strategies, we studied the connections between farming, food and planning in urban policies in the Perpignan Méditerranée Urban Region. Perpignan provides an interesting case study. This city of 250,000 inhabitants lies at the heart of a very intensive farming region, producing wine, fruits and vegetables. And yet, local agriculture is in crisis: the wine sector is struggling to achieve the necessary shift to quality, and the fruit and vegetable sector faces massive imports of cheaper products from Spain and Morocco. In the absence of a formal urban food policy in Perpignan, we analysed the status of food in policies dedicated to planning, agriculture and the environment. Primary data were gathered through the analysis of policy documents, as well as through interviews with local experts (including officials and technicians in metropolitan and municipal public administrations, planners, agriculture extension officers and environmental consultants). This initial research analysis revealed that a wide range of local policies deal with food without explicitly mentioning it. Various projects aimed to support local urban agriculture, regional food production or distribution, and short food supply chains have been implemented over the last 15 years, often with success. They involve a wide range of actors and stakeholders, who are often the same from one project to the next. Despite this, local officials are not yet ready to build a comprehensive urban food policy.

The metropolitan council instead connects the various sectorial policies in a Masterplan and an Agenda 21 plan, as seen through the prisms of urban planning or sustainability rather than food. The emergence of a coherent sustainable food policy would require a multi-level, multi-sectorial governance, which is a difficult issue in Perpignan, given the political opposition between the different levels of government, and between the Metropolitan council and farmers’ representatives.
An analysis of the emerging role of cities as ‘food policy makers’: A case study of Food Futures Manchester

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A small but growing trend has been the localisation of food governance, a part of which has been the emergence of cities as active ‘food policy makers’ (Wiskerke 2009). There is growing interest, in policy, practitioner, and academic arenas, in the potential of this municipal-level activity to support the development of more socially just, financially equitable, ecologically viable and resilient food systems. A study was undertaken of the emergence of cities as ‘food policy makers’, through an in-depth case study of a UK-based food strategy/partnership – Food Futures Manchester. The study aimed to see how Food Futures currently shapes Manchester’s food governance landscape, what constrains this role, and how the partnership can more effectively push sustainable food governance up the city’s policy and broader political agenda. In-depth interviews with various members of the partnership formed the basis of the study’s empirical research. Interviewees represented council employees, local NGOs and members of the public.

Food Futures is based within Manchester City Council, and thus inherently brings a food lens to council practice. It demands connectivity and collaboration across different council services, and with external partners. Interviews also revealed a polarised foodscape, which manifests in different ways. The embeddedness of Food Futures within the local council creates particular dynamics, both enhancing and (having the potential to) diminish this polarisation. Food Futures facilitates the leveraging of council and non-council resources for the pursuit of sustainable food objectives. However, the overlapping commissioner and network-actor roles of Food Futures create both opportunities and tensions. Weak leadership and a lack of political buy-in emerged as key constraining factors on Food Futures’ capabilities. The establishment of an ‘expert advisory panel’ and the active broadening out of participation within the partnership are see as key ‘steps forward’ for the partnership. The study deems that the opportunity for Food Futures to foster a local food economy in Manchester is not being captured.
Analyzing the breakthrough of urban agriculture using the multi-level perspective

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The attention for urban agriculture is increasing. This article aims to support the proposition that the breakthrough of urban agriculture is taking place. This upcoming development is analyzed as a sustainability transition using the multi-level perspective. The results indicate that urban agriculture responds to developments in market, science, policy, technology and culture; the so-called socio-technical regime.

Local food production, coming from the increasing interest in the origin of food can be seen as an example of such a development that encourages urban agriculture. Urban agriculture as an innovative niche development can take advantage of this window of opportunity.

