

RECASENS, Xavier and SJÖBLOM, Jenny

COST Action Urban Agriculture Europe: Urban Agriculture in Sofia UA stakeholders and the linkages between them Short Term Scientific Mission Report



Urban Agriculture in Sofia – UA stakeholders and the linkages between them

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Authors:

RECASENS, Xavier
Universitat Politècnica de Catalunya – Barcelonatech University
Department of Agri-Food Engineering and Biotechnology
SJÖBLOM, Jenny
Swedish University of Agricultural Sciences
Department of Landscape Architecture, Planning and Management

Supervisor:

PICKARD, Dona, Ph.D.
Bulgarian Academy of Sciences
Institute for the Study of Societies and Knowledge

COST Action Urban Agriculture Europe is chaired by:

Prof. Dr. -Ing.Frank Lohrberg
Chair of Landscape Architecture
Faculty of Architecture
RWTH Aachen University
e-mail: science.cost@la.rwth-aachen.de

Professor Lionella Scazzosi
PaRID Ricerca e documentazione internazionale per il paesaggio Politecnico di Milano
e-mail: parid@polimi.it

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Foreword

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Introduction

Bulgaria context

Bulgaria is located in the southeast of Europe, in the Balkan Peninsula. According to Eurostat, Bulgaria has 7,245,677 inhabitants (2014) and a surface of 110,900 km².

Bulgaria is divided in 28 regions (oblasti) and 262 municipalities. Only 11 cities have more than 100.000 inhabitants (Burgas, Dobrich Town, Pazardzhik, Pernk, Pleven, Plovdiv, Ruse, Shumen, Sliven, Sofia and Varna).The area with agricultural purposes is 54,812 km², which represents around of the 50 % of Bulgaria. The main uses are detailed in the next table:

Crops	Surface (ha)
Arable land	3,294,685
Perennial crops	159,079
Grasslands and meadows	1,646,993
Uncultivated area	358,239

Table 1. Crops in Bulgaria in 2013, Source: Ministry of Agriculture.

Around the 60 % of the crops are cereals, industrials crops (sunflower, rapeseed, tobacco...), legumes and vegetables; 30 % are grasslands and meadows and only 3% are perennial crops such as orchards, vineyards and family gardens.Bulgaria has 1,149,470 heads of animals in Livestock Standard Units (LSU). The main number of animals is cattle, poultry and pigs.

Animals	Livestock Standard Units (LSU)
Cattle	473,920
Pigs	177,390
Poultry	224,750
Sheep	141,520
Equidae	90,110
Other	41,790

Table 2. Number of animals in Bulgaria in 2013, Source: Ministry of Agriculture.

Sofia context

Sofia is the capital of Bulgaria. Sofia Municipality has a population of 1,309,634 inhabitants. It occupies a surface of 1,348 km². Sofia has a density of 975.88 inhabitants per km². The city is divided in 24 districts (Sredets, Vazrazhdane, Oborishte, Iliden, Serdika, Poduyane, Slatina, Izgrev, Lozenets, Triaditsa, Krasno selo, Krasna Polyana, Nadezda, Iskar, Mladost, Studentski, Lyulin, Vitosha, Ovcha Kupel, Bankya, Pancharevo, Vrabnitsa, Nova Iskar and Kremikovtsi); each district has a local major.Sofia Region is located in a plain, surrounded by the Vitosha, Plana and Lozen mountains and Balkan Mountain Range. The

plain is drained by Iskar River and the numerous streams from the Vitosha mountains and others range.



Figure 1. Sofia Municipality Region

Sofia Region is located in a plain, surrounded by the Vitosha, Plana and Lozen mountains and Balkan Mountain Range. The plain is drained by Iskar River and the numerous streams from the Vitosha mountains. In the 60's during the Socialism time, Sofia grew around the urban core to give home to the workforce that moved to the city (*Staddon, et al., 2000*). During these years were constructed typical blocks of households with open areas surrounded. After the 90's there was another period of urban sprawl, along the main road axes (*Krunić, et al., 2014*). The main land uses of Sofia Municipality are detailed in the next table:

Main land uses	Surface (km ²)
Human settlements	297
Farmland	493
Forest areas	478
Transport infrastructures	33
Water surface	29

Table 3. Main land use in Sofia Municipality, According to the Master Plan of the city of Sofia and Sofia Municipality, 2004.

