

Work package 7 / Deliverable 7.4

Final synthesis report

Heidrun Moschitz, Han Wiskerke

[Research Institute of Organic Agriculture, Wageningen University]

September 2015

Content

1	Overall outline of the project synthesis	3
2	Abstracts of Sitopolis special issue papers	4
2.1	The city regionalisation of food systems: Conflict & co-operation across three food cities. 4	
2.2	Connecting flows. Closing of Nutrient, Water and Urban Waste Cycles in Urban and Peri-urban Agriculture	4
2.3	Sustainability profiles in short food chain delivery. Evidences from three SMEs experiences.	5
2.4	The commons revisited: The example of “comuneiros” building resilience in urban food systems.....	6
2.5	Creating spatial synergies around food in cities.....	7
2.6	Business strategies in urban and peri-urban agriculture	7
2.7	The challenges of governing urban food production across four European city regions: describing the limits of multi-level governance.....	8
2.8	Initiating transformation in urban agriculture projects through alignments of interest	9
2.9	Evaluation of SME-researcher interaction	10
3	Recommendations	11
3.1	Characteristics of the respondents	11
3.2	Results of the online consultation	12
3.3	Conclusion	15

1 Overall outline of the project synthesis

In the project there are different lines of synthesis, and different levels at which the synthesis happens. Figure 1 aims at illustrating this:

- We have two levels at which synthesis happens (red): themes; city region
- The synthesis is oriented towards two different audiences: scientific (blue); practice & policy (green)
- The synthesis process will finally lead to two major outputs of the project: the Sitopolis special issue; and the 2nd international seminar, at which results will be presented to a wide audience of policy makers
- There are four major lines of synthesis, indicated with a large S in the figure. These are described below.

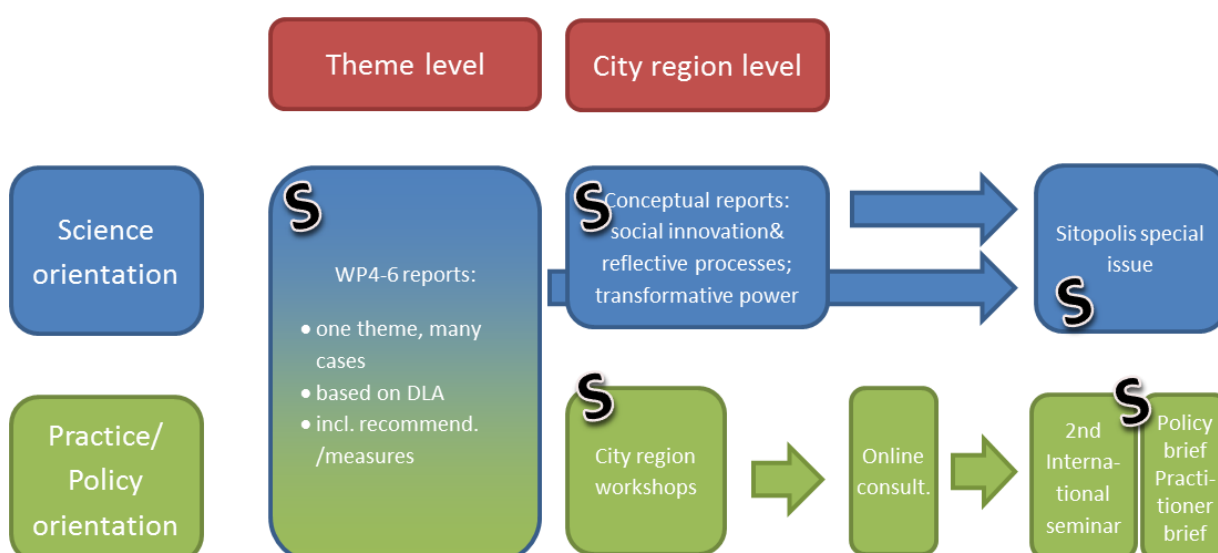


Figure 1: The processes of synthesis in SUPURBFOOD

Please note that this figure does not list all dissemination activities, but should illustrate how certain synthesis processes interlink with dissemination.