The findings of this research show that urban agriculture is a sincere development, and therefore requires the attention of urban planning in order to support this breakthrough.
Between social and economic factors: A typology of Urban Agricultural Initiatives

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Urban Agriculture (UA) is a specific form of agriculture that fits the requirements of certain urban lifestyles and is adapted to the basic land use conditions in urban areas. These adoptions lead to an agriculture that is highly independent from agro-economic site conditions like the fertility of soil and the climatic conditions. Use of different substrates than site specific soils, mobile growing containers, and even the substitution of nutrients in aquaculture or the replacement of sunlight offer new possibilities to perform agriculture on a small-scale level in areas with high population density. Furthermore growing fruits and vegetables are forms of self-empowerment and can lead to social inclusion in a community. Especially in areas with high population density UA can become a driving factor for the local community and connect people from different cultures and social backgrounds. UA can be a driver for economic success and a factor for new forms of employment in urban areas and also lead to new form of recreation and work / leisure time balance. It can generate new approaches for individual self-supply or improve the supply-chain of restaurants that want to gain more success and transparency in their marketing by healthy and sustainable local and self-produced products.

Nevertheless, the framework conditions of UA lead to a high diversity of initiatives and individual activities. This diversity occurs on the level of individual interests as well as on the society level. Community and intercultural gardens differ from individual subsistence to socio-cultural exchange, restaurants grow their own food on their roof and individuals perform agriculture in their leisure time. These and other forms of UA are based on different interests; differ in their influence of the surrounding society. They also interact in a different manner and intensity with environmental conditions, and generate potentially beneficiary or constraining environmental impacts. These complex interactions cause different implications for policy and planning perspectives.

To handle all these different forms of UA we distinguish UAInitiatives (UAI) by different characteristics that lead into a typology that can be used to sharpen the governance perspective on UAI. The typology is orientated on the distribution level of the produced goods, on the specific interests of the actors and on the kind of actors that are involved in these initiatives. We assume a practical application value of the typology as a planning tool, particularly as UAI prove to be multifunctional, multi-purpose and multi-actors constellations, which implicitly are related to a broad diversity of development options. Here planning and multi-level governance has to develop consensus oriented multi-objective strategies. Spatial considerations nevertheless might urge to prioritize certain form of UAI for certain locations or purposes. Here the typology might support (self-) profiling of UAI.
Lack of understanding between informal sector and formal food planning systems

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In most Spanish cities, the pressure from the lobbies to maintain the status quo and the inertia of governments and institutions, prevent them from encouraging the transition to more sustainable food systems. In previous years, a large percentage of the programs related to the theme, were to be found at School’s Agenda 21. Right now, as familiar incomes drop, and public assistance for scholar canteens is withdrawn, these programs are disappearing, and children bring their lunch from home.

As the government does not provide a coherent policy, bottom-up initiatives -embedded in a more general concern about inequity- have flourished, alternatives to normal food supply systems have been boosted by the crisis. Social movements claiming for food sovereignty and a different development model are not new. Some of the most consolidated examples still have a strong political bias, and being part of them implies a strong personal commitment.

The panorama is far from being homogeneous. We analysed different cases from Madrid, which range from survival strategies to self-employment programs and also include community gardens connected to neighbourhood groups claiming vacant spaces.

The research has enabled us to identify the different relationships towards the institutions. Although in academic circles the vision is usually more optimistic, we conclude that in general, local groups of consumers, farmers and gardeners have very low expectations of achieving and being integrated in a more sustainable food system.

Given the adverse context, some of them even reject to formulate demands, and keep on constructing a “parallel society”. The final question is how, if ever, the official planning process can learn from the collaborative planning strategies and tools for management and mapping developed by these social movements.
In the quest to discover more sustainable, equitable and resilient food systems, products themselves have become a prime vehicle for testing re-envisioned urban-rural relationships and the urban food systems they integrate.