Farmland and forest areas are the main uses in Sofia's municipality. They represents around the 72 % of Sofia surface. According to the Ministry of Agriculture, the main crops in Sofia municipality are extensive crops, such as cereals, industrial crops and crops for fodder. These extensive crops use the 84 % of the farmland. The area devoted to the production of fresh fruits and vegetables only represent the 1.21% of the utilized agriculture land.

Crops	Surface (ha)
Wheat	4,166
Maize	1,481
Other cereals	1,427
Sunflower	2,862
Other Industrial crops	3,655
Potatoes	53.9
Legumes	40.8
Fresh vegetables	84.7
Other arable land crops	1,395
Vineyards	1.7
Family gardens	56.3
Orchards	37.8
Combined perennial crops and berries	5.9
Nurseries	9.1

Table 4. Surface of crops in Sofia Municipality in 2013, Source: Ministry of Agriculture.

There are 1,422 agricultural holdings in Sofia Metropolitan Region; it represents around 12.58 ha. per holding. Although the average area per farmer is 12.58 ha, if we only consider the production of fresh fruit and vegetables, the average is 0.38 ha per farm holding of fresh vegetables and 0.40 ha per farm holding of fruits. Sofia municipality has 6,905 in number of heads, expressed in Livestock Standard Units (LSU). The main numbers in animals are cattle, as the dairy sector has important role in Bulgaria.

Animals	Livestock Standard Units (LSU)
Cattle	3,814
Pigs	506
Poultry	989
Sheep	809
Other	787

Table 5. Number of animals in Sofia Metropolitan Region in 2013, Source: Ministry of Agriculture.

The number of animal husbandry holdings in Sofia is 478 holdings. The average of livestock standard units is 14.44 heads animals per animal husbandry holding. The number of animal husbandry holdings in Sofia is 478 holdings. The average of livestock standard units is 14.44 heads animals per animal husbandry holding. It represents 14 dairy cows, or 144 sheep/ goats, or 28 sow over 50 kg, or 2,062 broilers – 1,031 laying hens. After 1946, during the Socialism period, the farmlands were collectivized by the State, and large cooperatives were created to produce food for the country and to be exported abroad. Also to improve the production of fresh food, some plots of one decare (1,000 m²) or more, were ceded by the State to population to be grown. The State provided with seed, seedlings and fertilizers and then it bought them the production. After 1989, with the democratic restoration, began a process return the land to original owners before the collectivization and the land were divided between their legitimate inheritors. This process has occasioned a fragmentation land, and many times the economical unfeasibility of the farming, the abandonment or the best cases the rent to others farmers or agricultural holdings.

Climate

Sofia region has a wide range of altitudes, from more than 2,000 m to 550 m, giving a great variety of microclimates. Sofia's climate can be classified as continental.

