Governance for urban food systems – Recommendations from SUPURBFOOD project

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Abstract
Within the EU framework 7 project SUPURBFOOD different urban and peri-urban initiatives were analysed, which are involved in recycling of nutrients, water and (food) waste, short chain delivery of food and multifunctional land use. Backed up by a survey among 262 private and public experts, recommendations are given how the governance of urban food systems could be improved. The survey and the best practice examples showed the important role of innovative and flexible organisational and administrative structures of local city governments in order to facilitate and support more sustainable and efficient food systems in cities. To reduce food waste and optimise recycling much can be done at city level with education and awareness rising measures as well collaborating with innovative private initiatives. To shorten food supply chains high priority was given to support farm-to-school programs and promote local and sustainable public food procurement, e.g. with financial public support for start-up companies, learning/cooperation networks and specialist advice. To ensure a sustainable and multifunctional land use priority should be given to support of innovative SMEs and organisations by enabling access to land for food production and developing new ways of managing urban and allotment gardens, aiming at wider societal functions in those gardens. There is a need for more adapted and regulatory framework.

1. Introduction

Within the EU framework 7 project SUPURBFOOD (Towards sustainable modes of urban and peri-urban food provisioning) different initiatives in seven case study city regions in Europe (Bristol, Gent, Riga, Rome, Rotterdam, Vigo, Zurich) and 26 case-studies in the South in Africa, Asia and Latin America (Renting 2015) were analysed, which are involved in recycling of nutrients, water and (food) waste, short chain delivery of food and multifunctional land use. SUPURBFOOD run from 2012-2015 and was a project in which SMEs were actively involved in the design and implementation of the project. This means that recommendations and a number of best practices originate from these SMEs, which were of different kind (e.g. Community Farm, Initiatives for local food and urban gardening, Machine ring with engagement in recycling, specialised wholesalers for organic and local products, etc.) Backed up by a survey among 262 private and public experts, recommendations are given how the governance of urban food systems could be improved.

2. Methodological approach

The paper focuses on the governance aspects and the role of innovative organisations and administrations on city level, which deal with three different aspects: a) urban food provisioning, b) recycling and waste, and c) multi-functional land use. Expert interviews and workshops were organised in seven cities across Europe dealing with these aspects, which are summarised in city reports and in three thematic synthesis reports (see www.supburbfood.eu). Many good practice

examples were described. Based on these reports an on-line survey was conducted among public and private experts from June-August 2015 in the participating European countries. Altogether 262 persons participated in the survey, including Switzerland (61), Spain (52), Latvia (18), Italy (25), United Kingdom (31), Belgium (36) and other countries (39). The total response rate was around 37 % with differences between countries (e.g. higher in Switzerland 48 % response rate). Most of the respondents indicated a geographical focus of their work in city regions (40%) or regional level (35%). Others worked more at the national level (19%) and European Union level (16%). There was a good representation of public administrations (27%), market actors (27%) and Civil Society organisations (27%), researchers (15%) as well as independent experts (11%). In the survey, 13 closed questions were addressed in the above-mentioned three areas, of which, for the purpose of this paper, we have selected the responses to those dealing particularly with governance aspects. Other questions, not explored here, were on more on the personal involvement of the interviewed persons in urban agriculture and food issues. The recommendations were presented to the respondents who rated them according to the question: "*Do you think the recommendation addresses the related problem effectively? Please rate from 1 (not at all important) to 5 (very important).* Also qualitative comments were collected. The results below show, that not all the questions were always answered; therefore the response numbers are lower than the total number of questionnaires received.

3. Results

3.1 Closing the cycles of nutrient, water and urban food waste

The survey addressed five questions to nutrients, water and food waste. The results of the survey related to this theme are summarized in Table 1.

Tab. 1 Importance ranking of five questions related to closing the cycles of nutrient, water and urban food waste (mean, variance, standard deviation and number of responses is shown)

On-line survey questions (June-August 2015)	Mean	Variance	Standard deviation	Number of responses
1. 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.	4.51	0.68	0.83	196
2. Local governments, private sector companies (including housing management & 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.	4.19	1.07	1.07	192
3. 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	4.11	0.98	0.99	194
4. 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.	4.05	1.22	1.11	197
5. 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.	4.03	1.15	1.07	195

Scale: 5 very important 4 important 3 medium important 2 little important 1 not at all important

From the survey we can conclude that most experts think in order to reduce food waste and optimize recycling the most important and effective measures for city-region and local governments

would be through targeted events, education and awareness raising campaigns, funding support and promoting examples of good practice.