In this track, we are seeking ‘good-practice’ examples of realised projects, including prototypes, policies and food/farming enterprises. Contributors should clearly define the product they consider; critically review the processes and planning that led to its realisation; and evaluate the product with respect to achievements and expectations. These realised products – prototypes, policies and food/farming enterprises – will, of course, range in size and content; they may include (but are not limited to):

- Building-integrated prototypes (e.g., vertical farms, rooftop farms, etc.)
- Cultivation and plant infrastructure prototypes (e.g., structures supporting or sheltering plants or tools, working spaces for farmers, etc.)
- Cradle-to-cradle prototypes (e.g., closed-loop water or soil systems, etc.)
- Enacted planning policy (e.g., policy at local, regional or national level that has encouraged places or processes for urban food system progress, etc.),
- Food procurement or trading policy (e.g., policy with impacts on the marketing and retail of food, policy with impact on the food choices of companies and institutions, etc.)
- Guidance documents (e.g., toolkits or how-to-instructions and their impact on the formation of urban food systems, etc.)
- Enterprises bridging the urban-rural divide (e.g., community supported agriculture, farmers’ markets, etc.)
- Urban agriculture enterprises (e.g., commercial market gardens, community-led initiatives, etc.)
- Food and farming produce (e.g., sustainable farms and their produce, niche market produce, etc.)
The Food Urbanism Initiative (FUI) opens research under the hypothesis that urban design strategies integrating well-conceived and carefully designed food production models and facilities will provide new urban quality. In testing this hypothesis, the FUI team addresses two fundamental research questions.

• How can urban design and public space making integrate, encourage and facilitate urban food production?
• What types of urban food production affect urban design and improve urban quality?

This paper summarizes the FUI research context, strategic site selection and proposed pilot project programming. In addition, this paper describes “parallel design studies” fueling research along the edges of the FUI limits.

The primary objective of the FUI research is to uncover and develop the synergies between urban design and urban food production so as to achieve new urban quality. During the second of three years of research, FUI hones its vision on site selection, developing the framework for proposed pilot project design and on the refinement of a new urban quality assessment tool. These three components set the groundwork for the third research year that aims to test the following theoretical hypothesis:

• When combined with carefully articulated urban design, architectural and/or landscape architectural measures, urban agriculture will provide “new” urban quality.

Urban analysis, stakeholder input and a public survey highlight a diverse array of contrasting urban conditions of typological differences, with varying obstacles and opportunities and at multiple scales. From these more than three dozen locations within Lausanne, four emblematic sites stand out for further inquiry; a leisure lake edge park, a peri-urban agricultural swath, a farm enclave and a post-industrial valley.

In year three, hypothesis testing takes place via a “design as research” approach for the identification, development and description of proposed pilot projects, a process that will also facilitate the gathering of measurable evidence for verification. These landscape, architectural and urban projects, at the micro, meso and macro scale, are intended to set forth a series of future visions that examine and assess site parameters while generating new spatial solutions for Lausanne.

In preparation for this final phase of proposed pilot project design, FUI research has infected a series of “parallel design studies” sited both in and outside the case-study area. These projects act as a concurrent set of investigations addressing FUI research questions and frame the following urban design tactics:

• Urban densification and renovation
• Urban containment and edge-condition definition

Projects include multivalent / multi-scalar urban interventions, typology design and insertion, productivity measuring, and a small-scale pilot project realization.

Together with the FUI overview, site selection process and “parallel design project” explanation, this paper aims to advance current research in the food planning field with its project-based approach.
‘Foodprints’ - a project investigating the role of Artistic and Design-based research within urban agriculture

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The presentation will demonstrate how the project ‘Foodprints’ was created from a platform of artistic and design-based research using empirical methods for data collection from unique urban-agro sites, multi-disciplinary input, quantitative analysis, literature, and the art of cooking in sensory design. The presentation demonstrates the project’s aspirations to instigate change on 3 levels: urban planning, design approaches and city inhabitant levels. The project served as an entry point into my current doctorate research exploring the organoleptic qualities of urban agriculture.