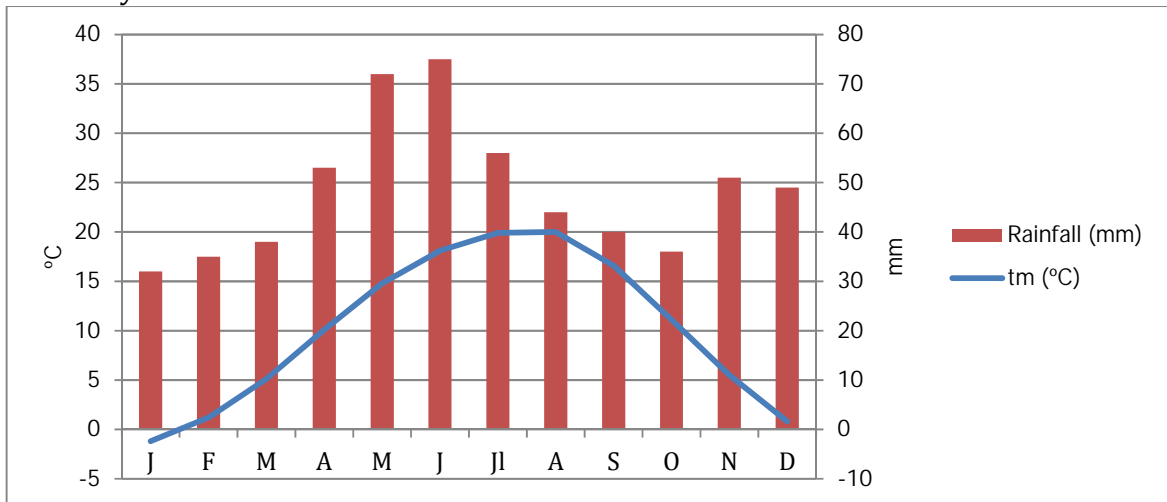


Figure 2. Sofia's climograph

The coldest month is January and the hottest is July/ August. The maximum of precipitation occurs in June and the minimum in January. According to the climograph of Gausson, there are not dry months, because the rainfall is over the average temperatures.



Picture 1. Fields around Sofia Municipality

Frost – free period is, according to Emberger, from May to September. This period is shortly if you compare with other European cities, and limits the crops that can be grown outdoors, especially vegetables and fruit trees such as peaches, nectarines, almonds...According to Valentin Kazandjiev, head of Division of Agrometeorology, the characteristics crops in Sofia Municipality are winter crops, spring crops, and vegetables such as cabbages, carrots and fruits such as cherries, plums, pears and apples.

Sofia's climate is Cfb according to Köppen Climate Classification. It indicates a warm temperature (average temperature in the warmest month is $> 10^{\circ}\text{C}$ and the average temperature in coldest month is between $18^{\circ} > t > -3^{\circ}\text{C}$), with absence of dried period and the average temperature of the warmest month is less than 22°C and in the four warmest months is $> 10^{\circ}\text{C}$.

Soils

The Sofia Region's geology, the localization, in a plain between mountains, and with sediments delivery for different rivers or streams, the climate and the biological activities have contributed to the formation of soils in the area. The main soils, according with FAO definition, are:

- Chromic Luvisols
- Fluvisols
- Vertisols

Usually all these soil typologies have not limitations to cultivate. But the Vertisols in Sofia Municipality are heaviest, with a high percentage of clay, sometimes more than 60%. This high content of clay forces to use powerful tractors to till and sometimes shows problems of drainage.



Picture 2. Soils with drainage problems

There are also some limitations to cultivate, especially in the area of Kremikovtsi where the soils have some kind of contamination. This contamination is related to an important metallurgical industry located in the area. Currently this factory is closed.

The research mission

Although urban agriculture activities have always existed in Sofia (traditionally in private family gardens and recently in sporadic collective and social projects), they have not been subject to local policy measures or any type of institutional regulation or organization. This raises the question of how the different UA actions interact with each other and how they influence the general direction of urban agriculture development in a non-regulated and non-supportive public environment.

Purpose

The aim of this research is to analyze the different UA stakeholders in Sofia and the links between them. In this context we want to describe and systematize the cleavages among the interests, rights and responsibilities of the urban agriculture stakeholders – producers, consumers, communities and public authorities.

Research questions

- Who are the different UA actors in Sofia?
- How do the different UA actions interact with each other?
- What is the official position of the municipality in relation to UA?
- How do the different UA actions influence the general direction of urban agriculture development in a non regulated and non-supportive public environment?
- What is the the possible institutional measures that could enhance UA in Sofia?

Methodology

This is a qualitative study in which we have conducted both in-depth interviews and informal interviews at Farmers Markets and farms. The interviews were combined with two field visits to a few farms and one walking tour in a residential area with private vegetable patches and a squat garden in the neighborhood close to the metro station Joliot Curie. The interviews were conducted with peri-urban agricultural producers (one beekeeper, one dairy farmer, one vegetable farmer and a few farmers at Farmers Market), citizen groups, community organizations and NGOs involved in urban agriculture projects, food cooperatives, two architects with interest in urban agriculture or urban planning, one representative from Sofia Municipality and one local mayor from the district Studentski as well as scientists with expert on soil, climate and history of agriculture in Bulgaria. In appendix 1 a complete list of the interviews is presented.