This report presents the overall results of the project. The first part (Chapter 2) contains the abstracts of the papers which were written for the special issue in the journal Sitopolis. They will be published by the end of 2015. The second part presents the recommendations of SUPURBFOOD, which were derived from the second city region reports, the conceptual reports and the WP4-6 reports. A draft version of these recommendations have been presented in the 2nd draft synthesis report (June 2015). These were presented in an European wide online survey among experts in urban food systems; from the feedback gained, we developed the final version of policy recommendations. Those recommendations also fed into the policy and practitioner briefs, which have been produced as part of WP8, and will be distributed widely to the relevant audience.

2 Abstracts of Sitopolis special issue papers

A special issue of the scientific journal Sitopolis will collate the major findings of SUPURBFOOD; this format will allow for spreading the results widely to the interested audience. The following abstracts represent the state of the articles before peer review, and therefore some (minor) changes can be expected in the final version that will be published by the end of 2015.

2.1 The city regionalisation of food systems: Conflict & co-operation across three food cities.

Authors: Matt Reed, Marielle Dubbeling, Han Wiskerke, James Kirwan, & Ingrid Jahrl

The City Region has become central to decision makers' deliberations as it offers a pool of innovation, direct answers to questions of sustainability and a responsive system of government. Through three case studies of city regions; Zurich, Quito and Bristol we observe a series of interlocked processes that are influencing the city regionalisation of food systems. Our case studies suggest that the 'normal' processes of poverty, social exclusion and attempts to address the failings of the contemporary food system have led to a range of civic and council leaders as well as business actors adopting new food practices. Each of our case studies illustrates the importance of local factors, such as systems of national and international government, as well as the capacity and resources available to local actors. Some challenges are common, such as access to land, food policy being separated from public health campaigns and lack of policy support. As recent global level interventions such as UN Habitat, as well as global food policy both public and private begins to focus on urban food this paper looks to the limits of the city region. It suggests that city region food system needs to link to the rural in new ways in order to match the social innovations of the cities with the productive capacities of rural areas.

2.2 Connecting flows. Closing of Nutrient, Water and Urban Waste Cycles in Urban and Peri-urban Agriculture

Authors: Otto Schmid, Maria Dolores Dominguez Garcia, Jan Willem van der Schans, Lan Ge

For centuries, the focus of waste management has been reducing or removing waste. The recognition that waste is a misplaced resource has changed the perspective of waste management towards sustainable resource management. This paper applies three sustainability perspectives, which are relevant to closing the nutrient, water and urban waste

cycles: urban metabolism, circular economy and the 'blue economy'. These perspectives embody different but cross-cutting technological and social-economic principles with increasing emphasis on creating value from resources that are currently viewed as waste streams. They all include a focus on power, including: Who has ownership of waste? Who will determine the waste management in a city, big or small companies or both in a complimentary way? Who is setting the criteria to decide the type and scale of operations and the operators? How is the sustainability of the approach ensured and what instruments (e.g. a waste management hierarchy) can be used for decision-making? As waste has more and more become a business opportunity, as we have seen in our case studies and business models in Rotterdam, Vigo and Zurich, more attention is needed to the control over the waste streams, which determines who gets licences and contracts for municipalities to make a business. We conclude that the three sustainability perspectives outlined above fit differently to the different context of the city-regions. Societal transformation is needed to close the urban waste, nutrient, and water cycles. The analysis shows that alternative networks can be complementary or in competition with the conventional system. Large-scale centralised systems will likely co-exist with small-scale decentralised systems. The competition between different systems will always be present, and such competition stimulates innovation.