‘Foodprints’ is a biologically-centered design and discussion toolkit for developing an urban food strategy amongst city designers, planners and inhabitants. The project applied concepts taken from biomimicry, systems thinking and scenario building to support development for new urban food models that could function mimicking the remarkable efficiencies found in nature. The toolkit produced a methodology to map the behavior of citizens, politics, architecture, logistics, food, farming and ecology within the urbanscape. It envisioned the city as a multi-organism, not as a fragmented site, and devised a catalyst to help navigate through the diversely complex issues surrounding urban agriculture and individual’s food relationships, creating a discussion platform for food, its stakeholders, urban metabolism, and opportunities towards a resilient future. Although ‘Foodprints’ was primarily aimed as a tool for developers, planners, architects and others in the built environment professions, it could also be used as an educational tool that could further be adopted in schooling, workshops, and everyday discourse about urban food logistics. Particular consideration was paid to urban planning policy for instigating ‘food strategies’ into policy-making as much as energy, water and waste have become. The project worked in collaboration with the Stockholm Resilience Centre in Sweden, KTH, FoAM and others to narrow down our catalyst framework typologies to 8 themes. The presentation will discuss each typology, docked also in its relevance to research on planetary boundaries and ecosystem services by the resilience centre.

The project’s methodology had strong foundations in artistic and design-based research. It explored how these research typologies could become a serious consideration in built environment fields. It examined imaginative approaches to challenge urban planning mindsets by using distinct strategies, both as inspiration and dissemination. Extracted research questions, both from ‘Foodprints’ and my current doctoral, include:

- What role can artistic and design-based research play within urban agricultural movements in order to create alternative modes of urban planning and self-sufficient driven living?
- Can these diverse types of research instigate a change in mind-sets, leading to a paradigm shift in future urban food systems? Can they aid us to mitigate the challenge of including urban agriculture into the urban planning and design process, making it a default?
- My doctoral study will explore methodologies from the organoleptic view on how the design of urban-agricultural spaces can become silent mentors towards food sovereignty and sustainable urban living. It will, in the forefront, focus on the challenge of the Nordic context to create a design-programme for year round solutions and creative ideas.
Design for Rurban Interaction - The Agri-Cultural-Forum, Kathmandu, Nepal

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The Master thesis demonstrates the potentials of Urban Agriculture (UA) as a tool of open space planning to contribute to a sustainable urban development in an increasingly urbanized world. In the final part of the thesis, the design of the „Agri-Cultural-Forum“ (ACF), the discussion is moved from a theoretical and abstract planning level to a site specific and spatial solution.

A description of the area of reference, the Kathmandu Valley (KTMV) in Nepal, concerning the prevailing urban development processes and their linkages to the (urban) agriculture sector is elaborated on the basis of a theoretical discussion of UA. Material and data for this analysis was gathered by mappings and interviews during a field trip to the area. Three potential areas for the design of the ACF were mapped and interviews with stakeholders from the „macro-, meso-, and micro level“ were used to finally choose one design area. This is the world heritage site of Bhaktapur, where the historic interaction of the city with the agricultural was conceptually picked up.

The step from research to design is illustrated by developing a valley wide design strategy for the KTMV and by designing a multifunctional park as a spatial tool of that strategy. The strategy and the ACF accentuated the „cultural surplus“ that can be created by UA in a rapidly growing city like Kathmandu, while paying specific attention to the economic potentials of UA.

Therefore the research question was, how UA, a field that brings together the rural- and the urban sphere, can provide a strategic-conceptual as well as a spatial-specific approach for the sustainable development of urban-rural dominated habitats?

The strategy “Design for Rurban Interaction” outlined UA as a strategy for the rurban sphere by unleashing socio-economic and cultural growth. This is to be accomplished by a region-based urban development strategy that exploits the potentials of UA. Integrated into the strategy of the Asian Development Bank (ADB, 2010), the strategy can coordinate the potentials of UA while linking them to the rural hinterland and establishing structures from which both spheres will benefit.

The design of the ACF should be seen in this context. The ACF was designed as a multifunctional space that is part of a bigger rurban network. Here education and training on agriculture practice, communication and interaction about common problems and needs as well as the production and consumption of agricultural goods will be organized.