We also identified and described several good practice examples (Dubelling et al, 2015a, b) which deal in a creative ways with food waste:

- In Ghent (Belgium), the city hosts a 'soup kitchen' *Soupcafé* in one or their buildings, where people cook and eat together food that would otherwise be wasted and voluntarily pay a donation for their meal.
- *Rotterzwam* is a business growing mushrooms on coffee waste in an abandoned indoor tropical waterpark close to the centre of Rotterdam (The Netherlands). The coffee grounds (which would otherwise be incinerated) are collected from local cafes by cargo bike
- *FareShare* in Bristol (United Kingdom) delivers food leftovers to over 70 organisations. The food they supply contributes to thousands of meals weekly for vulnerable people. FareShare only has a few employees. Many of their volunteers are, or have been, vulnerable for whom training opportunities and support is provided.

3.2 Short food supply chains (SFSC) and urban food provisioning

Regarding short food supply chains and food provisioning three main questions were asked. The results of the survey related to this theme are summarized in Table 2.

Tab. 2 Importance ranking of three questions related to closing the cycles of nutrient, water and urban food waste (mean, variance, standard deviation and number of responses is shown)

On-line survey questions (June-August 2015)	Mean	Variance	Standard deviation	Total responses n= 262
1. 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.	4.59	0.69	0.83	188
2. Local governments should support, improve and expand local food markets and food hubs, both physical (facilities, spaces, basic infrastructure) and on-line.	4.25	0.9	0.95	173
3. Local governments should have delegated responsibility for food provision planning in a similar and allied way to their responsibilities for spatial planning	3.84	1.32	1.15	174

Scale: 5 very important 4 important 3 medium important 2 little important 1 not at all important

As Table 2 shows, the participants rank effective measure for national and local governments to support farm-to-school programs and promote local public food procurement through public kitchens highest. There were no significant differences between the countries. Experts from city regions were more supportive of this measure than those from national or EU level. Respondents from civil society organisations were most supportive of this measure compared with those from the policy, market or research area or independent experts.

In addition, some additional questions were dealing with the kind of support. The answers show that the involved experts think that local governments should support the development of innovative short food chains mainly financially (especially at the developmental stage) as well as in legal issues. Independent, local specialist food retailers could be supported by: 1. Incubation support for start-up companies; 2. Connection with peers to support learning/co-operation between similar

companies; 3. Initiation of space and access to basic processing facilities; 4. Specialist advice relating to business and finance models.

We also identified and described several good practice examples (Dubelling et al. 2015a, b), which strengthen short food supply chain and local/regional food provisioning:

- The city of Bristol promotes with a *"Good Food Plan for Bristol"* and a "*Food Policy Council*" the development and strengthening of regional supply infrastructure local wholesale markets, food processors, local abattoirs, dairies and farms.

- *RoomeR* in Ghent (Belgium) produces an alcoholic beverage using elderflowers gathered from trees located in public and private areas in and around the city, reducing costs for land and tree production.

- The city of Zurich organised, thanks to a strong support of a private foundation (Mercator), during a whole month in September 2015 an information campaign *("Zürich Isst")* on nutrition, environment and food pleasure (with around 200 events offered by 100 organisations/institutions).

3.3 Developing multifunctional urban and peri-urban agriculture and land use

The results of the survey related to urban agriculture and land use are summarised in Table 3.3. The table shows that the most highly rated and effective measure for local city governments would be to support innovative SMEs and organizations, which deliver multifunctionality through food production, e.g. by protecting and enabling access to land for food production in urban and peri-urban areas.

Interesting best practice examples described (in Dubelling et al. 2015a,b) are:

- In 2013, Rotterdam changed the zoning designation of a large piece of peri-urban land to a multifunctional area for education, food production, biodiversity and leisure, managed by an initiative. *Uit je Eigen Stad* (From Your Own Town).

- The Rome (Italy) and Zurich administrations promote farms in their cities with a special website, allowing citizens to buy directly from city farmers.

- Zürich promotes high biodiversity on 10% of its urban area. The city actively buys land to protect these spaces from construction and provides incentives for better biodiversity preservation and organic farming. The department in charge supports the farms also with investment funds for i.e. stable constructions or farm shops, as well as with technical advice.

Tab. 3 Importance ranking of six questions related to multifunctional urban and peri-urban agriculture and land use (mean, variance, standard deviation and number of responses is shown)

On-line survey questions (June-August 2015)	Mean	Variance	Standard deviation	Total responses n= 262
1. 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.	4.36	0.98	0.99	174
2. 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.	4.19	1.06	1.03	173
3. 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).	4.16	0.81	0.90	173
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?)	4.14	0.95	0.97	173
5. 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.).	4.01	1.38	1.17	173
6. 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.	3.75	1.84	1.36	174

Scale: 5 very important 4 important 3 medium important 2 little important 1 not at all important

4. Discussion

The authors are aware that the survey returns what experts think is most important – it does not say what is best or most efficient as experts can be collectively wrong. However the findings are supported by the city-level studies and workshops made in the seven cities involved in Europe.

In addition you used closed questions which means the survey may have missed the most important questions (not likely but still possible) have you asked also some open questions to find out what was missing in the closed questions from your audience?