Results

Who are the different UA stakeholders in Sofia?

Below we have categorized the different types of UA in Sofia in order to shed a light on the share of agriculture activities. We divided the stakeholders according to their role in urban agriculture. During this study we have been able to identify a number of different stakeholders that are involved in urban and peri urban agriculture activities in the Sofia Region. Small-scale farmers, NGOs, guerilla gardeners, food cooperatives, professors, PHD-students, architects as well as representatives from the Sofia Municipality have been interviewed.

Urban agriculture

We have used the structure of urban agriculture (UA) typologies proposed by the workgroup 1, Urban Agriculture definitions and Common Agriculture Policy (CAP).

Family Gardens

There are some areas of Sofia houses with backyard where some citizens grow their vegetables, fruit trees (cherries, pears ...) flowers and raise animals. We visited the Izgrev neighborhood. In this neighborhood there are some streets Akademik Iliya Petrov st., between Rusalia st. and Zhetvarka st. with some semidetached houses with courtyards or patios.

These buildings structure are disappearing, first with the construction of housing blocks during the 60's and 70's and now with the new constructions 90's and 2000. All houses have backyards with fruit trees and some fruit grapevines. Although there are some gardens with small plots grown with vegetables. It is not difficult to imagine that a few years ago most of the gardens were cultivated. Actually most of the growers are elderly people, and some of them were born in rural areas and have knowledge about agriculture and how to preserve food (preserves, jams, pickles ...).

The main problem is the expansion of the blocks of households in this area, and the loss of the tradition of having your own garden. According to the gardeners, the young generations are not interested in agriculture. There are not municipal initiatives to protect and maintain the structure of this neighborhood with gardens (backyards and patios).



Picture 3. Raised beds in family gardens

This type of urban agriculture is mix of leisure for the gardeners; they spent their free – time cultivating vegetables or preserving food, and also food production because their food is consumed by them, their relatives or neighbors.

Community gardens

There are not traditions of communities or allotment gardens in Sofia and Bulgaria, but there are a lot empty open spaces between household's buildings built during the Socialism time 60's and 70's. These open spaces, now are covered by grass and some trees, underutilized and with low maintenance, are ideal to become community gardens. Because there are located nearby to the potential users and these gardens could provide a lot services to the citizens. In this context, there are some actors; they want to promote community gardens in Sofia:

- Delcho Delchev, architect and urban planner, is a member of one association dedicated to develop projects and urban planning. He wants to transform these open spaces between blocks with urban gardening and with spaces to meet the neighbors to socialize, because sometimes there are not relations between neighbors. The neighbors would be the users and cultivate together (vegetables, fruit trees and ornamental plants). His projects of urban gardening, would take account the water supply. This water should come from ground water and rainfall water, avoiding using public tap water.
- Biocity Sofia (Peter Valchovski) is a NGO, established 2 years ago. The main proposed is to work with urban gardening and show that it is possible to produce healthy food inside the city and also create spaces to leisure; education and interaction between different neighbors. They use the open spaces between blocks buildings. According them these spaces are ideal to initiate their projects, because are underutilized and have low maintenance, but are close to the potential users. They grow vegetables and ornamental plants, using permaculture management. The first garden was created in

Professor Zlatarski Street, 18, in Studenski Grad. The garden has 2,000 m², it is open without fences, but just only 1,000 m² are used to cultivate vegetables and ornamental plants and herbs. The other 1,000 m² are use for children playground and socializing or hang out. They have local district support, and also from the neighbors that they are the main users of this garden. This garden was financed by a local mobile phone company. They have two new projects, the first is to develop an urban garden in the underused City Hall's backyard (Moskovska Street) and the other is to create a place where the people can meet and speak about urban agriculture in the Union of Bulgarian Artist's hall (Shipka Street).



