Association of European Schools of Planning (AESOP)
2nd EUROPEAN SUSTAINABLE FOOD PLANNING CONFERENCE

Dear Delegates

It is with great pleasure that we welcome you to the 2nd European Sustainable Food Planning Conference and the University of Brighton. We are especially pleased to be able to host this conference as it fits neatly into the research agenda of the Faculty of Arts' "Sustainability Network" and the work on Continuous Productive Urban Landscapes which Katrin Bohn and I have conducted over the past years.

Planning for sustainable food production and consumption is an increasingly important subject for planners, policymakers, designers, farmers, suppliers, activists, businesses, and scientists alike. It is appropriate, then, that a major international conference should examine in breadth and depth the issues and questions arising from this complex matter.

Four themes have been defined as entry-points into the discussion of 'sustainable food planning'. These are (1) Urban Agriculture, (2) Integrating Health, Environment, and Society, (3) Food in Urban Design and Planning and (4) Urban Food Governance. We hope that these themes will enable an articulation of the manifold problems associated with, and possible solutions for, food provision in urban and urbanizing societies in Europe and beyond.

I would like to thank Professors Morgan, Wiskerke, and van der Valk for their invitation to host this conference; the theme conveners and reviewers for all their effort; Anne Boddington (Dean of the Faculty of Arts), Dr Catherine Harper (Head of the School of Architecture and Design); and especially Christine Sinclair for her tireless effort as conference administrator.

We hope that you enjoy being part of this event and find it helpful, stimulating, and effective in defining, visualizing, and working towards more sustainable food systems in Europe.

Andre Viljoen
School of Architecture and Design
University of Brighton

Conference Themes:

Urban agriculture.
Conveners: Prof. Dr. Han Wiskerke and Jan-Willem van der Schans (Rural Sociology Group - Wageningen University)

Integrating health, environment and society.
Conveners: Assoc Prof. Dr. Bettina Bock (Rural Sociology Group, Wageningen University) and Martin Caraher (Professor of Food and Health Policy, City University London)

Food in urban and regional planning and design.
Conveners: Prof. Dr. Arnold van der Valk (Land Use Planning Chair, Wageningen University), Andre Viljoen (Senior Lecturer in the School of Architecture and Design, University of Brighton), Prof. Katrin Bohn (TU Berlin, Bohn & Viljoen Architects)

Urban food governance.
Conveners: Prof. Dr. Kevin Morgan (Professor of Governance and Development, City and Regional Planning at Cardiff University) and Dr. ing. Petra Derkzen (Assistant Professor, Rural Sociology Group Wageningen University)

Conference Keynote Speakers

Prof. Tim Lang
Professor of Food Policy, Centre for Food Policy, City University London.

The re-emergence of food planning in relation to ecological public health: thoughts from the UK on the possibilities of a new European model.

Abstract
Over the last 40 years, evidence has built up about the food system's reliance on the natural world. That relationship has been generally exploitative. The food system literally mines the environment, and also snatches defeat out of the jaws of victory by overproducing and maldistributing food. In Europe, food is relatively heavily legislated, and consciousness about the issues has increased, as have appeals to behaviour change. Yet now we know that policy and practice have not responded either fast or deeply enough. Part of the reason for this failure to integrate policy with evidence has been that planning has become an enemy rather than friend. Planning is perceived as state interference, not a lever for the public good.
In this lecture I will argue that a new framework of thinking about food is needed, requiring simultaneous action on four levels of existence: the material world of physical things and natural infrastructure; the bio-physiological world of bodies, plants, animals; the cultural world of consciousness and life space; and the social world of human interaction. Faced by such complexity, is planning too blunt an instrument? What could shift all these in the necessary configuration for planetary and societal success?

Carolyn Steel
Architect, Lecturer and Writer, Kilburn Nightingale Architects.

Food, Cities and Sitopia: using food as a design tool to reshape how we live.

Abstract
Food is mankind's most vital shared commodity, inextricably woven into our social and physical structures and relationships. What, how and with whom we

eat helps shape our sense of community and identity, while the production, trade, consumption and disposal of food are all major influences on global climate and ecology, urban development, rural landscapes, transport infrastructures, politics, commerce and industry. Food connects multiple aspects of life on earth, making it a powerful tool with which to create an integrated design approach to human dwelling.
Sitopia (food-place) is my word for such an approach. We are entering a neo-geographical age, in which the careful use of resources will once again play a vital role in our capacity to survive and flourish. Through food, we can address the complex range of challenges ahead, from the design and strategic transformation of cities, buildings and systems, to a new conception of sustainable prosperity.

Prof. June Komisar
Ryerson University, Toronto. Architect, member of the Toronto Food Policy Council and a co-curator for the exhibit Carrot City: Designing for Urban Agriculture.

Dr. Joe Nasr
Co-coordinator, MetroAg – North American Alliance for Urban Agriculture, and Associate, Centre for Studies in Food Security, Ryerson University ,Toronto.

The integration of food and agriculture into urban planning and design practices: A North American perspective.

Abstract
A host of urban problems that traditionally have not been central to the work of planners and designers are transforming the understanding of typical urban 'systems' or areas of concern, requiring innovative responses. But how do planning and design take on emerging fields of practice? Challenges to the current food and agriculture systems represent one such area of intervention to which planners have started to respond recently. In parallel, designers (from architects to industrial designers) are increasingly interested in urban food and agriculture issues. Food and agriculture are thus fast gaining recognition as legitimate areas of planning and design through research, university teaching, design competitions, and professional recognition – but their integration into the

everyday practice of planners and designers does not result automatically from such recognition. This talk seeks to reflect on the emergence of a new field of practice in the built-environment professions, using food and agriculture systems in North America as a case study.

Poster Presentations

Health, Environment & Society	Planning and Design	Governance
M Hardman, D Jones *"Grow It, Eat It, Move It, Live It: A Birmingham Community Food Growing Network"*	S.M. Broekhof, A van der Valk *"From allotment garden to global food system State of the art and research agenda for food systems"*	J Salomon Cavin, N Niwa *"City farming in Geneva: the end of a love affair?"*
L Bouwman, L Vaandrager *"Towards active involvement in eating for health; A Salutogenic perspective on promoting healthful eating."*	D Wascher et al. *"Spatial Perspectives for Food Planning in Metropolitan Landscapes – The Brighton Example"*	D Kempa *"Environmental Benefits from Food Production – Food Producers' Attitudes and Farmers' Needs"*
	Burt-O'Dea K *"The LIFELINE: a community lead demonstration project in Dublin"*	J Carey *"Who feeds Bristol?: Towards a resilient food plan"*
		R Maessen *"Our common food"*

Conference Timetable

Day 1 Friday Morning 29th October 2010

08:45:00 Registration & Coffee, University of Brighton, Grand Parade

09:30:00 Welcome

10:00:00 Keynote - Prof Tim Lang *"The re-emergence of food planning in relation to ecological public health: thoughts from the UK on the possibilities of a new European model."*

11:00:00 Morning tea & coffee followed by 4 parallel sessions.

	Urban Agriculture - Room G4	Health, Environment & Society- Room GP 202	Planning and Design - Sallis Benny Theatre	Governance - room M2
11:30:00	S Caputo "*An economic model for urban food production"*	G Andersson *"Policy for sustainable development and food for the city of Malmö"*	U Giseke et al *"Doing Transdisciplinarity: Designing Multifunctional Spatial Systems with Urban Agriculture for Casablanca"*	M Stein *"Sustainable Food Procurement : policy development and case studies from the UK"*
	N Niwa *"Why do we need agriculture in Tokyo?"*	T Leenaert *"The Thursday Veggie Day campaign in Ghent (Belgium)"*	H Lee *"How food secure can British cities become? A case study of Maidstone, Kent."*	S Darly *"Urban food governance: a new playground for agricultural development networks in the periurban area of greater Paris region?"*
	E Giorda *"Farming in Motown: a report on urban agriculture in Detroit."*	C Brass et al *"Food Loop, a service design experience for urban food growing."*	B Everett *"Food and the transformation of urban borders."*	R Nijhoff-Savvaki et al *"The case of the pork meat in the United Kingdom, Greece, and Spain."*

13:00:00 LUNCH & poster preview.

Day 1 Friday Afternoon 29th October 2010

14:00:00	Keynote - Carolyn Steel *"Food, cities and sitopia: using food as a design tool to reshape how we live."*			
15:00:00	Afternoon tea & coffee			
	Urban Agriculture - Room G4	Health, Environment & Society- Room GP 202	Planning and Design - Sallis Benny Theatre	Governance - room M2
15:30:00	Odeyale et al *"Sustainable food production and consumption (Nigeria)."*	L Davis J Middleton *"The perilous road from community activism to public policy: Fifteen years of community agriculture in Sandwell."*	C Mees E Stone *"Food, Homes and Gardens: Public Gardens for a Sustainable City."*	J Midgley *"Foraging for local policy level engagement with food."*
	M Laurence *"Urban Agriculture: Vertical Farming and Closed Loop Cycles."*	M Caraher G Machell *"Defining Food Co-ops."*	L Peemoeller *"Preparing the Food Systems Report for the Chicago Metropolitan Agency for Planning (CMAP)."*	J Paddock *"Restating Equity for the Sustainable Development Agenda: Social Class, 'Ethical' Food and Alternative Food Networks."*
	M Samangooei F Stevenson *"Housing as a Food System in a Temperate Climate."*	L Levidow K Psarikidou *"Manchester Food Networks: Integrating health and environment."*	F Forte C Bradbee *"Sustainable Agriculture and Urban Design: the Italian paradoxes."*	J Goodbun K Jaschke *"The Ecological Aesthetics of Food Production at Arcosanti."*
17:00:00	SUMMING UP			
18:00:00	Free public screening of THE URBAL FIX with the film's director Tom Bliss			
19:30:00	CONFERENCE DINNER		Venue UOB Grand Parade	

Day 2 Saturday Morning 30th October 2010

08:45:00 Registration & Coffee, University of Brighton, Grand Parade

09:30:00 Keynote - Professor June Komisar & Dr Joe Nasr *"The integration of food and agriculture into urban planning and design practice: A North American perspective."*

10:30:00 Morning tea & coffee followed by 4 parallel sessions

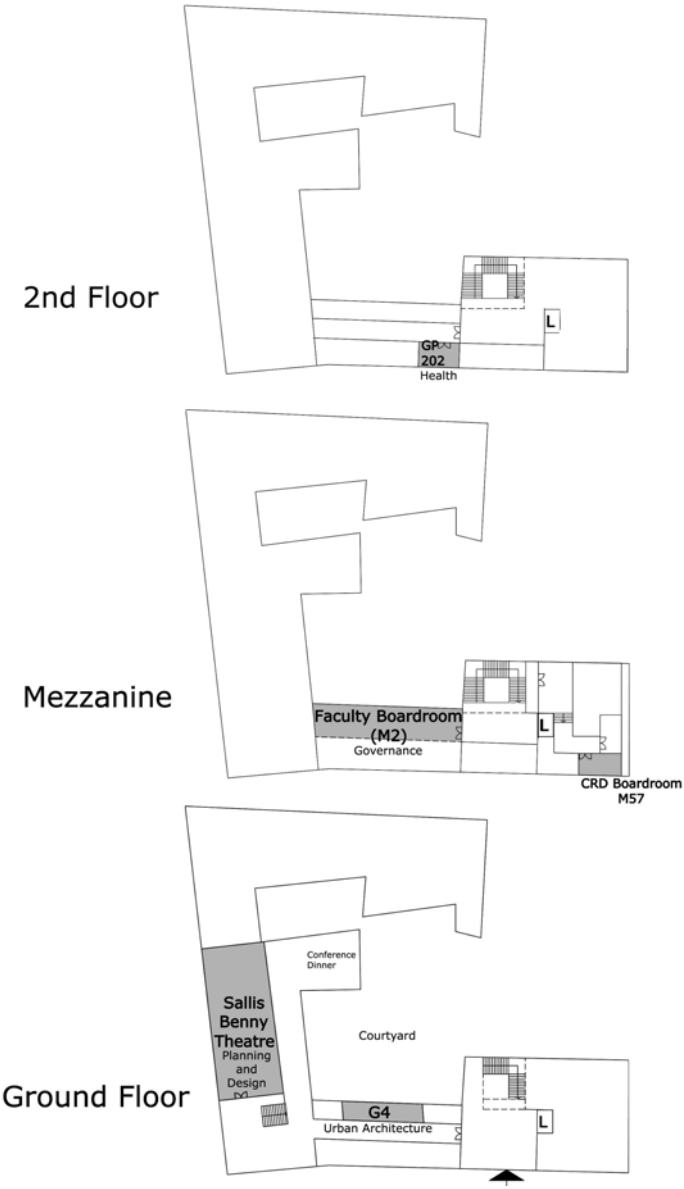
	Urban Agriculture - Room G4	Health, Environment & Society- Room GP 202	Planning and Design - Sallis Benny Theatre	Governance - room M2
11:00:00	G Denny *"Urban Agriculture and Seasonal Food Footprints: An LCA study of tomato production and consumption in the UK"*	K Hoogendam et al *"Mainstreaming Alternative Food Networks."*	S White H Natelson *"Planning and sustainable food and farming."* A Viljoen, K Bohn *"The CPUL CITY Toolkit: How to plan productive urban landscapes for European cities"*	P Stierand *"Food Policy Councils: recovering the local level in food policy."*
	J Jansma et al *"The impact of local food production on local sustainability in the Dutch city of Almere."*	K Newton T Wiseman *"Gardening together in sheltered housing: a new experience."*	K Verzone *"The Food Urbanism Initiative."*	S Plantinga P Derkzen *"How food travels to the public agenda."*
	T Moreau et al *"Sustainable Food for Cities; An evaluation of low greenhouse gas best practices for urban and peri urban agricultural systems."*	A Hawkins *"Appetite for Change: an exploration of attitudes towards dietary change in support of a sustainable food future."*	P de Graaf *"Room for urban agriculture in Rotterdam - spatial opportunities."*	M Bedore *"Food systems planning in small, buzz-less cities: Challenges and opportunities."*
	P Nicol *"Stories Of Apples: An exploration of the arenas of a London food supply."*	SUMMING UP	M Tomkins *"Food is concrete": augmenting architecture through community food-gardening on UK estates."*	N Cohen *"Planning for Urban Agriculture."*