2.3 Sustainability profiles in short food chain delivery. Evidences from three SMEs experiences.

Authors: Stefano Grando, Joy Carey, Els Hegger, Livia Ortolan, Ingrid Jahrl

The paper explores the aims, characters and activities of SME involved in short food supply chains (SFSC). From an SME point of view, the aim is to analyze the dimensions of SFSC's sustainability with specific focus on the distribution systems, the logistic arrangements, and the relations along the food supply chain. The analysis is conducted on three SME case-studies: two retailers from the Netherlands and Switzerland and an Italian multifunctional farm. The SME have been engaged in the monitoring of their development trajectories through the elaboration of (self-assessment) tools that have highlighted sustainability profiles of SME also in relation to their suppliers and partners. SME's logistic solutions and relational patterns have been analysed in relation to what aspects SME themselves consider strategic for their business. The research reveals that the SME, despite their different positioning along the food supply chain, do share an interest for maintaining a fair relationship with other actors of the food supply chain; pursuing a relationship with the territory they operate in is just one among other priorities. Economic efficiency plays a fundamental role for the business survival, given the competition they have to face with mainstream supply chains, yet it emerges less as a goal in itself than as a pre-condition for the SME to pursue their

social objectives. The diversification of sourcing and market channels, the efficiency of the distribution system and the effective communication of SFSC's specific values emerge as key factors for SME willing to stay autonomous from large agro-food players and industrial food chains. From the point of view of the SME, trust, transparency, and control on the chain, more than geographical distance or the number of steps "from farm to fork", are the elements that distinguish the SFSC against the industrial ones. These reflections are discussed in the light of the literature on short food chains and alternative agro-food networks.

2.4 The commons revisited: The example of "comuneiros" building resilience in urban food systems

Authors: Maria D. Dominguez Garcia, Paul Swagemakers, Otto Schmid

In the context of continuing processes of urbanization, city regions face development, governance and sustainability challenges. One of these challenges relates to how to organize urban food systems effectively, resource use in particular. Resources include urban green space in use for municipal parks, forests, animal husbandry and vegetable gardens. The case study research draws on the recognition that individuals play a key role in bringing about transformations for sustainability, and reveals how transformative strategies contribute to the reconnection of agroforestry production and food consumption. The analysis pays specific attention to the role of "comuneiros": citizens who together own and manage nearby located green space, in which they recover native forests and reintroduce small animal husbandry. The provision of products and services that stem from common-pool resource management are analyzed in terms of ecosystem services. Therewith the case study exhibits how the resilience of a socio-ecological system is built and results in improved soil fertility and biomass production, which can be transformed into energy and/or high quality compost, and new types of food production. A reintegration of agroforestry activities and horticulture production reflects a sustainability shift in which human and environmental interactions fundamentally alter, and which benefits urban and rural dwellers.

2.5 Creating spatial synergies around food in cities

Authors: Evy Mettepenningen, Marlinde Koopmans, Ilona Kunda, Daniel Keech, Talis Tisenkopfs

This paper focusses on the phenomenon of multifunctional urban food initiatives (MUFIs) and how, using food as a vehicle, they provide integrative solutions for a number of social, environmental and economic problems in contemporary cities in developed countries. Through an in-depth investigation of three MUFIs in the UK, Latvia and Belgium, the paper aims to increase understanding on how different activities are combined within MUFIs, leading to the creation and strengthening of synergies: first between the different activities performed within MUFIs, and second the spatial synergies between the MUFI and the (peri-)urban environment in which it operates. The three cases illustrate that the dense and complex urban environment in which they are situated provides a lot of possibilities to create a wide, diverse and dynamic network around food, leading to a high potential for synergies to occur. In this way, MUFIs can respond to specific urban needs, which are not addressed by the government, and therefore have an important signaling function. For the MUFIs themselves, although being multifunctional increases opportunities, for example to attract financial means, it is also a challenge to find the right balance between the different functions and not to lose sight of the economic side of the business. Local governments can support MUFIs and the synergies they create by providing space for them, room to experiment, changing regulations to get MUFIs out of the 'grey zones' of legislation and by starting to strategically think about food in their city region.