Picture 4. Community garden

- Nikola Bohettev is member of the small network guerrilla gardening. They want to develop a community gardens in Sofia inspired by the prinzeessinnengarten (Berlin) model. As Peter Valchovski, he proposes to use the open spaces between blocks to create community gardens. But also the ideas were not accepted by the other members of the group. The Nikola's Urban Garden projects were not well received by the neighbors (users) because the farm activity is not well seen in Bulgaria. For many people farm activity is hard and it is returning to the past, we must not forget that many Sofia's inhabitants were moved in the 60's and 70's from the rural to the Sofia city to work in factories and services and urban farming sometimes is not seen as activity related to leisure, social interactions, food production... Thereafter they decided to choose very small plots and perform guerilla gardening activities. The idea was to just plant something, leave and then the community would take care of it. This proved to be more successful and also brought media attention. In another area they did the same with planting and leaving which worked; the community took care of the plants. Another time when they tried to create microgarden in the centre it was not as successful; everything was taken away and even though repeating the process the same thing happened again. However, they will continue this.

Sofia's City Council has a program, called Green Sofia, to fund the creation of community gardens in the open areas between blocks. According to City Council and Peter Valchovski, the main functions of these community gardens are leisure, educational, social (socializing) and to keep these areas.

Squat Garden

We visited a squat gardening in Dianabad neighborhood. This garden is located in Apostol Karimatev Street with Buenos Aires Street. This squat garden has a surface around 200 m², is divided in 4 plots, where the urban gardener cultivate vegetables. We could not interview squat gardeners, but the main function of this garden is the leisure and the food production as well.

Educational Gardens

Bulgarian Environmental Partnership Association (Lubomira Kolcheva). This NGO works with environmental education, citizen participation in public spaces development and urban planning and sustainable mobility. They try to integrate environmental education into existing curriculum in the schools (related with energy, water, climate ...). At the moment they are involved in the improvement of two public spaces together with the people living in the area. Previously they have been involved in a biogarden project; involving four bio gardens in kindergartens. The NGOs employees as well as a number of volunteers provided support the first year and then the kindergartens were supposed to maintain it themselves. The NGO also provides a toolbox for students and teachers. They used raised beds and provided them with soil because they did not know if the soil in the ground was polluted and because was to easy to work with small tools (shovels, hoes, rakes ...).



Picture 5. Educational garden

In the end two gardens sustained and the success factors in the project were committed directors and teachers. The project did not meet any resistance from the parents who approved of the project and were involved from the very beginning. The parents helped building the raised beds and took part in the harvest party and other educational events. Introducing the agriculture in the schools, not only in the kindergarten even primary and

secondary level as educative tool (plants cycle life, insects' cycle life, fungus and diseases, organic production...), may be the way to change the image of agriculture in Bulgarian society. Some kindergartens adapt their installations to integrate these educational gardens, for instance, one of them collect the water from the roof for irrigation.

Local farms

As already mentioned, the main crops in Sofia are extensive crops and all of them need a process to be consumed by the humans (grind, extract oils ...). Although there are, in other countries, small producers of extensive crops that transform their production to sell directly in the same farm, door a door or farmer markets, but it is not a widespread activity. During the Socialism time there was a vegetable belt around Sofia to provide fresh vegetables, but now these crops have abandoned, they are not competitive economically with others regions or countries with best climate and soils. There are still areas for the cultivation of vegetables and fruit, but a testimonial way

The short season to produce vegetables outside, limits the number of vegetable holdings and the species and varieties cultivated. To grow varieties with a short cycle of life or improve in technology (greenhouses, poly-tunnels heated or not) could be two solutions to extend the vegetables surface. Farms of the Sofia Municipality have a small size; this could affect their management, their management and their economic viability. Nevertheless there are some small farmers that adapt their business model to the city and citizens. All interviewed farmers have adapted more or less their activities to the proximity of the city and the Citizens. Next table shows a short description of the farmers use as a model:

Name	Localization	Number of animals (heads and LSU)	Farmland surface (ha)	Crops
Teodora Todorova	Ravno Pole - Elin Pelin	500 bee -hives	-	-
Nikolai Nikolov	Kazichene	5 dairy cows and 1 calf - 5.4 LSU	4	Cereals for fodder
Stoyan Stefanov	Elin Pelin	Animals for self consumption	18	Vegetables (lettuce, leafy vegetables), potatoes, turnips walnuts, fruits and fodders
Vesselina Mutafchiiska	Zheleznitsa	150 sheeps, 16 cows, 6 calves and 27 horses - 55 LSU	40	Fodders and pastures.