13:00:00 LUNCH

Day 2 Saturday Afternoon 30th October 2010

13:00:00	LUNCH			
13:45:00	Posters session			
	Urban Agriculture - Room G4	Health, Environment & Society- Room GP 202	Planning and Design - Sallis Benny Theatre	Governance - room M2
14:15:00	R Wiltshire L Geoghean *"Growing alone, growing together, growing apart?"*	Free session	J Crotch, *"Linger, Savour, Touch…."* A Moya Pellitero J da Silva Eliziario *"Covilhã, Landscape of Change A new rural-urban model of growth."*	G Machell M Caracher *"The Role of Municipal Markets in Urban Food Strategies: A Case Study."*
	C Tornaghi *"New environmental cultures, urban agriculture and public space. How the grassroots creation of new Commons challenge urban planning and design."*		E Oldroyde A Clavin *"Growing Food, Nested Scales and Design Activism: an integrated approach in Leeds."*	J Smith *"Traditional food markets: the hidden sector?"*
	D Solomon *"URBANIAHOEVE: Where Social Design Expands Urban Agriculture."*		V Larjosto *"Designing urban agriculture for informal settlements-aspects from Brazil."*	X Morin H Barmeier *"Resilient Urban Community Gardening Programs in the United States and Municipal-Third Sector "Adaptive Co-Governance."*
15:45:00	TEA			
16:15:00	SUMMING UP			
17:00:00	END			
17:30:00 to 19:00:00	Post conference M / PhD student meeting			

Map showing the location of conference rooms at Grand Parade



G. Andersson
City of Malmö

Policy for sustainable development and food for the city of Malmö

Abstract
The city of Malmö has been working to be more sustainable for a long time, which is reflected in its environmental programmes and policies. As a part of this work, organic food has been systematically introduced into city run kitchens, and reached a share of 24 % in 2009.
Taking a step further towards sustainability, a new policy for sustainable development and food has been formulated and will most likely be approved by the Municipal Executive board in September 2010. The policy will regulate the procurement and quality of food served in public kitchens within the city of Malmö. It will also ensure that food procurement is more sustainable.

The implementation of the policy will be very important. It needs to have clearly formulated targets combined with clear leadership strategies at all levels. It is necessary to move slowly, step by step, but steadily forward. Well educated and committed personnel, who have access to continuous training is also a prerequisite for success. There is also a need to have a close dialogue with suppliers. With all these factors fulfilled we are convinced that the aims of the policy will be met in 2020.
Keywords: climate friendly food, organic food,

H. Barmeier
Oxford University U.K.
K.X. Morin
Princeton University, USA.

Resilient Urban Community Gardening Programs in the United States and Municipal-Third Sector 'Adaptive Co-Governance'

Abstract

Engaging city government in sustainable food system planning may enhance urban health, social justice, and environmental quality. However, little is known about why municipalities engage in food system planning. To gain insight on the genesis and evolution of local government involvement in sustainable food system policy, we examined four long-standing urban community gardening programs in the United States. Our research finds the following
Municipally-sponsored community gardening programs in Seattle, Portland and New York exemplified schemes of 'adaptive co-governance,' as the mechanism for local-level policy making.
Assessment of these relationships shows that resilient relationships cycle between four phases: 'budding,' 'building,' 'bonding,' and 'breaking'— the Four-B framework, adapted from Nkhata et al (2008) and Gunderson (1999).
Bottom-up policy-making was evident in establishing community gardening programs in all three case studies. City Council members and mayors who championed the programs did not lead the charge for community gardening as much as they responded to and facilitated an interest in the community.
Public and third sector partners' mutual appreciation of the multiple benefits of community gardens undergirded the development of resilient co-governance schemes.
Co-governance relationships were cost-effective for municipalities to adopt and beneficial to third sector partners. Co-governance schemes that promote the resilience of community gardens and of the food system depended upon partners who manage their own relationships for resilience. Study of a non-municipally-sponsored community gardening program in Philadelphia suggests that co-governance can function mostly without municipal government but is less able to adapt to adverse shocks
In sum, government's presence in the garden is better understood as a process rather than a product; it has not been consistent in the past and likely will not remain consistent in the future. Equally, citizen involvement is inconsistent over time. Resilient co-governance schemes may offer a model for success but persistent commitment from all partners will be needed to build resilient urban food systems.
Keywords: sustainable food system, local food policy, community food security

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M. Bedore
University of Ottawa, Canada

Food system planning in small, buzz-less cities: Challenges and opportunities

Abstract

For over a decade, planning scholars have promoted measures that cities can take to incorporate food systems into the urban planning agendas. Large cities such as Toronto, Rome, London, and others are hubs of these activities such as municipal food policy councils, institutional procurement programs, and formal municipal food documents. In contrast, there is significantly less policy and programming activity in many smaller Canadian cities. In this paper, I focus on the challenges and opportunities facing cities that are distinct only because they are small, ordinary—even mundane—and lacking the 'buzz' of large, fast-growing cities. I draw from my doctoral research and anecdotal experience based in Kingston, Ontario, Canada. Kingston is a small city with 117,00residents, located about two hours from larger cities like Montreal, Ottawa, and Toronto. Between 2006 and 2010, I conducted my doctoral fieldwork by exploring the urban retail food landscape of Kingston's lower income neighbourhoods, including the closure of two full-service grocery stores. Specially, I draw from forty-two interviews with local actors like elected officials, urban planners, real estate brokers and local food activists. I intend for this presentation to initiate a lively discussion about food systems planning in the context of the small, buzz-less city. Set within the theoretical context of Logan and Molotch's (1987) growth machine theory, I suggest that food systems planning is hampered by factors such as preoccupation with land values, limited human resources, policy learning capacity or inter-sectoral networks, and ideological resistance to 'interfering' in the free market. Policy ideas may include but should not be limited to encouraging better inter-sectoral communication, low-cost ideas for municipal food networks and programming, capitalizing on local knowledge and human capital, and incorporating food into other municipal agendas.

Keywords Food planning, small cities, urban planning, growth machine theory

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T Bliss
The Urbal Institute

The Urbal Fix

Abstract

The Urbal Fix is a film that puts cities into the driving seat of an adaptive strategy against imminent resource depletion, economic chaos and climate crisis.

'Rurban' describes the bleeding of unsustainable urban consumerism into formerly healthy rural resources. Its polar opposite, 'Urbal', describes the only logical cure: The injection of countryside, by means of green productivity, deep into the heart of our cities.

Presented by landscape architect and film maker Tom Bliss, the film features contributions by Hilary Benn MP, Professor Katrin Bohn (CPULs), Professor Lord Tony Giddens (Former Director LSE), Andy Goldring (Permaculture Association), Nick Green (Incredible Edible Todmorden), Sir Peter Hall (Town and Country Planning Association), Professor Tim Lang (City University, Food Policy), Daniel O'Neill (Centre for the Advancement of Steady State Economics), Jonathan Porritt (Environmentalist), Professor Robert Tregay (Landscape Architect) and many other activists, politicians, academics, designers, entrepreneurs, and growers.

Urbalism is the distillation of a select range of theories: Ebenezer Howard's pre motor-car Social City provides a 'once and future' ergonomic, political and economic framework. Steady State Theory provides a contextual objective. CPULs provide a spatial structure plus psychological and ecological priorities. Bio-mimicry systems (permaculture, community woodlands, SUDs) offer low impact / high yield outputs with biodiversity, ecological services and biosequestration benefits. Natural England and the NHS provide additional ergonomics and justification via health and well-being co-benefits. Incredible Edible Todmorden and other temporary, guerrilla and planned schemes in West Yorkshire provide proof and inspiration. And engagement, co-design and local empowerment imperatives demand a new multi/trans-disciplinary approach for designers and other 'experts' - as championed by The Urbal Institute.

L. Bouwman

Wageningen University The Netherlands
L. Vaandrager
Wageningen University The Netherlands

Towards active involvement in eating for health. A salutogenic perspective on promoting healthful eating

Abstract

Ample evidence exists on the negative influence of eating a diet high in energy, saturated fat and salt and the onset of diabetes, cardiovascular and malignant diseases (see for a summary: WHO, 2004). The rising problem of obesity fuels the efforts of health promoters, policy makers, the food industry and other experts concerned with nutrition communication to promote convenient healthful eating. Despite these efforts, promoting healthful eating remains a challenge. At present, two contradictory trends emerge in relation to eating for health. On the one hand, decades of nutrition promotion efforts have created awareness and understanding of eating for health: to eat a variety of food, more fruit, vegetables, and fish and avoid too much fatty and sugary food, calories and salt, and have also created the intention to do so in practice (cf. Eurobarometer, 2006; Health Canada, 2004). At the
environmental level, great efforts have been put into 'making the healthy choice the easy choice' (cf. Brug & van Lenthe, 2005). On the other hand, studies show that, in the Netherlands as well as in other countries, most consumers eat less fruit and vegetables and more products high in energy, saturated fat, and sugar than
recommended (Centers for Disease Control, 2005; Ocke & Hulshof, 2006; WHO, 2004). This latter type of dietary intake is indicated as one of the main causes of the increasing prevalence of obesity and consequent rise in adult onset of diabetes, nowadays a major public health concern in the Netherlands, as well as globally (Kreijl, Knaap & van Raaij, 2006; WHO, 2004). Apparently, knowing what to eat for health is not put into practice by many people. New strategies therefore, have to be considered to ensure that consumers direct their eating practices towards health.

In this article we discuss the assumptions that drive current efforts in nutrition promotion and indicate existing mismatches with consumers' own way of dealing with issues of health. We then introduce the perspective of Salutogenesis as a starting point for the development of more relevant and applicable efforts.

C. Brass
SEED Foundation UK
F. Bowden
SEED Foundation UK
K. McGeevor
Policy Studies Institute UK

Food Loop: Service Design in Urban Food Growing

Abstract
This paper discusses the roles for service design and collaborative design processes in creating successful urban agriculture projects and spaces. Drawing on findings from a recent action research collaborative project 'Food Loop' between SEED Foundation and PSI, it looks at the link between food waste and food growing and how design processes can enhance the development of local food growing to meet the needs of the communities that use them. This action-research project has sharpened the focus of our thinking, bringing the political context of the project into perspective, and has enabled us to understand the role of design in propelling policy objectives into practicable solutions. The action-research triangulates a broad practical service design experience and first hand service delivery knowledge, with current literary and academic thinking. Our work is providing significant insights into the role of design in the delivery of new and more sustainable systems and services, as well as the steps central and local government need to take in order to meet sustainable development targets and help members of the public adopt more pro environmental behavior.

The project reinforces our belief that effective and lasting changes for sustainable development require the coordinated action of business, the public sector and civil society, and that design can play a critical role in making that happen. Service design processes can help identify the needs of stakeholders, understand their connected problems and develop new systems and tools that will enable them to more successfully and enjoyably collaborate.
Keywords service systems, closed-loop design, food systems

S. Broekhof
Wageningen University
Prof. A. van der Valk
Wageningen University

From allotment garden to global food system. Explorations of new territory in the world of planning research.