The site chosen for the ACF is located between the old- and the new town of Bhaktapur. Next to that touristic hotspot, here agricultural and horticultural practices can be studied, tested and exchanged either by professional farmers, hobby gardeners or visitors of the park. Through the cultivation of modern and traditional plants, the ACF will function as an agricultural reservoir while at the same time demonstrating the potentials of monoculture fields, green houses and organic farming. Finally the ACF and the cooperating farmers will create an open space infrastructure that provides multiple ecosystem services to the city and its population.
A SWOT analysis of hydroponic and aquaponic systems for food security in cities

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Nearly 80% of British citizens now live in or near towns and cities. British food imports account for about one-third of total consumption and are increasingly vulnerable to dislocations in the supply chain. Domestic production is increasingly likely to be compromised as the costs of fossil based inputs rise. Likewise, the transportation of rural production into urban centres becomes progressively difficult as fuel prices rise. Thus, urban and especially peri urban agriculture and horticulture are seen as essential if food security is to be strengthened.

Hadlow College is currently pursuing several possible hydroponic and aquaponic projects in peri urban sites in Maidstone and London. This paper critically assesses the sustainability of such systems via SWOT analyses. The key questions to clarify are how many people are needed to maintain such projects, the likely inputs, costs, yields and how many residents can ultimately be fed. Finally, food maps need to be developed for typical towns, to show how such projects could be replicated and diversified to help in the development of food hubs and provide most of the food needs of citizens. The feasibility of this is discussed.
Considering global trends such as climate change and resource scarcity, it becomes obvious that we need new approaches to reduce urban footprints and make cities sustainable. Moreover, cities have to become or remain liveable for their inhabitants, offering social and economic opportunities as well as a good quality of life. Zero-acreage farming (ZFarming) - similar to urban farming in general - is supposed to have positive impacts on the urban setting, making cities green, healthy and liveable. We understand zero-acreage farming as a special form of urban agriculture that takes place in and on buildings within the city. “Zero-acreage” describes the non-use of farmland and therefore differentiates the building-related forms of urban agriculture from those on the ground. It includes soil-based as well as hydroponic open rooftop farms or gardens, rooftop greenhouses, indoor farming and productive facades.

The objective is to illustrate in which way ZFarming responds to a number of key urban challenges and to review the major benefits, limitations and missing links. Therefore we have done a two-step research: first, we have analyzed 96 documents published in accessible international resources according to their evidence regarding the impacts of ZFarming practices based on the three dimensions of sustainability (environmental, social, and economic). In a second step, we have investigated the present practice of urban ZFarming by analyzing 77 existing ZFarming projects in Europe, North-America, Australia and Asia concerning the following aspects: forms and types of ZFarming; locations and parts of buildings that are used; main purposes and goals of ZFarming projects; products, activities and practices; relations with the urban environment. Based on this, we evaluate the social, economic and ecological impacts of ZFarming. The analysis illustrates that ZFarming has multiple functions and produces a range of non-food and non-market goods that may have positive impacts on the urban setting: It promises environmental advantages such as reducing the environmental impact of architecture, reducing food miles or resource and energy efficiency. Social advantages include the improving of community food security, provision of educational facilities, linking consumers to food production or serving as a design inspiration. Within the economic dimension it provides potential public benefits and commodity outputs. But dealing with and managing ZFarming is challenged by several difficulties: for some applications, the necessary technologies are known but have not been used in that way or combined before. Others require entirely new building materials or cultivation techniques, which need to be further developed. Beside technical constraints, we found further critical aspects, such as the problem of high investment costs, exclusionary effects due to restricted accessibility and exclusive products and customers or a lack of acceptance on soil-less growing techniques.