Table 6. Different farmers interviewed and used as model of local food farms.

All of them are located in the peri-urban area around Sofia, within Sofia Municipality or in the Sofia Region.

Teodora Todorov (1) is a beekeeper. Her bee-hives are located close to Sofia, in a protected area within Natura 2000 named Dolni Bogrov - Kazichene (BG0002004). She

offers a wide range of bee products from honey of different flowers (thistle, strawberries ...), pollen, propolis and royal jelly. Teodora produces around 3,000 kg of honey per year and 1,000 kg of pollen per year. Teodora is a well known beekeeper in Bulgaria and very active in several associations to promote the Bulgarian honey. She sells their production directly to the consumers. She wants to put some bee -hives in some buildings inside Sofia city. Teodova's dream is to establish a training school for beekeepers in Bulgaria. The value of her productions is 20,000 – 100,000 € per year.

Nikolai Nikoloy (2) is a small farmer with 5 dairy cows and now 1 calf. He also cultivates 4 ha of crops for fodder that he uses to feed the animals. During the spring – summer the cows grazing in communal land, but during the night are stabled. He has a production between 150 – 170 l per day; this represents 54,000 - 62,000 l per year. He sells the main portion of his milk production to a cheese factory and minor portion directly to customers. Nikolai complains because the direct selling is not regular and main demand is concentrate during the weekends. To have less than 10 dairy cows is useful for him, because he is not subject to the European Legislation. The value of his production is 5,000 – 20,000 €. He does not produce any vegetables for the market, only for self supply.



Picture 6. Small dairy farm in Kazichene

Stoyan Stefanov (3) is producer of vegetables (leafy vegetables, onion and garlic, pulses, potatoes, turnips, carrots, cucumbers and tomatoes) and fruits (walnuts, hazelnuts). His production is under organic management, he has some fields certificates and others in process of certification. The crop surface of this farm holding is 18 ha, divided in two municipalities. He grows Bulgarian landraces and most seeds are bought from experimental centre in Bulgaria. All his family is involved in the project. They sell all production directly in a door a door way, through their web site and also food cooperative (Hrancoop); and also offer educational activities to kindergartens and schools. Every week he writes an e-mail about what he can offer and then people make their orders and thereafter he delivers to their door. In the summer he delivers two to three times a week. Never more than 20 hours between picking and delivering.

Potatoes, carrots and turnips are storage by him, to sell during the winter. He has the intention to enlarge his farm holding, with a small food processing and to sell his foodstuff. The value of his production is 5,000 – 20,000 €.

Vesselina Mutafchiiska (4) is a dairy cow farmer. She has 16 dairy cows, 6 calves, 150 sheep and 27 horses and 40 ha to produce pastures, fodder and hay. The production is organic, but not properly certified. She produces milk, yogurt, cheese and butter. She sells her production directly “month a mouth” way, she offers a weekly a basket with dairy products and she also sells in the two farmers markets in Sofia City. This farm also offers educational activities for kindergartens, schools and schools for children with special needs. The value of his production is 5,000 – 20,000 €.

Farmer’s market and Food cooperative

Perhaps the first thing to say about these two initiatives: the farmers market and food cooperative that they are not focus in local food, understanding local as distance. Their aims are to promote family farm holdings in Bulgaria, to keep traditions, to promote food variety and increase people’s health “we call it food sovereignty”. Both initiatives food cooperatives and farmer markets are bottom-up initiatives.

Farmers Market (Nikolay Genov and Ralitsa Kassimova): The purpose of Farmers Market is to have more direct contact between producers and consumers and to promote fresh produce and traditionally and homemade food. Nikolay and Ralitsa are members of the association that organize these farmers market. This association has 7 members; they are the markets management staff. They have different functions such as coordinators, logistics, media, projects and events. This association is responsible to promote these farmer markets in Facebook, radio, TV, web sites and others. The budget of this farmer market is around 2,000 €/ month, they have an extra budget for special events (market before Christmas and others). Their main source of funding are the farmer sales, of which obtain a 10% of the sales, and also they apply for extra funding of different administrations, projects or subsidies. The farmers are only authorized to sell their production, these markets have internal rules. The numbers of farmers that sell in the farmer market vary 20 – 30, during the spring and summer seasons there are more farmers selling their own production. The number maximums of farmers are limited for physical conditions of space. The farmer’s production must be organic, but it is not necessarily to be properly registered. There are vegetables and fruit producers; jams and marmalades producers, small wineries, herbs producers, dried fruit producers and vegetarian food producers (bread and dishes), bee-keepers, dairy producers (yogurts, cheeses and butters) and a producer of flours of different cereals. There are two farmer markets in Sofia:

- ***Ivan Vazov (Petko Y. Teodorov Street):*** Ivan Vazov farmer market is open every Wednesday from 16:00 – 20:00 during all year. This market receives 200 – 300 costumers per day.
- ***Roman wall (Hristo Simernenski Street):*** Roman Wall farmer market is open every Saturday from 10:00 to 15:00 during all year. Around 600 – 1,000 people visit the market per week.

They have no official arrangement with the Sofia City Council, but the City Council is interested with their activity, has helped revitalize areas where the markets are located. Some seller would like that the markets were bigger and with more variety of producers and with more activities.



Picture 7. Roman Wall Farmer's Market

Hzankoop (food cooperative) (Nickolay Genov and Ralitsa Kassimova): Hzankoop coop started with a group of friends 2010. 20 people came to the first meeting and the main reason to be small in the beginning was to establish trust between the members. Presently the cooperative consists of about 300 members and more than 50 producers. 2 years ago they decided to have more structure within the group and created certain rules and a form for all the members, However it is still an informal structure and they are not a registered association. Presently the need to revise this since the state is requiring this. The producers deliver on Tuesdays to a location that the cooperative has rented. Members come between 6 and 8 pm to pick up their orders. 3 coordinators are responsible for organizing everything but also members come to help to organize the set up. Members order in advance through a Google spreadsheet that has been developed by one of the coordinators.

In Bulgaria there are around ten food cooperatives in total and the producers often deliver to a number of these which is an advantage to the farmers. They have tried to start a national network with food cooperatives but this is not in place yet. In the first meeting 7 city coordinators came and as a result 4 groups started Farmers Markets in their towns.

Other information about the UA stakeholders

The results show that most of the bottom-up stakeholders have a university degree or have been working in a quite high position in non-related agriculture professions. One of the UA-initatives in Sofia mentoned that all people who had been involved in their project had a doctors, master, or bachelor degree. The small scale farmers, that we talked, mainly sell directly to the consumers. One small dairy farmer also sells his milk to a dairy processing company, but complains about the low profit of that. Many of them emphasise the importance of being able to talk directly with their customers and get their input immediately and be able to establish a close relationship. For some farmers it is not possible to reach the supermarkets and selling directly is the only way to reach customers.

The Farmers Market is providing both economical as well as social benefits. Several of the interviewed farmers seem to have a number of regular customers; and interestingly enough in two cases most or half of their customer base is located in Sofia rather than in the village where they operate. The local aspect seems to be important but like in general the definition of local seems to vary a lot, while some regards Bulgaria to be considered as local other see Sofia municipality as being local. According to one respondent some consumers value the local aspect more than the organic aspect. There are different ideas about the need for organic certification; for some farmers the certification seems to be more important than for others. A PHD student we talked to also lifted a problem with certification in Bulgaria which involves grassing on commons. If your animals grass on a piece of land that you have not bought or rented (i.e. commons) you cannot be certified since you do not know exactly what they eat. The beekeeper mentions that they are too close to the city to be certified. Neither the Farmers Market nor the Hzankoop (the food cooperative) require the producers to be certified. The organisers emphasises that they want to encourage farmers to be able to show that they grow according to sustainable practices. They believe that if the contact between producers and consumers is more direct trust could be built which they mean reduces the need for certification. However, the issue of trust seems to be a problem in Bulgaria and is mentioned by almost all the stakeholders. Some farmers therefore argue that it is absolutely necessary to be certified, both because of the problem with trust in Bulgaria and because they think it is a problem that everyone at Farmers Market says they grow organically without being certified. They state it is important that an independent organisation has performed the certification.