2.6 Business strategies in urban and peri-urban agriculture

Authors: Henk Renting, Han Wiskerke, Shuang Li and Femke Hoekstra

This article focuses on business strategies applied in urban and peri-urban agriculture (UPA) in the context of city region food systems. It analyses the specific nature and diversity of business strategies in UPA, and demonstrates that the entrepreneurial models that can be found here are different from business strategies in "rural" agriculture due to the particular features of urban and peri-urban contexts incl. little space availability, proximity of citizens/consumers, and the need to develop specific network relations with private, public and civic actors for the successful implementation of business strategies. The paper reviews and compares typologies for business models and strategies in urban and peri-urban agriculture that recently have been developed in parallel in different research settings, such as the COST Action Urban Agriculture in Europe, a Master thesis research project at Wageningen University, and the EU Erasmus+ project Urban Green Train on training for

entrepreneurship in urban agriculture. The paper highlights a number of striking and exemplary cases for different business strategies that can be distinguished in urban and peri-urban agriculture drawing upon the SUPURBFOOD project. The analysis will look into promising approaches to address key aspects of business strategies such as underlying values and value propositions, economic rationales, organizational models and relevant (formal and informal) social networks relations. The paper also traces back and compares current debates in urban and peri-urban agriculture with previous debates on farm business strategies in agriculture more generally. The main conclusion of the paper is that a specific approach to business strategies in urban and peri-urban agriculture is required, and that common approaches in “rural” agriculture and business economics (such as a business model canvas, new business model approaches) are not always directly applicable and need to be attuned for an adequate application in the framework of urban and peri-urban agriculture. Additionally, the specific nature of business strategies in UPA has implications for effective support measures for entrepreneurship both in terms of training, funding and policy support, in which especially the establishment of appropriate linkages with relevant public and civic societal actors is a key point of attention.

2.7 The challenges of governing urban food production across four European city regions: describing the limits of multi-level governance.

Authors: Matthew Reed, Evy Mettepenningen, Marlinde Koopmans, Paul Swagemakers, Lola Dominguez Garcia, Ingrid Jahrl and Otto Schmid

The development of food production in cities has raised a number of important questions about the governance of these activities and the role of city regions. In this paper through four European case studies - Bristol, Ghent, Vigo and Zurich we consider the ways in which food and the city are governed. Each case study provides contrasting experiences that focus on a set of common problems in a European context. These are: access to land; the limits of local government control over the food system; getting urban agriculture recognized in land use policy; and recognition by political parties. By using contrasting case studies, including one outside of the EU, the importance of local actions and systems is outlined, as well as the common challenges. Multi-level governance was a theory developed to account for the emergence of the beginnings of a European state, and its key authors have recently re-focused on the importance of identity in this process. Our case studies demonstrate the role played by citizens in urban food and the challenges this brings to city region governance. Through horizontal networking, being inspirational to other cities and citizens, communicating their demands and successes very clearly urban food activists have raised significant

questions about how cities are actually governed. Using the creation of localized identities, which are inclusive and embracing but rooted in their city these food activists are looking to a future controlled by a democratic impulse rather than the technocracy of professional city managers.

2.8 Initiating transformation in urban agriculture projects through alignments of interest

Authors: Damian Maye, Han Wiskerke, James Kirwan, Ingrid Jahrl, Heidrun Moschitz, Paul Swagemakers

Short food chain activities are traditionally examined in rural development contexts. In this paper the short chain metaphor is extended to consider also means to close waste and nutrient cycles in urban contexts as proactive strategies to respond to and to ameliorate food system vulnerability. A firm-level analysis of practices is applied to understand the sustainable innovation journeys of three urban agriculture firms/projects: an urban agriculture project in Rotterdam in The Netherlands, with an emphasis on closing nutrient cycles; a short food chain project in Zurich, Switzerland; and a community forest project in Vigo, Spain. The sustainable innovation journey approach, which in this paper combines an emphasis on practices with transformation, examines in particular how social practices initiate change and transformation through alignments of interest. Each of the three cases was studied in-depth over a two-year period, which involved interviews and detailed case-level fieldwork with leaders of the firm/project and related stakeholders, participant observation and secondary data analysis. The paper highlights the importance and value of understanding practices, institutions and the environments in which something takes place in order to assess the capacity for sustainability transformation. This social practice perspective runs counter to techno-scientific responses to urban food system challenges which involve vertical farming, urban architecture and smart technology to urbanise food production. The paper recognises the importance and role of technology but also recognises its integration with social practices to enable change within the urban foodscape.