The survey and the studies on city level have shown that innovative and flexible governance and administrative structures are very important to facilitate and support more sustainable and effective food systems on city level (Morgan and Sonnino, 2010). Food can be used as a medium to link different urban policy objectives to achieve wider societal goals such as community building, social inclusion, education, nature conservation, improved health outcomes and enhanced quality of life.

However, in many cities this is only partially achieved. The analysis has shown, that different sectoral policies that affect food provisioning nowadays tend to be counterproductive and that is

why more innovative and flexible urban food governance arrangements are needed. However the different perspectives of the actor groups and the kind of policy level and socio-cultural context in different countries and regions has to be taken into account. For example experts from the Mediterranean countries and Latvia, ranked the role of national governments lower than the experts of the other countries in Middle Europe.

Different challenges and barriers have to be overcome, as the city region reports in SUPURBFOOD Project (2015) revealed. For example in the city of Zürich, there are several challenges and barriers the city policies have to deal with (Schmid and Jahrl, 2014).

- There is still a low awareness and willingness for personal action although food waste are more often in the media. Challenges are for example the high collection costs.
- For local and regional provisioning of sustainable food several challenges and hindering factors exist: low pressure on policy makers, missing overall city strategy for sustainable food beyond departments, partly low professionalism of initiatives, high logistic costs for small local companies, existing public procurement and call for tender system with little flexibility, etc.
- There is an insecurity of long-term land-use because of conflicting goals of different users. The farmers are between a productivity orientation and a nature conservation orientation. And there is a competition between urban gardening groups and traditional allotments gardens for land.
- Until now there is insufficient awareness of the population for agricultural land (littering).

Therefore, it is important that on city level clear strategies for sustainable food provisioning, urban and peri-urban sustainable agriculture and food waste reduction & recycling are developed and are coordinated well. This is also emphasised in the Milan Urban Food Policy Pact 2015, which can be considered as a signal for municipal/regional governments to take up take up the challenge of developing innovative and flexible governance and administrative structures to govern sustainable food systems. Although in October 2015 over 100 cities has signed the contract (and later others joined) and expressed a commitment for actions, it remains unclear if there will be a follow up of this initiative or if it remains just a declaration.

5. Conclusions

In general, the recommendations for improved governance of urban food systems can be divided into five strategic fields of action.

First, **supporting market development for sustainable and short food supply chains**. Here, a recommendation is to support independent, local specialist food retailers in order to sustain short food chains. Furthermore, local food markets and food hubs, both physical and on-line, should be improved and expanded; and farm-to-school programs and local public food procurement should be initiated and promoted so that they serve local, healthy, organic and seasonal food.

Second, **providing space for civic and business initiatives**. In particular, it was seen relevant to protect and enable access to and tenure of land for food production in urban and peri-urban areas and to allocate space for biogenic waste storage and recycling in current and new housing units. A much stronger collaboration between city administrations dealing with agriculture and those with space planning with urban agriculture and gardening initiatives is needed to find land for cultivation and deal with conflicting demands for land (as for example in Zurich, see also Bengtson et al. 2004).

Third, **enabling both technical and social innovation from civil society and businesses**. The experts saw the need to support initiatives and be courageous enough to allow for experimentation with new ideas of grassroots, small and medium enterprises (new forms of organisations and public-private partnerships). In addition, city regions could co-finance innovative technologies e.g. for reducing, re-use and recycle (food) waste.

Fourth, **adapting policies and regulations**. Within the regulatory field, the main recommendations were to review the quality grading standards, as well as the expiration dates of food to minimize food losses. Furthermore, it was recommended to make food-growing areas in new or renovated housing settlements and building projects mandatory. This would also mean to reflect how to take this up in land planning laws and policies on city-region, national and even EU level.

Fifth, **improve coordination and planning to make use of synergies and knowledge exchange** within and between administration, civil society and business. These actions include at the administration level, to set up an integrated food-planning department with sufficient financial resources to ensure greater coherence and efficiency policies affecting food (e.g. like London Food Board); and to link up with other cities to strengthen capacities, align food policies and influence relevant regulations (national, EU). Moreover, efforts are needed from both administration and civil society to enable a dialogue between both. Therefore, civil society organisations should join forces and campaign together for the right to better food for everyone in urban areas.

These five strategic fields show that improving governance of urban food systems entails a comprehensive view on this system. It requires a high level of openness towards new actors and actions (initiatives as well as business models), and needs to consider and encourage divers approaches: business driven, civil society driven, and make use of the room of manoeuvre of administration. New governance models also need to acknowledge the widely spread expertise on shaping urban food systems that exists in society, business and administration. The challenge and skill is to bring these different forms of expertise together and deepen a fruitful critical exchange. The analysis of the role and business models of the SMEs in the different city regions and the several city workshops with stakeholders showed the important role of private and business-oriented actors, supported by civil society organisations, in taking a leading role in developing more sustainable urban food systems. If these actors collaborate well together they are also able to influence city administrations and policies in a more long term perspective.

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