To conclude, ZFarming has some potential to contribute to a sustainable urban development and to generate win-win scenarios in cities. Nevertheless it is still in an early stage of development and needs to overcome several constraints.
Nutrition, air conditioning and heating, recreation, education – these are all different services that need separate infrastructures. Those infrastructures consume and waste loads of nutrients, water and energy: Nutrients from urban wastewaters are dumped into the sea or if applied excessively pollute fields and water bodies. Meanwhile, non-renewable phosphate resources diminish and much energy is needed for nitrogen production. The same one-way discharge logic applies for sensible or latent heat which are consumed (and emitted) by households and food industries. And there is a large demand of energy for heating greenhouses that produce Mediterranean vegetables all year round as well as for transporting the food over ever growing distances. Finally, 30 to 40% of the food distributed to retailers in industrialized countries is being wasted mainly due to lacking knowledge or appreciation of its value among customers, while growing numbers of households in metropolises and mega cities lack access to fresh and healthy nutrition.

Many different approaches are needed to put food systems and housing on a more sustainable basis. A promising solution can however be the concept of combining both infrastructures through multi-functional, building-integrated agriculture. Its quantitative impact for food production may be limited, but in addition its various positive side effects address the above mentioned challenges and thus can make a considerable contribution for more sustainable cities in general.

The presentation and paper will focus on the particular potential of rooftop greenhouses for local production of healthy food, providing at the same time heat or cold for the house below, and/or recreational space for its residents while recirculating water, organic material, nutrients and heat. As a side effect, the direct experience of food production and resource recycling processes may increase knowledge among the inhabitants of the value of food.

Examples of already existing projects will be presented where housing or food and beverage infrastructure (retailers/restaurants/bars…) are integrated with a garden or even greenhouse on the roof. The integration takes place in terms of direct use of the vegetables and fruits produced, reuse of greywater and organic waste, recovery of waste heat and protection of the building against summer heat, as well as recreational and educational purposes. However, the examples will show that further advancement is still needed, in particular as far as water and nutrient recycling (from wastewater) are concerned. Also, even though architectural designs exist, there are no examples for net heat or cold producing rooftop greenhouses yet.

The final aim of the presentation is therefore to depict concepts for integrated rooftop greenhouses as a new, multi-functional urban infrastructure that combines food and heat/cold production, reusing waste heat, wastewater and organic wastes from the building below or several buildings in the surroundings and thus realizing water; energy, nutrient and mineral cycles. Taking into account long existing knowledge, the reasoning will also refer to mechanisms and systems of wastewater reuse for irrigation or fish farming purposes that have been established and proven successful in cities of developing countries and dry regions.
The idea of food scarcity is completely foreign to generations of people to who have grown up with well-stocked Supermarkets that are open year-round. Yet, food shortages have been historic throughout civilization. In recent history we have seen political control of limited resources like food, water, and fuel through rationing. Today in light of simple supply and demand, rapid population growth, environmental degradation, climate change, land loss & agglomeration, political and economic uncertainty there is plenty of evidence to suggest that we will face widespread food shortages again.

Rations is an interactive experimental game designed by food systems planner Lynn Peemoeller to stimulate open conversation, debate and experimentation on the topic of survival, food scarcity and need. Utilizing a counterfactual scenario participants explore and share attitudes beliefs and stories about resources to build a sustainable food web.

The Rations game can be used as a case study for the growing convergence of food, design, technology and the arts as a contemporary creative trope and the usefulness of participatory models of engagement within food systems planning. For more information on the Rations Project please visit www.foodsystemsplanning.com.
This paper presents two empirical case studies to illustrate local food systems (LFS) with transformative potential of the post-socialist food system in the towns of Szekszárd and Gödöllő, Hungary. Both cases exemplify civic food networks which offer sustainable food provisioning pathways by attributing place-based identity to agro-food products. The findings are based on qualitative interview and survey data that seek to identify how consumers, local businesses, non-profit groups and citizens construct and use local traditional and cultural aspects as quality criteria to promote or enact sustainable food consumption in Hungary. Preliminary results from the ‘Gödöllő Local Food Council’ and the ‘Szekszárd local food project’ suggest that local food systems and place based agro-food marketing are replete with paradoxes. The cases show that sustainable food systems can successfully root in the (historical) knowledge system of local inhabitants and build socially innovative partnerships. The emerging interest in local food can be interpreted as a form of democratization as much as it celebrates and diffuses traditional knowledge. Yet, as a contradiction, it also essentially commodifies this local knowledge to satisfy consumers’ demand. The paper concludes by considering the consequences of such tension in the democratization of the food system.
Public Procurement Policy can be a driver for change in food consumption patterns. The European Commission appointed Standing Committee for Agriculture Research (SCAR), 3rd Foresight report stressed that “A radical change in food consumption and production in Europe is unavoidable to meet the challenges of scarcities and to make the European agro-food system more resilient in times of increasing instability and surprise”. This highlights the necessity of examining both sides of the production-consumption equation, and indicates that in order to build more sustainable and resilient food systems current consumption patterns will have to be addressed.