2.9 Evaluation of SME-researcher interaction

Authors: Heidrun Moschitz, Han Wiskerke

Complex problems of sustainable development require interaction between a variety of stakeholders (e.g. researchers, businesses, policymakers, civil society organisations) to find meaningful and workable solutions. This line of thinking is also central to the multi-actor approach in many Horizon 2020 research projects. In this paper, we evaluate the experience of collaboration between small and medium enterprises (SMEs) and researchers in SUPURBFOOD. In this project, researchers and practice partners collaborated with the goal of identifying and analyzing best and novel practices in urban and peri-urban food provisioning. To manage the processes of knowledge exchange and joint learning, methods were applied that built on the experience of two prior EU research projects, in which several of the partners had collaborated: SOLINSA (www.solinsa.net) and FOODLINKS (www.foodlinkscommunity.net). To learn from this experience, we have evaluated the learning processes and in particular the interaction between researchers and partners from SME. We conclude that co-creating knowledge between SME and research remains a challenge, and requires facilitating thoughtful and purposeful processes between the involved actors. This starts even before the project with the selection of partners (both SME and researchers) that are willing and able to engage in such co-creation processes, and involves a clear definition of roles once the project has started. There is a tension between providing space for continued reflection about the process and keeping a focused overview of the bigger purpose of the project. Well managed, the joint learning experience can lead to results that are relevant to both the scientific and the practice audience.

3 Recommendations

On the basis of the second city region reports, the conceptual reports and the WP4-6 reports, draft recommendations were developed. They have been presented at the 2nd international dissemination seminar, which took place in Bonn on June 10 2015. About 70 participants from all over the world participated in this seminar, mainly coming from city administrations.

The recommendations were tested through an online consultation of experts from administration, civil society and small and medium enterprises, and fed into the policy briefs (WP8). In the online consultation, the experts were asked to rate each recommendation against the question “Do you think the recommendation addresses the related problem effectively?”. Response options ranged from 1 (not at all) to 5 (totally).

3.1 Characteristics of the respondents

The following tables provide a short overview of the type of organizations, their working level, and the country in which they are working.

Type of organization	Number	Share
Policy & Administration	71	27%
Market / enterprise	39	15%
Civil society organisation	71	27%
Research institute	50	19%
I am an independent expert	30	11%
Total	261	100%

Working level	Number	Share
City-region	103	40%
Local / Regional	92	35%
National	49	19%
EU	16	6%
Total	260	100%

Country of Origin	Number	Share
Netherlands	1	0%
Switzerland	61	23%
Spain	52	20%
Latvia	18	7%
Italy	25	10%
United Kingdom	31	12%
Belgium	36	14%
Other:	38	15%
Total	262	100%

3.2 Results of the online consultation

The following shows the recommendations and discusses them in the light of the results of the online consultation. In general, all recommendations achieved a score of more than 3 on the 5 point scale. In fact, only two recommendations were evaluated with a score less than 4. In the following, the recommendation with the highest score in each group (A, B, C) is indicated in bold.

A. Closing the cycles of nutrient, water, and urban waste

1. National governments should collaborate with the private sector and consumer organizations to reform policies and regulations related to quality grading standards of food to minimize food waste.
2. National governments should collaborate with the private sector and consumer organizations to develop policies and regulations related to expiration dates of food to minimize food waste.
3. **City-regional and local governments should support grassroots, community, Small and Medium Enterprises (SME) and other initiatives dealing with sustainable waste management and food waste reduction through targeted events, awareness raising campaigns, funding support and promoting examples of good practice.**
4. Policy makers should co-finance innovative technologies in sorting and processing of biogenic waste (such as biogas units or improved composting facilities) to enhance compost quality and biogenic waste recycling.

5. Local governments, private sector companies (including housing management and corporations) and civil society organizations (CSOs) should allocate space for biogenic waste storage and recycling (such as small composting sites) in current and new housing units and projects.

All these recommendations were evaluated as effectively addressing the problem of closing nutrient cycles (an average rating above 4), while recommendation nr. 3 reached the highest level of agreement.