Abstract

Planning scholars have recently opened up doors to the previously unknown territory of food studies. So far only tiny fragments of the complex cycle of production, processing, retail, consumption of food and the treatment of waste have been covered by a vanguard of adventurous planning scholars. In this paper we explore the state of the art in food planning studies based on a literature scan in international planning journals. The selected papers offer useful insights in the spectrum of questions planners ask with respect to food systems, pertaining to economical, environmental, social and ethical issues. Additional reading of a couple of best selling books in the field provide building blocks for the conception of an integrative theoretical framework. The paper reflects work in progress focusing in on a widely perceived divide between contrasting worlds of food. First, contrasting worlds of the global industrial food system and alternative local and ecological food systems are starting points. The literature scan shows a firm bias in the planning journals under scrutiny in favour of the pros of alternative food networks. Second, food planning studies are to be categorised under four levels of geographical scales i.e. the global, the regional, the local and the neighbourhood. The authors of this paper believe that the state of the art in food planning is not in conformance with an emerging current in planning literature which brings forward the importance of regional planning as the seam between the global and the local. Do planners have to take a dual perspective i.e. global or local for granted or can we conceive a third road which leads towards an integrative regional perspective? The answer to this question holds clues for a tentative research agenda for the future.
Keywords: food planning literature, topical subjects, food systems, levels of geographical scale, research agenda.

S. Caputo
University of Birmingham UK

The purpose of urban food production in developed countries

Abstract
Food security is now on the UK government agenda. The perspective of fossil fuel scarcity limiting movements of supply, and recent food price rises constitute a warning sign of the unsustainability of current global food systems. UK Government has produced a series of papers on food production, in which food security, food access, and a more environmentally safe food chain are indicated as important objectives. Urban agriculture is not part of the possible strategies mentioned, which aim at diversifying supply sources, foster healthy and affordable food consumption, and reduce emissions. Given the massive carbon footprint of cities, food production in an urban context ought to be considered as a contributor to a low carbon society, as it can deliver crops with zero food miles, possibly accessible to low income groups. However, for this to happen, urban agriculture needs to become economically viable. Research is needed to establish modalities for highly productive food grown in cities, and in particular, business models based on a network of small and medium sized cultivated spaces, which utilise local urban resources (water, compost, sun). As a first stage of a PhD research this paper covers the initial literature research and subsequent findings, making the case for a new role for urban agriculture in developed countries, which gives not only environmental and social benefits, but also economic opportunities. It does so by reviewing the national definition of food security, the role that play non-profit organisations in promoting urban agricultural practices and the business model on which they are based.
Keywords: urban agriculture, food security, food systems

Prof. M. Caraher
City University London UK
G. Machell

City University London UK

Defining Food Co-ops

Abstract
In the UK, the term food co-op is used to describe a range of food projects and initiatives. This paper explores the current meaning of the term food co-op and presents original research that draws on data collected for the first phase of an evaluation for the Making Local Food Work Programme. Data for this paper is based on ranking exercises completed by food co-op stakeholders in the UK as well as semi structured interviews with food co-op volunteers, organisers and customers. The research is part of the first stage of a larger impact evaluation of food co-ops. Different types of food co-op operations will be presented. These include locations in an urban church, a community centre, a primary school, a pub, and a market stall. This is a practical study that aims to discuss the range of benefits food co-ops can have as well as addressing the challenges.
Key Words Food project, alternative food network, evaluation

J. Carey
f3 – the local food consultants Bristol UK

'Who feeds Bristol?: 'Towards a resilient food plan'

Abstract
There is no existing overview of the food businesses that supply the Bristol city region, nor how they operate together as a food supply system. Neither is there a responsible 'body' within the region that has a remit to consider and support the development of a sustainable and resilient food system. 'Who Feeds Bristol?' is a 'rapid appraisal' to collect original data providing baseline information and evidence for a subsequent roundtable process with key decision-makers and stakeholders to develop a resilient food plan for Bristol. It builds on the food security-related findings of the 2009 Bristol Peak Oil report and takes forward recommendations for further research. The appraisal looks at the 6 key components of the food system: production, processing, distribution, retail, catering and waste disposal and aims to build an explanatory narrative that enables decision-makers and stakeholders to understand who feeds

Bristol, how the food supply system operates and where the vulnerabilities lie. Data is being gathered from databases, websites, interviews, surveys and existing reports and the report will be completed at the end of September 2010. Conclusions will be drawn about provision of basic food stuffs; land use for current and potential food production; vulnerabilities within and threats to the supply system; priorities for building resilience in the food system and positive planning powers that the Local Authority and NHS can use in support of a more resilient food system.

Key words Bristol, food security, peak oil, resilient food system, city food plan, baseline information, vulnerabilities, threats, land use, potential food production, planning powers, decision-makers and stakeholders, priorities for building resilience

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N. Cohen
The New School, New York City USA

Planning for Urban Agriculture

Abstract

A growing urban food movement in North America has, in many ways, moved ahead of planners and policy makers, particularly in the contentious area of urban food production. Urban agriculture projects are not only multiplying, but the very nature of urban agriculture is changing. Distributed models of urban farming and foraging are being developed by private entrepreneurs; farms are being created on rooftops and brownfields; homeowners are farming their front yards; and in shrinking post-industrial cities, advocates and developers are proposing large scale agricultural projects covering thousands of acres. Despite this flurry of activity, many cities lack the most basic policy tools to deal with these diverse new practices. In some cities urban agriculture is not even recognized as a permissible land use, making all farming a guerrilla activity. Building codes and zoning regulations fail to address the needs of rooftop greenhouses and backyard livestock. Commercial-scale urban agriculture proposals raise concerns about the health and environmental impacts of farming, and the social and economic consequences of turning large swaths of urban land over to food production. While there is a generally accepted notion that urban agriculture provides multifunctional benefits, few projects, least of all

small scale volunteer gardening efforts, have empirical evidence of these benefits, while municipal tools to evaluate those impacts, such as environmental impact assessments, generally do not address urban agriculture.

If urban agriculture continues to increase in scale, the broader impacts on urban life, from infrastructure capacity to quality of life and community cohesion, will be affected for better and for worse. Faced with expanding urban agriculture ventures, city officials are reassessing local zoning codes, ordinances, and development policies to accommodate, regulate, and support urban agriculture efforts. Some efforts are comprehensive while others are piecemeal. Some cities are acting proactively while others are moving more slowly or resisting change. This paper presents case profiles, based on field research conducted during summer 2010, of eight diverse cities that have, to greater or lesser degrees, grappled with the complex issues surrounding urban agriculture. It explores the responses of municipal officials to urban agriculture proponents, and analyzes the similarities and differences in the goals, strategies, and policy and planning initiatives advanced by each city.

J. Crotch
Glasgow School of Art
N. Simpson
Glasgow School of Art

LINGER, SAVOUR, TOUCH. Slow Food…..Slow Architecture

Abstract
We are moving to fast…fast lives, fast cars, fast food…..and fast architecture. We are caught up in a world that allows no time to stop and think; to appreciate and enjoy all the really important things in our lives. Recent responses to this seemingly unstoppable trend are the growing movements of Slow Food and Cittaslow. Both initiatives are, within their own realms, attempting to reverse the speed, homogeny, expediency and globalisation and consider the values of regionality, patience, craft, skill and longevity.
The analogy between Slow Food and Slow Architecture are embraced at the Mackintosh School of Architecture where in Stage 3 the project briefs are designed to address many practical issues such as sustainability, materiality,

construction and how these contribute to an architecture where craft, sensuality, delight and contentment are also explored through a number of 'food centric' projects. Working on the premise that speed driven architecture can result in a visually dominant architecture, one in which the spaces created are viewed rather than felt; the projects require a 'Slow' response.
With Slow Food as the metaphor for 'Slow Architecture' can a programme that embraces the key principles of this movement encourage students to investigate a more holistically sensual approach to their architecture and produce proposals that extend beyond the 'visual'?
Keywords: sustainability, multi-sensory, Slow Architecture

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Urban food procurement governance: a new playground for agricultural development networks in the periurban area of greater Paris region?

Abstract
In France, where state governance is still highly centralized, the main objective of urban food policies has been determined after a nationwide consultation (the "Grenelle de l'environnement"). It prescribes that, by the end of 2012, 20% of the food served in schools must be cooked from organic products.
In the greater Paris region (or Ile-de-France), this objective has been integrated into various regional policies (from school food to the development of organic farming) and has been implemented by a small number of municipalities without any attempt to structure the governance of these multi-level and multi-site initiatives. This lack of city governance is especially visible in periurban areas, where the territorial governance is fragmented between a great numbers of independent local authorities. In this context, the urban food governance, in the periurban area of Ile-de-France, tends to be driven by agricultural development networks, rather than cities government.
In this communication, we will analyze the nature and the impact of this phenomenon thanks to two case studies located in the periurban countryside of Paris. The first one is the case of a school food project initiated by the mayor of the town of Nemours that has been managed, and reshaped, by the local comity of the Chamber of agriculture. The second case is also a school food

project, managed at a greater scale than the previous by the agricultural development agent of the Natural Regional Park (Parc Naturel Régional) of Vexin français.
The overall objective of this contribution is to extend the understanding of urban food governance by focusing on the original situation of periurban areas in developed countries.

G. M. Denny
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Urban Agriculture and Seasonal Food Footprints: An LCA study of tomato production and consumption in the UK

Abstract
Utilizing the Life Cycle Analysis (LCA) of a tomato as a case study, produce surveys in East Anglia, and household surveys of 183 Urban Agriculture (UA) practicing households, this paper explores the ability of UA, in an international food market, to decrease food related greenhouse gas (GHG) emissions. This study concludes that through UA participation, a decrease in an individual's tomato consumption emissions from 52.4 $kgCO_2e/yr$ to 11.2 $kgCO_2e/yr$ is achievable (equivalent of 2 classic tomatoes/person/week/year). UA participation, either in the form of growing tomatoes in an allotment, or relying on a semi-commercial or commercial UA shop/market stall, reduces yearly tomato consumption emissions by 44% (from a non-UA, low emission diet) and by 78% (from a supermarket diet).

Through the UK case study, this paper contributes to the discussion of greenhouse gas footprint reduction and urban/per-urban land-use, specifically relating to the food-based percentage. First, a direct emission comparison is drawn between UA grown tomatoes and purchased commodities, taking into account all identified production burdens and seasonal fluctuations. Next, utilizing household survey consumption data of UA practitioners, current tomato production emissions can be calculated for an average UA-participating individual. Finally, a tomato procurement model can be derived for a UK food market with UA inclusion showing the lowest emissions by commodity and

average from various procurement locations including commercial, semi-commercial, and allotment forms of UA.

Key words: Commercial UA, Semi-commercial UA, gCO_2e/gTomato

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The perilous road from community activism to public policy: Fifteen years of community agriculture in Sandwell

Abstract

In 2008, Sandwell's Director of Public Health commissioned a community agriculture strategy for the borough, to be developed through a user-led process, which set out the strategic case for an expanded programme to contribute to the development of a sustainable food system, and to the goals of the Sandwell Food Policy. The Policy seeks to make explicit and develop the links between the regeneration of the environment and the regeneration of health, and the links between environmental (in)justice and health inequalities, through food and horticulture in an urban environment. Growing Healthy Communities: A community agriculture strategy for Sandwell 2008-12 is grounded in learning through practice from fifteen years of community activism in the regeneration of derelict land for mixed-use food and therapeutic horticulture initiatives.

The Strategy represents a pivotal moment in both community activism and public health policy in Sandwell. It recognises the strengths of innovation through community development approaches; the possibilities of developing policy through 'non-rational' pathways; and values people's abilities, and indeed their rights, as well as those of professionals, to make decisions about 'what works' for them. Nevertheless, this unconventional road is as perilous as that from evidence to policy, in terms of the complexities in both framing, designing and delivering effective, accessible, and relevant, public health 'prevention' and 'inequalities' interventions.

The presentation will tell the story of Sandwell's perilous journey along this road. It will offer reflections and insights into the successes and challenges encountered along the way, including the challenges of evaluating and

evidencing the complex and wide-ranging health and well being outcomes of such an approach: a challenge that is shared by both community activists and public sector professionals engaged in promoting health and well being, and preventing illness, through interventions in community settings.
Keywords Evaluation, public health, local interventions, health inequalities

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B. Everett
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Urban Seams: Food Planning Strategies for Borders in New Orleans

Abstract
As the increasing mobility of people, information, and technology causes cities to rapidly expand, it simultaneously widens socioeconomic divides. These liminal borders manifest themselves as physical hiatuses in the urban environment where disparate races, ethnicities, and lifestyles collide. Borders are often depopulated zones of low use that encourage crime, blight, and negative social stigmas. Many are located on vacant sites, in unused public parks, and in median strips between neighbourhoods. Meanwhile, the escalating flux of the city has pulled the attention of designers toward urban centres and mixed use developments, leaving borders in disrepair.
This paper explores the process by which food programming can transform neglected, urban borders into pluralistic public spaces in New Orleans, Louisiana. Hurricanes Katrina and Rita have exacerbated racial and economic borders that have existed since the city's founding in 1718. In order to activate the contentious, physical borders that are created by these social divides, programs are needed that have social, economic, and cultural value to all surrounding neighbourhoods and their residents. Since food provides both a personal and shared multi sensorial experience, it can act as a socially mobile medium to bring together individuals, families, communities, and even whole cultures. The incorporation of food venues—markets, cafes, urban agriculture, and culinary job training centres—into border sites has the potential to transform them from urban deserts to socially and culturally diverse urban destinations. Food seams offer a setting that encourages interaction and connection among patrons, thereby diminishing hegemonic power relations, liminal antagonism, and negative social stigmas. By establishing food seams

throughout New Orleans, a socially sustainable network of urban food systems emerges with the ability to foster healthy neighbourhoods, build socioeconomic value, and create a collective sense of pride among otherwise disparate communities.