EU public procurement policy shapes the conditions under which food operators can source their food, and allows requirements relating to seasonality, the environment and energy efficiency, but does not allow standards on animal welfare and locality to placed as conditions for choosing suppliers. This is in contrast to municipal and urban sustainable food strategies that would give preference to locally sourced foods, not only to reduce environmental impact of consumption, but also to promote inclusive local economic development. Municipalities are forced to find creative solutions and loopholes allowing them to source locally produced food. In the current CAP reform (CAP2020) the commission has stressed measures that give small and medium size farms improved access to local and regional markets as a tool for improving income and sustainability of small farms. However, this line of thought has not been integrated into current public procurement policy.

This paper will examine EU public procurement policy and related policies in relation to whether they provide a barrier or opportunity to developing more sustainable, resilient food systems. Case studies from England and Denmark will be used to illustrate how European Public Procurement Policy in effect can limit efforts for municipalities to develop more sustainable urban food strategies.
Exhibitions

VISION VERTE

VISION VERTE offers exciting insights in today’s ideas and practices of city farming to learn more about the benefits of urban agriculture as regards sustainable urban development.

The VISION VERTE exhibition brings together results of the German-Moroccan research project on “Urban Agriculture as an Integrative Factor of Climate-Optimised Urban Development in Casablanca” with examples how to transform the urban fabric for urban agriculture.

Die Produktive Stadt/ Productive City

Wastelands are transforming into community gardens, fruits and vegetables are growing on squares and roofs.
In numerous cities urban agriculture is already contributing to climate protection, biodiversity and self-sufficiency. It is supporting the neighbourhood’s internal communication and participatory urban design.

The exhibition „Die Produktive Stadt“ is showing new images of urbanity and giving perspectives for a sustainable urban design. It is documenting the new garden movement as well as the traditional urban agriculture and its design, taking Berlin as an example.
TOUR 1

ECF Containerfarm

ECF promotes innovative ways of providing healthy vegetables and fresh fish. The ECF methods are organic, CO2 neutral and water-saving; moreover they are not dependent on fertilizers and transported goods. ECF is thus revolutionizing food production and encourages healthy, balanced and environmental-friendly diet choices.

The ECF Container Farm in Berlin is housed in a unique built structure with an appealing design. It represents a new typology and form of the traditional community gardens for the city of the 21th century. In the limited space of the container it is possible to accommodate fish breeding combined with the cultivation of vegetables, while abiding by the guidelines and principles for a sustainable and efficient mode of operation. For this purpose an integrated farming concept has been developed. The nutrients contained in the fish faeces are absorbed from the vegetables and serve as a natural fertilizer; thus a closed loop that mimics the efficiency of nature is established.

The container farm can be purchased with professional support and advice is being provided to the new owners, covering issues such as the choice of vegetables, fish species and the choice of suppliers. The final decision of what to produce lies with the owner: tomatoes, cabbage, lettuce, basil or mint are popular choices, while carps, trouts and tilapia are suitable fish species.