B. Short food supply chains (SFSC)

1. EU, national and local policies should support independent, local specialist food retailers to sustain short food by providing/arranging (*shown in order of mean preference from the respondents of the online consultation*)
 - (i) incubation support;
 - (ii) connection with peers to support learning/co-operation;
 - (iii) initiation space and access to basic processing facilities – presses, cutting rooms, kitchens, etc., which could be fixed or mobile;
 - (iv) specialist advice relating to business and finance models;
 - (v) provision of loans, so that the money comes with advice and a stakeholder mentality by provider.
 - (vi) access to marketing advice and brand development guidance;
2. Local governments should support the development of innovative short food chains by (*shown in order of mean preference from the respondents of the online consultation*)
 - (i) integrating locally produced food into public procurement contracts, for example through ‘meet the buyer’ events;
 - (ii) supporting direct selling logistics for farmer groups;
 - (iii) providing space for marketing;
 - (iv) training and technical assistance;
 - (v) legal support;
 - (vi) financial support (especially at the developmental stage);
 - (vii) other:

In addition to these rankings, the respondents were asked to evaluate the following recommendations:

3. **National and local governments should support farm-to-school programs and promote local public food procurement through public kitchens (schools, council offices, prisons, old peoples’ homes and those contracted to the local government) so that they serve local, healthy and seasonal food.**
4. Local governments should support, improve and expand local food markets and food hubs, both physical (facilities, spaces, basic infrastructure) and on-line.

5. Local governments should have delegated responsibility for food provision planning in a similar and allied way to their responsibilities for spatial planning.

Recommendation nr. 3 was rated highest, whereas recommendation nr. 5 achieved a score of less than 4. Some comments suggest that it was difficult to understand what was specifically meant by this recommendation.

C. Developing multifunctional urban and peri-urban agriculture and land use

1. Local governments should support SMEs and CSOs in developing innovations and experimenting with new practices which deliver multifunctionality through food production by *(shown in order of mean preference from the respondents of the online consultation)*.
 - (i) providing resources (e.g. land);
 - (ii) enabling temporary use of land;
 - (iii) organising training and technical assistance;
 - (iv) provision for supply of public kitchens;
 - (v) organisation of networking events for food producers;
 - (vi) providing legal support;
 - (vii) providing or facilitating financial support such as loans and pump-priming grants
 - (viii) encouraging machine sharing;
2. **Local governments should protect and enable access to, and tenure of, land for food production in urban and peri-urban areas, e.g. by limiting building projects on agricultural urban and peri-urban land and renting public areas to farmers, including cooperatives.**
3. National and local governments should develop regulations to make (commercial or non-commercial) food growing areas mandatory in new or renovated housing settlements and building projects, e.g. rooftop farming, community gardens, allotment gardens.
4. Local governments together with gardeners should develop new ways of managing urban and allotment gardens, aiming at wider societal functions in those gardens (e.g. community building, social inclusion, education, nature conservation?)
5. CSOs should enhance and facilitate cooperation between all types of urban food producers and gardeners at city-regional level in order to strengthen their collective influence on local legislation through a dialogue with policy makers and other involved stakeholders (incl. SMEs).

6. Local governments should set up an integrated food department to ensure greater coherence and alignment, increase efficiency of the policies and programs that have an impact on the food system (such as agricultural land use, green space management, food transport and marketing, waste management, environmental health and food standards etc.).
7. Municipal governments should work together to strengthen capacities, align urban food policies and influence relevant regulations (i.e. land use policies, biogenic waste recycling and short food chains) at national and European level.

Out of these recommendations on multifunctional land use, recommendation nr. 2 was evaluated best, while recommendation nr. 3 was the only one to achieve a score less than 4.

3.3 Conclusion

In sum, we can say that generally all recommendations suggested by the project were seen as helping the topic of sustainable urban food provisioning. Only slight differences could be observed between respondents of different countries, between different group types or between levels of work. Market actors seemed a bit more hesitant towards recommendations targeted at policy making, but it is difficult to understand the concrete reasons for this estimation on the basis of the survey undertaken.

None of the respondents was completely against any kind of support of sustainable urban food provisioning; there is a general agreement that city regions should play a role in making their food system more sustainable. These recommendations therefore were a sound basis for the practitioner and policy briefs that were developed in WP8, and will be distributed widely among the interested audience.