Keywords: Katrina, planning, markets, socioeconomic, accessibility

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Sustainable Agriculture and Urban Design: the Italian paradoxes

Abstract

As urban or peri-urban agriculture gains in popularity it raises questions about the design of cities as well as the role of planners and designers in making a place for food production in the city. Much of the urban food production movement, especially in North America, starts with a surplus of urban land amidst poverty or is motivated by the urban rising class and their desire for non-industrial food. In northern Europe the newest tradition of vegetable gardens for the urban inhabitants began in the 19th century and is now in a second rebirth. Italians are very aware of the issues of 'Slow Food' and have a well established local food culture, but function out of a different cultural mindset in cities where the urban centre is the most desirable place to live. This means that the re-integration and development of sustainable food production in Italian cities faces some unique issues.

This presentation will examine the planning, social and design problems specifically emerging in Italy in the effort for re-covering and re-establishing urban edible landscapes. It will focus on a north Italian city, Piacenza, which is located in the productive Po River Valley (65 km south of Milan) and has a long history of food production in what is now the historical centre. Food was raised *intra moenia* by nobles, urban dwellers, and particularly by the monasteries over several centuries. But Italian culture also grapples with a strong philosophical and aesthetic division between the city and the countryside. It is understood that nature belongs in the landscape of the countryside rather than in the city and there is little tolerance for the mess of vegetation or unwanted wildlife. This

long held cultural understanding presents an obstacle to the systematic re-integration of food production into Italian cities.
In 2005 the Laboratorio Urbanistica Partecipata of Piacenza promoted a petition that the city assume a strategic plan for food production around and within the city integrated with an urban green system. Local citizens have continued to push for a more systematic approach to urban food production. Some small local farmers have accepted the challenge of selling their products through the local food chain. One result of the petition was a recent city government survey of existing food production gardens within the city. A variety of gardens were found within the city that includes community gardens, opportunistic gardens on marginal lands, private gardens, school gardens, and those still functioning within monastery held lands. With the completed the survey the city now stands at a decision point. How can it plan for urban food production? How can it promote alternative uses in periurban land other than industrialized agriculture or remunerative building uses? Is land available within the built urban fabric? Is it safe to grow food on it? How will it all be organized? Where will the infrastructure to support it come from? And above all, will people accept 'nature', even in the form of food production within their city?

E. Giorda
Michigan State University US.

Farming in Motown: a report on urban agriculture in Detroit.

Abstract
Detroit used to be the core of the US car industry, the engine of American industrial production. In the 1950's, Detroiters apparently achieved the American dream, but when the industrial system started to collapse, the city rapidly followed. For many years local administrators have tried to revive the past glory, until the 2008 crisis made clear that that path is closed. Urban gardens started to appear in the last decade as a grass-roots response to the urban decay, spurred by the lack of access to fresh food that makes Detroit one of the largest food deserts in the US. In the last 5 years the phenomenon has caught the eyes of the media, and finally also the local government is recognizing it. According to local sources, the number of gardens is steadily growing. Five structured farms are now operating in Detroit, along with more than 200 community gardens. Until recently, institutional support for these

activities has been limited. Some institutional actors are now investing in the sector. Wayne State University sponsors a farmers market and let the students grow gardens on campus; the Eastern Market Corporation recently an experimental farm on its campus; the City planning department is working on a plan that would readmit commercial farming within the city boundaries. Moore's work on sustainable cities could help framing what's happening in Detroit. I argue that urban farmers in Detroit follow a story line that describes the future of Detroit as a city of gardens. As many Detroit gardeners are the heirs of the activists who fought in the past for social justice and equal rights, their quest for locally produced food is informed by the concept of food justice. The arrival of a new, well-capitalized farm on the stage might change this storyline towards a new direction.

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Doing Transdisciplinarity - Designing Multifunctional Spatial Systemsthrough Urban Agriculture - Casablanca
Urban challenges and the landscape as a constructive urban element

Abstract
Global Change is a collective term that refers to all changes in the global environment that may alter the capacity of the earth to sustain life. One of the most powerful drivers of global change is urbanisation, including socio-economic transformations and the complex interactions of urban areas with their physical environment. With this in mind, the German Federal Ministry of Education and Research (BMBF) established a research programme on "Future Megacities" in order to develop energy- and climate-efficient structures in urban growth centres in industrializing and less developed countries. The challenges faced by future megacities, to list but a few, include considerable – and partially

uncontrollable - spatial growth, fragmented spaces, substantial population growth,
the increasing divide between rich and poor, problems of providing adequate housing, of guaranteeing adequate environmental and living standards, and of maintaining a technical infrastructure (particularly for transportation), as well as the challenges posed by looming climate change. At the same time, in the current developmental processes of emerging megacities the foundations are being laid as to whether open space can be preserved within these urban regions in order to make a long-term contribution to the sustainability of cities and the quality of life in them. The discussion on potential open-space systems for urban growth centres seems almost a luxury. But that's misleading. The course of how urban standards of living will develop in the future is being set in today's dynamic process of urban development. This raises the question of what kind of open space systems are needed for future megacities.
Keywords: urban agriculture, urban development, open space planning, multifunctionality, rurban,

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The Ecological Aesthetics of Food Production at Arcosanti

Abstract
In this paper we will explore 'paradigms and strategies for urban and rural planning and design', and 'definitions of sustainable metropolitan agricultural systems', using as a case study the recently revived plans for food production at Arcosanti. We will use new and previously unpublished on-site interviews and documents to discuss these developments, as well as reflecting upon Paulo Soleri's distinctive methods of 'scenario building, visioning and public engagement'. In discussing these matters, we will draw upon a somewhat forgotten 1970 paper by Gregory Bateson - Restructuring the Ecology of a Great City - arguing that following Bateson, we must not think of food systems as solely energy and material flows - progressive though this would be. Rather, food ecologies are as much to do with communication and information flows,

and can only be properly grasped through what Bateson described as an ecological aesthetics. The complex challenges faced by the historical and ongoing development of Arcosanti reflect contradictions within the urban food movement more broadly. Whilst much of the recent discourse around urban food production assumes that any such developments will necessarily be based in grassroots, socially progressive 'grow your own' and 'transition town' type initiatives, facilitated by designed organisational systems (planning) of one kind or another, this will not necessarily be the case. Indeed, one can presume that if there is any sense to urban food production at all, then the normal forces of capital accumulation will soon get to work. Indeed, many of the more recent proposals that are emerging within the architectural imaginary are precisely of this form, for example the vertical farms which by definition require significant capital investment, and are no doubt based upon private ownership of production.

In fact, whilst generally seen as a critical of the forces of capitalism, the progressive character of the transition town type model is itself by no means uncontested. There are important reasons to be suspicious of the ideology that can be found lurking not far beneath the surface of many 'return to localism' movements. For example, in a recent article Andy Fenwick has argued that the Transition Town type strategies entail, from one kind of Marxist perspective at least, multiple problems including: a confused appeal to a mythical past, exporting unemployment to developing countries, reliance upon local currencies acting as local trade barriers, and cheap labour. More importantly, these movements can easily be accused of false consciousness - that is to say, giving the appearance of radical change, whilst actually diverting energy away from confronting the real and fundamental source of environmental and economic crisis: capitalism itself. Nonetheless, the 'metabolic rift' described by Marx has never been so alarming, and the need for a radical cultural re-conceptualisation of our food systems would seem to be undeniable. Transition culture can rightly claim that the very real instability of capitalism in the contemporary period, and the very real possibility of near future resource wars, and/or a collapse in global trade, demands a robustness to food production that only local knowledge and production networks can provide.

We will explore how these broader socio-economic contradictions might be reflected in the experimental setting of Arcosanti, and suggest how a conception of ecological aesthetics might help make visible the multiple levels of consciousness - both radical and false - that all of these experiments necessarily project.

P.A. de Graaf
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Room for urban agriculture in Rotterdam - Defining the spatial opportunities for urban agriculture within the industrialised city.

Abstract
The research presented in this paper provides a top-down perspective of the Rotterdam urban landscape and its opportunities for urban agriculture. This perspective aims to be instrumental in bottom-up entrepreneurial driven realisation of urban agriculture projects in cities in industrialised countries in general and Rotterdam in particular, firstly by uncovering and mapping opportunities for urban agriculture and secondly by showing their potential through design case studies. The paper will focus on the mapping of opportunities and its underlying rationale.
First, promising types of urban agriculture are defined based on international best practice and expert judgement of the local context. Secondly, a set of criteria is formulated that defines opportunities based on the demands and on the benefits for the city these types have spatially, environmentally and socially. The third step encompasses a mapping of these opportunities through interpretation of the existing urban fabric: it's built and green milieus and the social diversity of their inhabitants, its zoning and its underlying waste (water) and energy infrastructure. This step will result in a map for each type that highlights areas or fields of opportunity, with an overall map integrating the maps for each type in an opportunity map for urban agriculture in Rotterdam.
It is argued that the definition of spatial opportunities and a corresponding typology for urban agriculture should be investigated in relation to the role it can play in making the city more sustainable both in a social and an environmental sense and the potential of urban agriculture to function as a system that is more than the sum of its parts, making the city more resilient to changes caused by climate change or other environmental problems, such as depletion of finite resources, loss of biodiversity etcetera.
Keywords: typology, mapping, urban planning, systems thinking

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Grow It, Eat It, Move It, Live It: A Birmingham Community Food Growing Network

Abstract
Small-scale local growing initiatives are taking a pivotal role in strategies designed to bring food production into the heart of the city (DEFRA, 2010). Networks have formed, predominantly in London, to aid those wishing to begin community gardens. However little is known about networks that exist in other UK cities; their roles, who is involved with them, what they hope to achieve and how they achieve it. This paper will focus on the UK's 'second city'; Birmingham and the example of GEML (Grow it, Eat it, Move it, Live it). The initiative is made up of four elements each with their individual missions; 'Grow It' aims to turn unused land into community grow sites, 'Eat It' attempts to turn crops into healthy food, 'Move It' promotes free outdoor activities to get people moving and joining in whilst 'Live It' encourages good neighbours and the creation of strong neighbourhoods.
The campaign is funded by the Heart of Birmingham Primary Care Trust and co-ordinated by Birmingham City Council. GEML only operates in four 'less affluent' wards in Birmingham and thus far is not city wide. The scheme provides basic resources to start growing projects, promoting a healthy lifestyle and linking communities to other council run initiatives. The project brings together a variety of organisations ranging from charities, schools and voluntary groups to other council departments.
This paper will begin by exploring who is involved in the GEML project on a macro level; its origins and plans for the future. The paper will then proceed to work on a micro level, focusing on two well established GEML projects; a women's group community garden which aims to bring organic food production to inner city Birmingham and the 'Soho garden project' that works with local school children. In both instances the discussion will focus on why these parties are involved in the GEML project, how they got involved in urban food production and assessing the extent to which they are successful in cultivating

crops in the city. The paper will conclude by identifying lessons from this project that could be transferable to other urban agriculture initiatives and networks.