(Prinzenstraße 35-38, 10969 Berlin; www.ecf-center.de/ecf-containerfarm)

Prinzessinnengarten

After 60 years of neglect, vegetables and herbs are now being produced in an empty plot in the very heart of the city. Since the summer of 2009 a disused area of 6000 square meters was cleaned, and waste gave place to a lively garden in a high-density, low-income city district. The area has been rented from the city and made publicly accessible for all. Due to the short-term, yearly renewed contracts, the users have to remain mobile and flexible. A wide range of easily transported equipment, utensils and recycling techniques has thus been developed to meet these needs. To ensure a strictly organic cultivation, only controlled and certified soils, pots and seeds are used, while no chemical fertilizers are allowed.

Apart from promoting ecological diversity and healthy food choices the Prinzessinengärten has had a considerable social impact. There are no private but only shared patches and beds, and great effort is being made not to exclude any social group from participating. In a short period of time the garden has been transformed into an appealing meeting place, where ideas are exchanged and beginners are supported. The garden’s Café has also played an important role in creating and maintaining this social character. Using fresh produce from the garden, the Café has also contributed to the modest financial means necessary to keep it alive.

(Prinzenstraße 35-38, 10969 Berlin; www.prinzessinnengarten.net)
TOUR 2

Landschaftspark Herzberge

A former urban void, the landscape park Herzberge in Lichtenberg, Berlin has only recently undergone a significant transformation. The landscape park lies mostly within the grounds of the historical hospital „Königin Elisabeth Herzberge“ and comprises the hospital gardens and leisure areas. During the GDR era it was partly used as an urban gardening cooperative, only to fall into disuse in the following years. Since 2004, thanks to the coordinated efforts of the „Agrarbörse Deutschland Ost e.V.“, the association „Landschaftspark Herzberge“ and the city district authorities, the landscape park Herzberge has become a much needed, multi-functional open space for the surrounding urban community.

The adjacent commercial and housing areas have been integrated in a concept that provides connecting paths and a variety of leisure areas. Among the stated aim of the initiators of the project was to establish a biotope protection network and promote ecological diversity. Indeed, the sight of sheep in the city may surprise the visitor; the biotope networks in the landscape park Herzberge have so far succeeded in bringing an unusual diversity of species in the urban environment.

(Allee der Kosmonauten 23b, 10315 Berlin; www.landschaftspark-herzberge.de)

Spiel/Feld Marzahn

The currently observed trends of urban agriculture and community gardening have actually a long history. However, as shown in the case of the eastern district of Marzahn-Hellersdorf, these trends may prove vital in addressing contemporary challenges. Empty urban spaces that have fallen into disuse can be revitalized through collaborative forms of food production, thus creating productive urban landscapes.

Lately, several obsolete infrastructural facilities have been demolished in Marzahn, thus leaving extensive empty open spaces. A concept for reusing these spaces has yet to be found. The abundance of educational facilities in the immediate vicinity of these large empty spaces offers a unique opportunity of developing a novel concept. The social benefits of urban agriculture, such as working in team, experiencing nature and learning about healthy eating can become a significant part of the school curriculum. This first ideas have culminated into an exemplary project, a playground, thanks to the close cooperation between the TU-Berlin and the local authorities.

(Am Mühlenbecker Weg,12679 Berlin; www.spielfeldmarzahn.de)
In a 120 year old market hall right at the centre of Berlin Kreuzberg a new place promoting a sustainable culinary culture has been created. In Kantine NEUN the daily menus are based exclusively on local produce, only making an exception for some spices and oils that cannot be obtained in the region. According to Julian Karnetzky, one of the founders of the market hall and Kantine Neun projects imported ingredients are thoroughly controlled, so as to ensure that they have been produced organically and obtained through fair trade practices. Through side-projects such as the “Tante Hans” initiative the founders are actively involved in festivals and other events.

One of the main aims of the project is the promotion of organic farming and the support of small enterprise. Another crucial issue is that of food waste. Only in Germany more than 11 million tons of perfectly edible, tasty produce is disposed of, either because it does not conform to the trading standards, or because of surplus production control. Last but not least the importance of reducing fish and meat consumption is vital for the food security of the future. By addressing these issues Kantine NEUN tries to raise awareness and help the urban dwellers embrace new, sustainable eating habits.

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