A. Hawkins
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Appetite for Change: an exploration of attitudes towards dietary change in support of a sustainable food future:

Abstract
When considering how to plan for a more sustainable food future we need to decide whether we are willing and able to continue to grow and rear the food that we choose to eat now; or whether we need to plan for a gradual shift in consumer and dietary behavior to support initiatives aimed at increasing food security and reducing the detrimental impact of food production on the environment. Health professionals have, for many years, been developing strategies and interventions to improve dietary choices for health reasons - including a drive to increase consumption of fruit and vegetables to five portions a day. What can we learn from the public health sector about the barriers and motivations to this kind of dietary change upon which so many structural approaches to sustainable food production appear to be based?
This paper considers the findings that arose from qualitative data gathered in 2010 through a number of focus groups. These groups explored levels of knowledge about environmental issues relating to food and ascertained the level to which people felt willing and able to consider dietary change in order to support a more sustainable food future.
Keywords: behavior change, food security

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Mainstreaming Alternative Food Networks

Abstract

Alternative Food Network (AFN) have three common traits; redistributing value through the network in the opposite connection of the bulk commodity; reinstalling trust between producers and consumers; and articulating new forms of political associations and market governance (Whatmore et al., 2003). Although AFN's have made a significant contribution to the transition of conventional agriculture in Europe, some have cautioned that AFN's only benefits the most educated and elite within our society. But what will happen if AFN's are going mainstream? This project is focusing on several alternative chain models in the United Kingdom and the Netherlands. To gain a deeper understanding of cooperation's within regional chain models, we conducted in-depth inquiries in the supply chain of seven case studies of which three cases are summarized within this paper. These three cases try to create added consumer value as efficient as possible and are not focusing on a niche market but are trying to reach the mainstream consumer. Research findings show that these concepts all differentiate from the classical supply chain. Although the majority of the initiatives are not in the maturity stage yet, these initiatives are growing larger and become a more strategic part of the (food) landscape. By combing the best of both worlds they are trying to solve some disadvantages within the current local-to-local
supply chain, by combine the advantage of the mainstream networks with the ideology of the alternatives food networks.

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The impact of local food production on local sustainability: case of the Dutch city of Almere

Abstract

Urban agriculture (UA) produces local food and simultaneously provides green space, energy, care, education or recreation for city dwellers. But what is the impact of local food production on sustainability? This case is situated in the fast growing Dutch city of Almere (190,000 inhabitants), 30 km east of Amsterdam. Almere has to expand towards 350,000 inhabitants in 2030 because of the growing need of new houses in the Western part of the Netherlands. 15,000 new houses are planned northeast of the city on app. 4,000 ha fertile farmers land. But it is not only housing needs that have to be met, nature conservationists, water board, farmers and enterprises all stake their claim on this area. We designed with a group of stakeholders a virtual suburb where urban agriculture meets city live in Almere northeast: Agromere. Agromere inspired the city counsel of Almere to include UA in its so-called concept city development plan (Almere 2.0). But which amount of food could be produced by city farmers and what is the impact of local production on the sustainability of Almere? We calculated that 6.200 ha conventional farming land (or 8.100 ha in case of organic production) is needed to produce app. 20% of the daily food basket of the future 350.000 citizens of Almere. This local produced food contains 76% products from plant origin like fruit, vegetables, beer and bread. 24% of the local food are animal products like milk, eggs and some meat. For this amount of animal production is nevertheless more than half of the surface needed. The local production in this case reduces the greenhouse gas emission with an estimated 27.000 ton per year. This reduction is relative small because most of the products chosen are already being produced in the Netherlands. The amount of imported fresh seasonal food is normally limited in the Netherlands. An considerable part of the reduction is realised through the reduction of the consumers transport needed for shopping, the substitution of fossil fuel for renewable energy sources and organic manure in place of synthetic fertilizers. These are measures which are more or less independent of local production. This case study again underlines that a change in consumers behaviour towards food consumption, the way of shopping and

food waste could positively influence the impact of local food production and thus the energy needed for food consumption.

D. Kempa
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Environmental services coupled to food products and brands: Food companies interests and on-farm accounting

Abstract

The research on the documentation and analysis of environmental benefits in the supply chain is currently influenced by two trends: transparent criteria for the certification and eco labelling of food products are important in terms of consumer relations, whereas success factors for agri-environmental payment schemes are important on the farm level. Currently both of these research fields are mostly pursued in independent studies. Because of an increasing consumer awareness and higher competition, leading companies in the food industry see an additional need to communicate environmental benefits resulting from either organic production methods or agri-environmental measures. Although farm structures, economics and governmental authorities as influencing factors have been thoroughly investigated, demands of the food industry for environmentally friendly produced goods and their effect on farmers' decisions have not yet been analysed. To address this research deficit, two case studies were prepared at the Institute of Environmental Planning at Leibniz Universität Hannover. The first case study is a survey aimed at the industrial food producers' demands with regards to the environmental performance of supplying farms. Concurrently, within a second survey farmers will be questioned to find out what conditions are required to implement agri-environmental measures beyond cross compliance and document their environmental performance. It is assumed that food companies have an interest in the documentation of environmental benefits of supplying farms for their marketing strategies and would provide support by finance or contract-design for farmers. In turn their demand for documentation could have an influence on

farmers' decisions for implementation and documentation of environmental services. Thus the surveys will provide essential findings for further development of documentation strategies for environmental benefits within the supply chain. First results of the studies are expected in late summer and will be presented at the conference.
Keywords: ecosystem services, food industry, agri-environmental measures

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Designing urban agriculture for informal settlements – aspects from Brazil

Abstract
This paper discusses urban informal settlements, urban agriculture (UA) and design, focusing on Brazil. From the viewpoint of landscape architecture, it describes the opportunities of UA in sustainable slum upgrading and the challenges of designing for informal settlements. It reflects on a model of linking the informal and formal city through urban agriculture. The paper is mainly based on the master's thesis of the author including case studies, experiences and a design in Salvador da Bahia, Brazil. Many lessons are transferable to European countries with growing ethnic minorities and income inequality.
Urban agriculture has been globally recognised. It directly contributes to the United Nations Millennium Development Goal 7, environmental sustainability, which also targets slums. Latin American slum-upgrading programmes in some cases involve a designer but seldom UA. In Brazil there is a national policy for UA, but many of the urban poor grow food for self-consumption, with insufficient knowledge or at risk. Integrating UA into favela upgrading could make the activities safe, ecological and effective. Further, the participation of a landscape architect promotes spatially attractive, ecological entities. Strategically planned UA can for instance aim to oppose expropriation, as intended in the design for Vila Brandão.
Designers face new challenges in the informal context. Low education, waste, precarious infrastructure and insecurity of tenure are common problems, not to mention violence. In favelas the outdoor space is a significant social forum, and upgrading should focus on public space. Urban agriculture is a good example of a socio-ecological intervention that goes beyond the physical infrastructure.

Food security, jobs and income created by UA promote social inclusion that contributes to a safer city and sustainability. Multifunctional green areas hosting UA can link the informal and formal city. Large-scale productive landscapes contribute to eco-system services and ecological safety of metropolitan areas.
Keywords: favela, landscape architecture, socio-ecological intervention, slum upgrading, Salvador da Bahia

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M. Laurence
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Urban Agriculture: Vertical Farming and Closed Loop Cycles.

Abstract
At the beginning of the 21st centaury, an unprecedented event has occurred: the human race, in the midst of exponential population growth, has tipped the scales into a global, urban society. More than 50% of us now live in the built environment, with 80% predicted for 2050, by which time the population – if it gets there – will be some 9.5bn. all this on about 3% of the world's landmass make for a set of circumstances in which any single failure in the current supply chain could spell disaster. In the UK now, the average food item on a supermarket shelf travels 1200 miles, and this is likely to grow larger as the "footprint" of urban centres spreads ever wider.
Whilst much will have to be done to improve the productivity of our modern agriculture (and the story if that is another lecture), there is a growing sense of urgency with regards making the city fabric itself productive. But with many cities densely developed, there remains very little urban ground available for food production. If we lift our eyes up, away from the streets, we may consider the roofs and many of these will indeed be useable, but this is not the only available space. For every roof, a building has to have walls and the taller the building, the more walls there are! What can we do with such space? Vertical food systems are a solution that may be retrofitted to many buildings with relatively little difficulty. Hydroponics is the methodology to achieve this as it is generally a lightweight, modular system that can be easily assembled and is highly efficient and productive. Furthermore, it has the potential to utilize waste heat, water and nutrients form the building, turning these into a positive asset rather than an environmental problem. This is the thinking behind cyclical

design, the methods that nature always uses; the waste from one system is seen as an output and becomes the input for another, thus cycling nutrients and resources. These vertically farmed spaces may be commercial, communal, or individual – for example, the prototype system that we are developing at BioTecture may be a simple wall mounted unit on a hi-rise balcony, using no power or water supplies, or may be linked in series, plumbed in and automatically fed and watered. The food potential from such systems is massive and empowering for all concerned.

One other major food system that must be seriously explored is the use of urban forest gardens. These consist of massed polycultures of perennial plants, imitating a natural woodland. These have huge potential to provide individuals and communities with a wide diversity of crops in the form of fruit and nut trees, vines, fruiting shrubs, herbs and perennial vegetables. These systems are employed worldwide using plant appropriate to their climate and could cover 75% of the world's surface (unlike arable farming with can only cover <10% and shrinking [due to desertification]). These systems, intimately tended by the individuals who benefit from the produce can be at least as productive in terms of yields per acre, but with little or no fossil fuel input. This is vital as world oil supplies have peaked and will shortly move into steady decline, and modern agriculture is heavily dependant upon fossil fuels. Indeed, on average, for every calorie of food energy produced, 10 calories of fossil fuel energy will have been used – a crazy imbalance, brought about by a skewed economic system.
Wide scale employment of these two systems would greatly increase the self-reliance of cities in securing future food supplies.

Dr H. Lee
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"How food secure can British cities become? A case study of Maidstone, Kent."

Abstract
The security of food supplies for citizens in Britain is rapidly climbing the political agenda. So far, discussion has been primarily focussed on a technological 'fix'

for enhanced British agricultural production: 'sustainable intensification' in Britain is becoming a popular term. This paper argues that such an approach may help optimise yields in some areas but is not going to ensure food security overall. It is suggested that there needs to be a complete re-evaluation of our food production potential nationwide and especially in urban areas as part of an integrated sustainable development approach. For towns and cities this would comprise:
Surveying available land for food production potential within and around urban concentrations – parks, existing allotments, brown-field sites etc., with a full feasibility analysis of soil potential, including any history of contamination;
Modelling the potential of food types (dairy, meat, vegetables, fruit, cereals) for production in and around cities, so that transport spines can be utilised to facilitate rapid movement of more perishable produce into cities – thus revisiting and refining the zoning ideas for food production that urban geographers first proposed in the 1820s;
Integrating urban food with water, energy and architecture (buildings for widespread water harvesting and storage, green roofs as standard, solar photo-voltaic thermal, medi-turbines, anaerobic digestion etc.); Ensuring that societal wastes are managed so that organic wastes are moved outwards from cities to replenish the nutrients in food being moved inwards; Not losing sight of the need to enhance the quality of life of urban citizens – physically and mentally – by encouraging more 'green exercise,' facilitating better community identity, and re-assessing the entire aesthetics of the urban environment. Thus urban centres need to be reviewed as agroecosystems in terms of stocks and flows of all commodities, with food as a key component. Maidstone, the county town of Kent, is considered and some tentative ideas proposed as an example of the sort of mapping and feasibility assessments that might be considered. Thus, it is suggested that an agroecosystem approach to urban sustainable development in Britain is the most viable way ahead if we are to feed the 80% of our citizens who live in such areas.

T. Leenaert
EVA (Ethical Vegetarian Alternative), Belgium

The Thursday Veggie Day campaign in Ghent, Belgium
Making Meat Moderation Marketable

Abstract
In May 2009, the city of Ghent became the first city in the world to officially stimulate its citizens to observe a weekly vegetarian day. Perhaps it was the first time that a government (be it a local one) structurally encouraged meat reduction. The idea has been implemented in the public school system of Ghent, where 94% of the pupils in 35 schools chooses the vegetarian lunch on Thursdays. About 140.000 veggie city maps were spread, showing people where they can eat vegetarian. Also developed were educational kits for schools, guides for chefs, campaign booklets, a successful Thursday Veggie Day cookbook, etc.
The worldwide media coverage of this campaign was exceptional (e.g. CNN, BBC, Time Magazine, Japanese national news, Die Zeit and basically all major international outlets covered it). Since then, the idea has been followed by Sao Paulo, Bremen, Cape Town, San Francisco, as well as by the towns of Hasselt and Mechelen in Belgium. Many more city governments and nonprofits are interested in copying the campaign. The worldwide movement for weekly vegetarian days, also under impulse of Sir Paul McCartney, is growing, and Ghent is always cited as the pioneer. In Belgium, the concept has quickly gained ground and is, after just two years of campaigning with rather limited means, already known by a lot of Flemish citizens. The campaign has gotten support from celebrities, politicians etc and has won several awards. The Thursday Veggie Day campaign was developed by the vegetarian organisation EVA and was set up to stimulate people, business, government and the third sector to participate in a weekly vegetarian day, for the benefit of sustainability and personal health. The emphasis is on a positive message with a feasible call for action.
Keywords: vegetarian, meat reduction, sustainability, food, community

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Making Local Food Sustainable in Manchester

Abstract
In Manchester, environmental and health issues have been integrated into a wider agro-food strategy for making the city 'more sustainable', in several senses of the word. With crucial support from state bodies and charities, several initiatives expand access to fresh, healthy food, especially in food deserts. Through 'community engagement', they mobilize various resources, skills and voluntary labour to create 'community spaces' for social inclusion. Manchester agro-food networks shorten supply chains, e.g. by more directly linking peri-urban agriculture with urban consumers, and by promoting urban agriculture based on local resource mobilisation and personal trust. In all these ways, food relocalisation helps to overcome socio-economic inequalities and health problems from conventional agro-food chains. It involves a cooperative effort towards environmentally sustainable, socially just, healthy communities. In a national policy context promoting food relocalisation, Manchester agro-food initiatives reconstruct local identities and social commitments by linking health, environment and greater access to food. Alongside those achievements, Manchester food initiatives face challenges that are discussed by practitioners. How to extend the health and environmental benefits? How to mainstream the initiatives, while minimising dependence on state support and voluntary labour?
Key words: local food, food relocalisation, food deserts, community engagement, Manchester, permaculture

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The Role of Municipal Markets in Urban Food Strategies: A Case Study

The Issue:

In the UK municipal markets have been recognised by both government and industry as valuable social spaces which can address growing public health issues in urban areas such as obesity. Yet, there is a lack of evidence linking markets to the public health impacts that are to be found in the policy literature. This paper will provide indicatory levels of food access at a large municipal market in Leeds and extrapolate the findings into a discussion on the wider

potential role of municipal markets in urban food strategies. Specific focus will be on the role on markets in addressing food access for low-income urban communities. As urban food strategies develop in towns and cities across Britain, steering groups and urban planners need to take a realistic look at potential existing food strategy assets. Historically, traditional British markets have been important municipal bodies that ensured urban dwellers have access to an adequate and affordable diet.
This research draws on a case study from the North of England. The case study indicates the level of accessibility to a healthy and affordable diet at Leeds Kirkgate Market and examines the markets role within the Leeds Food Strategy. The Leeds Food Strategies' mission is to 'assist and encourage everyone in Leeds to have the opportunity to eat a healthy diet'. The case study is based on Leeds Kirkgate Market, a traditional municipal market with over 600 trading stalls. The market was a central point of early urban planning in Leeds and originally reflected historic market values, primarily: a duty of care and responsibility for the townspeople.

R. Maessen
Province of Noord-Brabant, The Netherlands

Our Common Food

Introduction

Once established, the intuitive idea of food as a focal point for promoting the sustainable development of our local communities is so obvious it is hard to understand why others would not fall for it right away. How did we ever manage to think of cities as not being hungry? Yet, it is also clear this intuition is not immediately transferred to public administrators and professionals who have somehow managed to do without for such a long time (e.g. Plantinga 2010, p 47). Consequently, planning for sustainable food production and consumption – the raison d'être of this conference – may indeed be "an increasingly important issue throughout the production chain" but it is questionable whether that will be enough for public administrations to place our common food centre stage in regional development strategies. Food and agriculture are still mostly considered from a sector point of view only and therefore remain a topic for food and agricultural specialists. This conclusion was an important outcome of a

recent investigation into the possibilities for setting up a food policy council in Tilburg or in Noord-Brabant. The view prevails that sustainable food production and consumption is not a formal task for public authorities at the local or regional level (Plantinga 2010). With a dooming budget cap for public authorities due to the aftermath of the financial crisis, neither time nor effort can be spared for what are considered frivolities or extras. Public administrations should not expand but confine themselves to their core business. And 'food' is not. Even when public administrations are making an effort to integrate policies, food is not often seen as a useful topic for doing so. In this article, I explore some recent developments in the province of Noord-Brabant in the Netherlands as a case study. It is an attempt to understand why public authorities may be reluctant to reclaim our food as something of a common interest and a useful topic for policy integration. I will describe these recent developments and place them within a larger framework.

C. Mees
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New York City

Food, Homes and Gardens: Public Gardens for a Sustainable City

Abstract
Densely built urban districts leave residents with little access to public open space in the vicinity of their housing units. Community gardens supplement traditional open spaces for recreational purposes and are often used to grow food. These gardens are critical as climate change and population growth increase the need for urban agriculture. Community gardens were first created in New York City during the 1970s. Residents of low-income districts appropriated available vacant public lots to create gardens in the vicinity of their apartments. These gardens were used as social gathering spaces, to grow food and beautify neighbourhoods. Common management of the space was essential to the maintenance of the garden as public space. Today 300 community gardens are situated on public land in New York City, overseen by the GreenThumb division of the Department of Parks and Recreation. These gardens are not legally protected in the same way as other parkland, but

residents' successful volunteer management and political activism has protected them against appropriation for other land uses while preserving the multifunctional aspects of their urban land use typology.
In the current economic crisis various elements are employed in New York community gardens to maximize productivity, conserve water, deal with waste issues and provide neighbourhoods with recreational opportunities. Beehives, chicken coops, rainwater harvesting, and hybrid structures combining greenhouses and storage sheds are examples of community garden elements that have been recently legalized, financially supported by NGOs or regulated in new ways. To maintain public gardens successfully, however, it is important to guarantee that residents are allowed to design and use the gardens according to their individual preferences and neighbourhood needs. To support urban agriculture and improve local food systems for a sustainable city it is therefore necessary to legal recognize and define community gardens as publicly owned and communally managed by residents, and to encourage their development in high density residential centres.
Keywords: land use, community gardens, open space planning, urban density, low-income

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Foraging for local level policy engagement with food?

Abstract
Throughout the United Kingdom there has been increased engagement by local policymakers with food. Local level strategies are being produced, often engaging with food as a way in which headline targets could be delivered by crosscutting activities, albeit often with a strong link to public health. However, no such strategy exists in the North East of England and as such no signs of food related governance are visible. This paper presents findings from a small study of third and public sector organisations that identified themselves as responding to issues of food access, poverty and insecurity experienced by households and communities in the region. The paper explored the experiences of these organisations and considers the influence of the surrounding local governance context on their activities, focusing on the role of

funding and the relationship between actors. The paper concludes that a governance arrangements and network are relatively weak, the activities that do occur are heavily influenced by central government policy priorities and the associated funding that trickles down to local levels and steers local public sector actions and in turn relationships with the third sector and their activities. This raises questions as to the basis, strength and longevity of food access and broader food governance activities that have arisen elsewhere in the UK, particularly following the end of funding and stimuli to action.
Keywords: governance, funding, North East England

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Sustainable Food for Cities: Criteria to Minimize Greenhouse Gas Emissions and Maximize Carbon Sequestration in Urban and Peri-Urban Agriculture

Abstract
The redesign of urban ecosystems is underway. Communities around the world are transforming cityscapes from barren rooftops, lawns, abandoned sites and marginally utilized peri-urban lands to functional, community-focused food farms of diverse nature and scale. Negative impacts of certain agricultural practices are also being identified and addressed. Agriculture's reliance on synthetic fertilizers, pesticides and fossil fuels contributes to greenhouse gas (GHG) emissions and climate change in numerous ways—including land-use changes, machinery operations, chemical manufacture, chemical applications, leaching and runoff.

In British Columbia (BC), Canada, over 170 Municipalities have signed a Climate Action Charter. The agreement, which commits communities to become carbon neutral by 2012, requires local governments to quantify, reduce and offset GHG emissions from public operations. To assist communities with the transition, a collaborative project between planners, landscape architects, local governments, agronomists and academic researchers is working towards the design of 'Low Carbon Communities'. Low Carbon Communities propose an integrative framework for food systems planning within cities—called Municipally Enabled Sustainable Agriculture (MESA). MESA aims to affect: food self-reliance, lower urban GHG emissions, carbon sequestration, community engagement, diversified regional and local economies, and improved health and resilience in urban ecosystems.
With a particular focus on Metro Vancouver, the objective of this study is twofold: (1) to assess GHG emissions from agricultural production in the region, and (2) to recommend criteria that support minimizing GHG emissions while maximizing carbon sequestration in urban and peri-urban agriculture. The study links criteria with potential indicators for monitoring project baselines, targets and accomplishments. A preliminary review of carbon sequestration in urban landscapes is presented and challenges to implementing MESA are discussed.
Key Words carbon sequestration, greenhouse gas (GHG) emissions, municipally enabled sustainable agriculture (MESA), urban agriculture, peri-urban agriculture

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Cova da Beira, a sustainable productive landscape
A new rural-urban alternative of growth

Abstract
The paper presents the research project Green Engines, discussing the results of the 2010 case study workshop in Covilhã, at the University of Beira Interior, Portugal. Green Engines is a research platform that aims to explore the

potentialities of productive landscapes to generate a self-sustainable territory. The research follows a landscape urbanism methodology with an interdisciplinary approach. We consider the environment not an object that can be designed, but a complex system of elements that create a network of interactions between them. The research objective is not to reach a predictable urban form or planning prototype for each case study. We take into account flexible dynamics, scenario thinking, actors involved, and processes over time, which relate with changes and re-adaptation. The selection of a specific scenario reflects choices, processes, among the possible options (policies, planning decisions, hypothetical events and plots, actors involved) which generate the complexity of a new landscape for the future. The rural valley of Cova da Beira, in Covilhã is a landscape in a process of change. How to create a sustainable productive landscape in the valley considering the potentialities that the rural territory already has? Agriculture is part of the cultural heritage and the identity of this historical rural-industrial territory. New ecological allotments can be a new economical contribution for the city and give social cohesion. It can make attractive the valley for new types of tourism. It can be the purpose of a healthy activity for retired people, therapeutic for marginal groups, sick people, and an educative platform in sustainable and ecological habits for new generations. The aim is to find a new planning strategy for a sustainable growth, creating a multifunctional landscape with the development of new housing areas and facilities, together with the integration of knowledge and education, culture and heritage, industry, infrastructure, the natural and the rural environment.

Keywords landscape urbanism, productive landscape, multifunctional landscape, planning strategies, rural development.

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Gardening together in sheltered housing: a new experience "…just watching it flourish, and then the tomatoes in the pots you know watching them grow, and the little yellow flower coming, and then you get that little tiny thing appear, ah wicked..!!"

Abstract
Growing food is an activity which potentially excludes individuals with limited resources. Older people living in shared accommodation are liable to exclusion because they have no land of their own, limited financial resources, variable personal capacity and complex social pressures. Gardening is a popular leisure activity for older people and has been found to improve psycho-social wellbeing and community interaction (Wiseman and Bhatti 2007, Milligan et al 2004). However research suggests that this potentially healthy activity is a source of worry and negative emotion in people that are living independently. Research about the impact of being unable to manage the garden suggests a fear of embarrassment and being branded unable to cope. Further to this an unkempt garden is a clear indication of vulnerability (Richards 2006). The most often cited reason for people moving to supported accommodation is their inability to manage their garden, so it is not surprising that gardening participation falls from 85% before the move to 15% afterwards (Stoneham and Jones 1997).
After the move is done an occupation of obligation can be adapted, and revert to being one of choice, and enjoyed once again. Little is documented on how to introduce food growing to supported housing schemes for older people. This qualitative research project evaluates the introduction of this health-promoting activity to this setting. It gathers opinions about events and experiences from first meeting to the vigorous clearing of a small walled garden and harvesting of the first crops. Focus groups enable the gardeners to explore and reflect on their experience of participating in a 12-week gardening group, and their ongoing plans and aspirations.

P. Nicol
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Stories of Apples: An exploration of the arenas of a London food supply

Abstract
When considering metropolitan food systems, London could be perceived as consumptive goliath. As one of the key capitalist powerhouses of the west, it thrives upon the circulation of conspicuous capital. The food system within the

city remains superficially tangible yet predominantly conspicuous in terms of the landscapes from which most food is derived. But even within such a 'global' city, a plurality of stories exists.

This paper presents a study that considers how a variety of apples enter a community within London. The apple acts as a device through which a city-region's food system and extent of connectivity with relevant productive land may be analysed and explored - leading to an examination of (r)urban food systems.

Through deconstruction of the 'applescape' of a distinct community, different scales and meanings of procurement are considered. Through conducting a multi-level analysis, four different arenas are examined. These include the mainstream retail applescape in the form of supermarkets and the wholesale market sphere, which supplies the majority of independent retailers within the city. Cases of more direct links with producers are then considered - via community supported agriculture box schemes and local farmer's markets – cases which, to some extent, connect more explicitly with the surrounding peri-urban interface. These economic cases are then contrasted with examples of more ecologically localised procurement in the form of gleaning projects and community orchards.

The ways in which these different journeys are understood and accounted for is explored. It is hoped that the collection of accounts will lead to a more nuanced understanding of the different possible routes an apple might take in entering or growing within the city. What happens when production re-enters the public sphere of the urban environment? What stimulates individuals and groups to pursue different forms urban food supply? Does the (r) urbanisation of the apple lead to the thing gaining more meaning than commodity and does this ricochet in to the wider urban arena?

Key words: political ecology; apples; place; orchards; city-urban interfaces; materialities; sensual methodologies.

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Urban planning: towards sustainable food systems
The case of the pork meat in the United Kingdom, Greece, and Spain

Abstract
Within the context of sustainable food systems, this study shows that effective design and coordination of niche netchains highly influences its effectiveness to upscale. It provides insights in barriers for up scaling niche netchains by looking upon urban food governance from a private as well as public and civic dimension. It found that, regardless cultural and societal differences, in all three countries niche netchain experts (private dimension) try to manage risks and uncertainties. Competition among niche netchain actors is seen as a major barrier to upscale innovation, with critical issues being standards and regulations, netchain leadership and long-term contracts, sharing and managing knowledge, as well as branding. Linking rural niche farmers to urban retailers is seen as the key challenge to a sustainable (niche) food system, and the function of procurement strategies of retailers in the context of urban food governance requires further research, specifically on the public and civic roles on how to support this. A general conclusion is that network management within niche netchains tends to focus on the 'hard side' of collaboration (e.g. complying to standards) and less to the 'soft side' (e.g. enhancing knowledge and skills). To further define the scope for sustainable food systems as part of urban food strategies, the study identifies aspects of food governance (netchain-wide learning, multi-actor task forces, societal embedding and branding) related to the public and civic dimensions, and identifies where public and civic actors could collaborate with private netchain actors.

N. Niwa
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Why is there agriculture in Tokyo? From the origin of agriculture in the city to the strategies to stay in the city

Abstract
Tokyo is one of the densest megalopolises in the world. This leads to extreme pressure on land and intense competition between urban activities. In this

context, it is surprising to imagine that there is agriculture in Tokyo. Today, agriculture represents 2% of the city area. If it is less than during the Edo period (1603-1868) - when more than 40% of the land area was devoted to agriculture- it is still more than in many other cities. How can we explain the presence of agriculture in Tokyo? What strategies do the farmers develop to remain in the city? These are the questions we will try to answer in this article. First, we will show the historic roots of agriculture in Tokyo and how Tokyo's development was based on agriculture. Secondly, we will give some illustrations of the strategies that have been initiated in Tokyo to maintain agriculture in spite of the high competition for space. We will present how agriculture fits into the urban context and develops strategies to find new spaces in the city and how the farming profession is now being reinvented.

Key words: Intra-urban agriculture, Tokyo, urban development, food production, natural risks, quality of life, adaptation to the urban context.

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Sustainable food production and consumption

Abstract

Human population has increased rapidly over the past 50 years. As a result, the rate at which people are consuming natural resources and polluting the environment (ecological footprint) is rising exponentially. Left unchecked this will result in a permanent loss of biodiversity, which will affect access to water, food production, health and shelter for hundreds of millions of people around the world. Food production and consumption is one of the main contributors to this

global problem. This problem needs to be addressed through social justice and encouraging a lifestyle that live within the fair-share of the earth limited resources. It is envisaged that sustainable food production is capable of becoming a useful tool in building social cohesion and interactions between society's different components leading to sustainable communities and cities. There is however lack of information on the growth of cities especially considering aspects of food and agriculture. This paper describes an ongoing study that is aimed at investigating the connection and relationship between sustainable food production and city growth with especial reference to the historical, cultural and the ethnic backgrounds of Akure City in Nigeria. The choice of Akure, southwest Nigeria for this study is based on a number of reasons; it is a typical example of a sub –Saharan African city that has experienced post-independence rapid urbanisation in the last 50 years (1960-2010). It has grown from a medium sized agrarian town to a major metropolis that has experienced socio-cultural transformations and developments through the influence of globalisation and neo-colonisation ideas. The paper offers understanding into the changes and transformations of people and institution, opens up new perspectives on the behaviour of the actors and the workings of its socio-cultural institutions in the study area and provides understanding of how a city in the developing world has metamorphosized or evolved over time through the agency of food. The paper concludes by suggesting a framework, which could be used as sustainable guidelines in sub Saharan Africa.
Keywords: development, sustainable food-production, urban agriculture, southwest Nigeria, urbanization.

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Growing Food, Nested Scales and Design Activism: an integrated approach in Leeds

Abstract
This paper details a Leeds based cross disciplinary live urban food growing project called Garden to Eat-Back to Front. The staff and students of Leeds

School of Architecture, Landscape and Design developed a partnership with the British Trust for Conservation Volunteers (BTCV), the NHS and Leeds Permaculture Network to develop a nested approach to growing food that connects multiple scales of design and delivery to enhance pro-growing behaviours in a number of deprived inner city neighbourhoods in Leeds
The study area is the East and North East wedge of Leeds. It is a highly deprived area with some parts falling within the 3% of the most deprived nationally. People have higher levels of unhealthy habits and suffer from depression more frequently than most Leeds residents. However, the area is vibrant and has a rich cultural mix with Chapeltown having double the city average of black and ethnic minority communities and there is strong local support for growing food. Results of 400 questionnaire surveys and 10 focus groups examined the interest in and requirements for food growing in the area. This empirical research was used to inform multi scale designs for cultivating edible crops in a number of different housing types and neighbourhood spaces in the study area. Delivery is taking place using a bottom-up approach working with the city council and developing local links, which will create the foundations for an appropriate neighbourhood scale network and resource. Resulting designs range from movable modular systems in front gardens, to rooftop banana plantations.
The paper examines the rationale for the approach and resultant design solutions of the different discipline groups and shows how they merge to inform an integrated response to growing food. In addition an explanation of how such a live interdisciplinary design project can provide multiple outputs for both teaching and active research will be provided.

J. Paddock
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Restating Equity for the Sustainable Development Agenda: Social Class 'Ethical' Consumption and 'Alternative' Food Networks.

Abstract
The goal of realising environmental sustainability has long been interwoven with the ambition of achieving the objective of equitable sustainability (WCED 1987) whilst adhering to principles of distributive social justice (Dobson 1998). I

demonstrate in this paper, through an analysis of food consumption practices, that such an ambition demands a critical and classed approach to environmental social science. This paper will present consumer narratives regarding their relationship with food, and indeed their experiences of engaging with alternative food networks in South Wales at both a farmer's market and a community food co-operative that each promote a form of 'alternative' food consumption (Kneafsey et al 2008). Consumers from various socio-economic backgrounds at each research site articulated their experiences within the descriptive frame of class. The focus of this paper will therefore be to explore such accounts, and indeed, to understand the extent to which reluctance to engage with alternative food networks on behalf of the consumer hinge upon relations of social class. Essentially, I suggest that the efforts of sustainable food planning, albeit within the context of this research, do little to promote equity. It becomes clear in this paper that in order to realise environmental sustainability based upon sound principles of distributive social justice, we must first accomplish a nuanced understanding of contemporary class relations.
Key Words Class, sustainable development, consumption, alternative food networks, equity.

L. Peemoeller
Food Systems Planning U.S.A.

Progress through Process: Preparing the Food Systems Report for the Chicago Metropolitan Agency for Planning (CMAP) GoTo2040 Plan.

Abstract
How will we continue to produce food and feed our population in 2040 while planning for population growth, transportation, homes, and commerce in the Chicago Metropolitan region? This is the question that frames the CMAP 2040 Food Systems Report, which was developed over the course of 9 months through a participatory community planning process with over 130 food systems stakeholders from the urban and peri-urban areas that make up the Chicago Metropolitan Region. The report was the first report of its kind for the region. It required a collaboration of stakeholders who had not previously worked closely together to define existing conditions, a vision for 2040, a set of recommendations, and a list of indicators. This paper examines the process by

which the report was produced using the community planning strategy and the challenges and opportunities it presented.
Keywords regional planning, community food systems, stakeholder process.

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How food travels to the public agenda

Abstract
Our daily bread is entering the public domain again after decades of neo-liberal market policies and consumer choice doctrine in food provenance. A combination of factors, described as the “new food equation” (Morgan and Sonnino 2010) make that food supply matters again as a political issue. Increasingly, awareness grows of the relations of various (urban) problems with food (Wiskerke 2010). And equally there is more attention towards the nature of the problem; a systemic problem related to the functioning of modern agriculture, agribusiness and retail rather than a problem which can be solved by individual choices. Government is therefore finding its way back to the eating table. Food is emerging as a policy concept by which it is possible to look at problems in a new and connecting way. Food policy can imply a shift from sectoral thinking and acting towards a more integrated and territorial way of thinking about policy, creating synergies in innovative ways. One of the governance instruments to come to such food policy at the level of a city is by forming a Food Policy Council, an instrument originally developed in Canada and the US (Blay-Palmer 2010).
As a governance instrument a Food Policy Council could fit with the Dutch tradition of consensus and network governance. So far a ‘Food Policy Council’ does not exist in The Netherlands. However, various cities and civil organisations are moving into food policy activities in their own local context. Research carried out in the city of Tilburg (the Netherlands) aimed to find the different possibilities and restrictions related to the establishment of a Dutch version of a Food Policy Council in Tilburg. Based on interviews with stakeholders in Tilburg this paper analyses the possibilities and restrictions of a

FPC using the following concepts: urgency, representation, role of the government, responsibility and scale.
The results show how food becoming a public issue is a gradual process in which sense of urgency is a key indicator. Lack of this and therefore of responsibility show that many stakeholders are somewhere halfway. The systemic nature of the problems is widely acknowledged while the solutions are defined on the individual end-of-pipe level. If only consumers knew and were aware…….

J. Salomon Cavin

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City farming in Geneva: the end of a love affair?

Abstract

This article intends to show that, historically, there was a real point of convergence between agriculture and urban planning goals and strategies in Switzerland and in Geneva particularly. This convergence turned out to be very efficient in maintaining the distinction between constructible zones and non-constructible zones. This collaboration was put into practice at the federal level through the Wahlen program and agriculture and urban planning policies since 1979. In Geneva, the collaboration was very efficient. In the 30's the Geneva canton defined a green belt whose purpose was to preserve the undeveloped landscape from urban sprawl and the legal definition of an « agricultural zone » in 1952 clearly reinforced this protection long before legislation was implemented on a national level. Today, the situation has changed and this partnership is in question. In Geneva, increased urbanization is putting great pressure on land. In order to build a more sustainable and compact city, it is important to urbanize the land on the direct outskirts of the city. However, these are the most dynamic urban farming areas. In the meantime, the cantonal government has reinforced its ambitions towards agriculture and created new instruments to promote farming and local food production. The current situation is indeed perilous, but gives the possibility of a dialogue between the concerned parties and the realization of a common project: the project of urban agriculture.

Keywords Switzerland, urban planning, urban agriculture

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Buildings as a Food System in a Temperate Climate

Abstract
The source of the food we eat in the UK and its impact on social, economic and environmental issues has become a major concern, where food accounts for 19% of carbon emissions in the UK. Sustainable and low energy methods of cultivation address these issues and are increasingly being implemented at a local and community scale. This paper highlights the importance of local, residential cultivation of fruit and vegetables to increase the consumption of fresh foods rather than energy-intensive processed foods. However, this prospect is limited in the UK due to high land prices and lack of land for cultivation, especially in towns and cities. As an alternative, the use of the building fabric itself for the low energy cultivation of food is explored. Requirements for food production are analysed against critical building parameters (e.g. orientation, container depth etc.) which can assist the design process of these systems using a novel assessment tool. These are used to assess five existing case studies of cultivation on the building fabric, with the lessons learnt developed into a set of refined design principles and building parameters specifically related to growing food on the building fabric. The key finding of the study is the importance of access for easy maintenance and harvesting by the building occupants and using appropriate levels of soil within a system, to help with biodiversity, fertility and the establishment of plants. Integrating water storage and areas for composting is also crucial to reduce the embodied energy of the food grown.
Keywords: building fabric, sustainable food production, low energy, organic

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Traditional food markets : re-assessing their role in food provisioning.

Abstract:
Rapid transformation in the food retail supply system accompanied by rational economic efficiency has marginalised the role that traditional markets play in the UK food distribution system. Yet these markets survive, some even thrive, implying that traditional food markets cannot be defined simply in terms of their distribution function. Traditional markets, in fact, occupy a contested space in food provisioning, as part of the conventional food system but also seen as part of an 'alternative' urban food system, evolving in response to market forces and changing consumer preferences, and providing an important 'hidden' retail source for fresh and affordable food that is both globally and locally sourced. This paper presents the first detailed assessment of traditional food markets in England. It maps and identifies patterns of concentration at different geographical scales using database research on traditional markets, wholesale markets and more specialist niche markets, including farmers' markets. The paper goes on to present some early fieldwork findings from case study research on traditional markets in the North East and Eastern regions of the UK. These findings provide new insights into where this affordable fresh food comes from, what the people operating, trading and shopping on traditional markets think about the food on sale, about fresh food shopping habits, and the influences affecting fresh food choices. The findings also raise questions about perceptions of 'value' and 'quality', and about distinctions between 'alternative' and 'conventionally' produced food.
Keywords: geography, fresh food, shopping, value.

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URBANIAHOEVE: Where Social Design Expands Urban Agriculture

Urban agriculture defined in simple terms is the growing, processing, and distribution of food and other products through intensive plant cultivation and animal husbandry in and around cities.

Described as laden with benefits for the cities & regions as well as its practitioners & entrepreneurs, urban agriculture's (UA) current definition delineates (peri-) urban food production in locations as disparate as Dakar, Havana, and Detroit. But as UA's field of operation increases, adjustment and nuance of the definition becomes an imperative. How can agro-parks developed by multinational agriculture concerns be included under the same term as grass-roots/landscape architecture initiated by the cultural sector? Must urban agriculture continue be defined using the same forms of output as conventional agriculture?

Since September 2009 URBANIAHOEVE Social Design Lab for Urban Agriculture has been conducting action research towards developing a signature, suitable, and sustainable form of urban agriculture (UA) that could be widely adopted in Northern European cities. The physical and conceptual starting points for these UA typologies presuppose the use and integration of existing forms of green and social infrastructure, as well as offering a clear benefit to the immediate surroundings. This paper charts URBANIAHOEVE's specific areas of research and the resulting typologies that range from planting design, to food facilities and (playground) equipment, to collaboration protocols and the strategic re-appropriation of public space.

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Sustainable Food Procurement : policy development and case studies from the UK

Abstract
This paper is based primarily on a review of extensive web-based materials plus interviews with procurement officers, suppliers and community-based food projects. This is a working paper describing ongoing research. It presents evidence that there has been some transformation of the local food economy in terms of growth in local procurement of food for the public sector - including a number of case studies. But this still only affects a small percentage of total public procurement spend Advocates of sustainable procurement are often

frustrated by the slow speed of progress given increasing awareness of the unsustainability of present food production systems. The paper will inform businesses seeking to develop sales in the public sector. It will be useful for business support agencies and public sector officers engaged in procurement and local food policy. It will contribute to the emerging academic literature on public sector procurement and local food.
This paper discusses public sector food procurement polices aimed at promoting local and sustainable sources of food for school meals, hospitals and other public sector users, aspiring to provide affordable high quality food while boosting local economies.
Keywords food sustainable local school nutrition

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Food Policy Councils: recovering the local level in food policy

Abstract

This paper looks at food policy councils as a possibility to shape urban food systems. The urban food system lost through up scaling and delocalisation its importance for food supply. With this development the scope for influencing food systems on the local level shrunk and food policy moved to national, European and global level. Recently the need for urban food policies is seen again. The case study of the Food Partnership in Brighton and Hove shows that food policy councils represent a viable possibility to recover the local level in food policy.

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“Food is concrete”: augmenting architecture through community food-gardening on inner London housing estates.

Abstract

The French poet and artist Jean Cocteau (1983 (1928)???) once stated that all art is anonymous, in that authors are rarely present when people view their art. This is also true of the built environment, which is largely silent of architects' voices, filled instead by the hubbub of the daily intervention of residents. This paper explores one intervention - community food-gardening - as it is presently emerging within six inner London housing estates. In a series of interviews, the estate residents explicitly expressed frustration at the "blank", "bleak", "disused", "neglected", "barren", "grey" and "derelict" landscapes surrounding their homes, voicing instead a desire to re-use them "productively" through food-gardening. However, this paper argues that while food is enunciated as the primary concept, it is a set of primary practices, such as the construction of the self-built, food-producing landscape, the creation of shared social narratives and the interaction with natural resources that dominate. Thus the gardeners should not be confined by the urban food discourse, exemplified within civic agriculture (Lyson, 2004), which seeks to link consumers to food production by its (re)localisation. Rather, what needs to be explored is the re-linking of residents to architecture, landscape, and the planning of cities. As one resident put it, gardeners are "amateur architects", augmenting the pre-planned architecture with a bricolage of seasonal, quotidian, and playful performances. This challenges formal architectural space and place through soil, the growing of food, and its social harvesting. Using multi-site participant observation, semi-structured interviews and photography, the research throws new light into this overshadowed everyday food-gardening activity that often falls within the penumbra of the productive, economic and environmental "feeding cities" UA discourse. It confirms that self-grown food, within the built environment, is a primeval and emotional scream muffled by our current relentless food supply systems. Similarly, postwar Town and Country Planning Acts have muted the multiple narratives of play, knowledge, and self-building that are finally escaping, fuelled via this tiny, self-made harvest.

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Public space, urban agriculture and the grassroots creation of new Commons: lessons and challenges for policy makers

Abstract
In recent years, the emergence of a new environmental culture is posing new challenges to public space management. Urban social movements in the Global North are claiming public spaces that reflect stronger concerns for sustainability, climate change and environmental quality. From Landshare to Urban Harvest, from Guerrilla Gardeners to the diverse practices of collective urban agriculture, a wide range of initiatives is experimenting and enacting –with different degrees of legality - new ways of sharing spaces while producing food and experiencing conviviality in public spaces.
In some cities these initiatives start and evolve within marginal/liminal spaces (illegal allotments, guerrilla gardening etc.) while other groups and organisations are seeking a more systematic dialogue with -and support from- local institutions (Landshare, Transition Towns, Urban Harvest, Abundance, Permaculture associations, etc.). Nonetheless, it seems that the ability of local and regional institutions to respond to these new demands are somehow limited and constrained by planning traditions that have not been permeable to emerging urban cultures and their needs, failing to create flexible or more adaptable public spaces. As a result, short term satisfaction to these needs is found in the possibilities left open by "loose spaces" (Franck and Stevens, 2006) or ad-hoc negotiations between grassroots groups and local councils (such as for the concession of public land), but none of these go beyond the status of emergency or residual practices.
Drawing on preliminary academic-activist research into several of these practices in UK and Italy, and adopting a relational perspective to the construction of public spaces (Lefebvre 1974, Jessop 2001), this paper aim to present and discuss the challenges that these practices and cultures pose to the political and planning agenda for urban public space management in regimes of energy and space scarcity and climate change.
Keywords: community activism, food growing, urban harvest, action-research, policy making

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The food urbanism initiative

Abstract

The domains of agriculture and urbanity have traditionally been seen as mutually exclusive despite their extreme interdependence. In recent years, a burgeoning grass-roots movement has emerged with the aim of re-integrating agriculture into the life of the city. The time has come for innovative spatial solutions to the problems surrounding food and urbanism. The Food Urbanism Initiative (FUI) aims to examine the overall impact of food on urban design and to study the potential of new architectural and landscape strategies for the integration of food production, processing, distribution and consumption in the contemporary city. The FUI paper outlines the fundamental intentions of this movement as well as examining strategies meant to facilitate urban development that integrate both city life and food production cycles into a more harmonious coexistence that is socially, economically, and environmentally responsible. Using Switzerland as a point of departure, FUI explores the nation's recent history and describes the project's research methodology while also citing corresponding examples at multiple scales.

The discipline of landscape architecture is well poised to deal with the challenges and opportunities for integrating food production into the life of the contemporary city. Its tools can be used to generate urban form and reconfigure existing urban spaces (vacant lots, parks, gardens, and public squares) to productive agricultural ends by drawing from its deep roots in both the realms of agriculture and urban design, its recent interest in reclaiming derelict sites for productive social ends, and its ability to manage multi-faceted processes over time. Food Urbanism proposals, programs and prototypical pilot projects are sprouting up across the globe and are beginning to provide valuable insight. FUI hopes to advance these efforts by thoughtfully examining the movement to develop solutions reinforcing the liaison between theory and practice, between architecture and agriculture, between city and farm.

Keywords urban design, architecture, agriculture, landscape architecture, community development

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The CPUL CITY Toolkit:
How to plan productive urban landscapes for European cities

Abstract
As cities across the world seek policy guidance, good practice examples and further theoretical evidence on the impact of urban agriculture, it is worth noting how rapidly this subject has moved from a “fringe interest” into the centre of public attention. While a long established literature documents and advocates urban agriculture in developing countries, the rapid shift of interest in urban agriculture that has taken place in North America, Europe and Australasia, is remarkable.

In Europe, the environmental and socio-cultural benefits of introducing productive landscapes into cities have now been widely accepted. Consequently, the paper will discuss something more strategic and infrastructural: the question of how a significant amount of urban agriculture can be re/integrated into cities. *Re*-integration is important here, as cities have included productive spaces before, and the economic and agricultural logic for locating fruit and vegetable growing close to the city centre was clearly argued as long ago as the early 19^{h} century.
Our task today is to rethink and redesign better spaces for today's (and tomorrow's) urban food systems.

The architectural profession as well as activists and artists have led much of this development, as evidenced by a number of significant international exhibitions, live projects and coverage within influential design journals. As interest in these topics within Europe spreads and moves into allied disciplines, such as planning and landscape architecture, this paper explores ways in which designers can continue to play a significant role in conceiving, advocating and justifying the integration of sustainable food systems into the urban fabric.

After 10 years of design and research work on the topic, the authors will present their evolving *CPUL City* design concept in the context of two European cities: Berlin and London.

Continuous Productive Urban Landscape (CPUL) is an architectural and urban design concept which the authors developed around the year 2000. It proposes a coherent strategy for the introduction of interlinked productive landscapes into cities thereby creating a new sustainable urban infrastructure and supporting a re-definition of open urban space usages. Urban agriculture is one of the major spatial and occupational components of this produktive urban landscape. Concepts like *CPUL City* provide cross-disciplinary design strategies capable of giving spatial and organisational coherence to the infrastructural and qualitative aspects of urban agriculture.

The paper will focus on the historic lessons, current practices and future strategies of two exemplary European cities, London and Berlin, with respect to CPULs. This first summary of specific data will form the basis of a more generic guidance on how to plan productive landscapes for European cities – the *CPUL City Toolkit*.

The paper will conclude with a reflexion on the challenges for and potential of enabling Continuous Productive Urban Landscape to be taken forward and move “out of the gallery” to become an integral part of everyday urban infrastructure.

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Spatial Perspectives for Food Planning in Metropolitan Landscapes: the SUSMETRO Stakeholder Game

Abstract
In this paper we explore the possibilities to grasp spatial perspectives for food planning within metropolitan landscapes through the development of an interactive game: SUSMETRO. In paragraph 2 we address the current issues that challenge the visualization of metropolitan landscapes with the Netherlands

as an example. In paragraph 3 we introduce SUSMETRO as a challenge to provide tool for visualizing Metropolitan Agriculture in the context of nature and recreation. In paragraph 4 we explain the methodological aspects of the game and how it aims to bridge different value orientations and facilitates designing a mix of agriculture innovations for the future. In paragraph 5 we explain how SUSMETRO acts as a boundary object that can facilitate discussions between different value orientations. In paragraph 6 we finish with some concluding remarks on the role of the scientists that facilitate the game.

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Planning's role in supporting more sustainable food and farming systems

Abstract

The planning system shapes our urban and rural areas by guiding and regulating the use of land, and through the making of place and space. In the UK the planning system operates at different scales, from the national, to the local, to the neighbourhood. Planning establishes visions for the development of localities, setting policies to enable the implementation of these visions. These policies guide place-based development decisions, from the location of new housing and infrastructure, to the conversion of a single shop into an office. The planning system has recently undergone reform, changing it from a traditionally land-based system, to one that seeks to address the many factors that shape spaces and make places.
The planning system is inherently intertwined with our food system. It influences the availability of land for commercial and non-commercial agriculture, it shapes the retail environment, and it outlines options for the management of food waste.
Given this role, planning has a responsibility to support and promote a more sustainable food system. Whilst this paper does not explore in detail what is meant by a sustainable food system (this is explored in detail elsewhere, including Lang 1999), it believes this system to be one that is ethical, equitable and environmentally-sound in meeting the needs of producers, retailers and consumers, and Sustain's Sustainable Food Guidelines are taken as a basic framework for the definition of a sustainable food system for the purposes of this paper.

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Growing alone, growing together, growing apart?

Abstract
The organisation of an unpaid supply of labour in an essential but under-researched aspect of contemporary forms of urban agriculture, and a key restraint on its expansion. In the UK there are two dominant modes of practice, collective and individual, the former exemplified by volunteering activity on growing projects, the latter by traditional allotment gardens. This paper explores the assumptions about human motivation, individual rights and effective social organisation that underpin these two modes, and scopes the consequences for accountability, sustainability and social inclusion in a diverse local population. The relationship between collective and individual practitioners can be antagonistic, and it is argued that greater transparency in the assumptions that underpin the social organisation of urban agriculture will support a more nuanced and effective set of policy choices.
Keywords: Volunteers Motivation Individual Collective Allotments

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