Regarding the customers who buy directly from the farmers this is in accordance with studies in other countries. Generally it is affluent people, with a higher education, informed about food and food quality, between the age of 25 and 45, and have small children. Both farmers and other stakeholders mention that a lot of people cannot afford to shop at the Farmer Market. As mentioned above many of the customers seem to be located in Sofia. According to one of the farmer it is easier to find customers in the city who values organic food. He means that people in the peri-urban Sofia either grow their own food or buy vegetables from the cheap supermarkets since they do not understand the value of organic food and that it contains more nutrients. According to him it has to do with a mindset and not so much about the money since the price of his produce is not significantly higher, than conventional vegetables in the supermarket.

Many of the actors in UA are using municipal land for their activities (beekeeper, biogarden, guerilla gardening, Farmers Market). Some of the actors has to pay rent (beekeeper, Farmers Market) while others such as the biogarden do not need to pay anything.

What is the official position of the municipality in relation to UA?

In Sofia there are 24 different districts who each has its own local mayor. Interviews were held with one local mayor; the mayor of the districts Studentski¹, and one

¹ Studentski is the largest community of students in Sofia; more than 40 000 students live here. According to the mayor they have difficulties in maintaining the area and they have very limited financial resources.

representative from the department of land use and water resources. It should be mentioned that it was rather difficult to arrange meetings with representatives from the municipality; meetings were cancelled, re-scheduled, delegated to others and so forth. Efforts were also made to meet representatives from the Ministry of Agriculture but the interest on their behalf was very low and this could not be arranged. This could indicate that the interest for UA is quite low in Sofia from the authorities; however more research on the official position of the municipality in relation to UA needs to be conducted in order to draw such conclusions. However, this short term study has resulted in some interesting findings on this subject, which are presented below.

Policies

No official policy for UA, local food or organic food seems to exist within the Sofia municipality. Apparently work relating to UA and local food is in its infancy within the municipality and according to one civil servant this has emerged in the last few years. Still it is admitted that local food is not prioritized, something which is confirmed by the interviewed bottom-up initiatives. Several UA-actors give examples on how local farmers have been neglected because of rules and regulations which do not favour local food; everything from farmers who wanted to sell apples straight to the school canteen to organic farmers who would have to pay a significant higher fee for the land than for example building contractors. In the interview with the municipality it was clear that they do not regard Sofia as an area with a potential for food production and that the municipality does not own a lot of agricultural land that could be used for production of food.

Organic food does not either seem to be prioritized within the municipality, something that was also confirmed by both Farmers Market organisers and organic farmers. In the interview with the municipality they stated that they cannot prioritize organic food since they believe it is more expensive than conventionally grown food and procurement laws were used as an explanation to this. According to the municipality procurement laws state that they have to choose the offer that is cheapest and most economically beneficial, i.e. gives the best value for the money like quality, content of nutrients and so on.

The view on UA

The municipality and the bottom-up initiatives involved in urban gardening projects within Sofia seem to have a common view on the purpose of UA. UA is seen to be an activity that could improve social cohesion and UA functions are leisure, educational and social activities. Food produce is seldom mentioned as the purpose of UA. Several actors believe that because of the distance to agriculture in Sofia there is a need for UA. For the authorities interviewed UA seems to be a way to work with the problems with green areas in Sofia and a means to make the city look nicer. The mayor of Studentski use words such

as 'nice' and 'clean' several times when talking about UA. None of the representatives from the authorities believe that the city of Sofia can be effective in producing food; land is expensive in the city and should be used for other purposes, and therefore food production cannot be the purpose of UA. Both actors involved in community gardens want to create a sense of community and to increase trust between people, something that is perceived as a problem in Bulgaria. Even though one of them mentions that they want to show people that you can grow your own food this seems to be secondary. Something that is highlighted both by the municipality and the bottom-up initiatives involved in UA is the importance of having the garden close to your home. As one puts it "*if you have to travel a lot it loses its meaning*". While the mayor states that it needs to be right outside the window another actor states that as long as there is good transportation it could also take place in the peri-urban zones (something that does not exist today where access to a car seems to be a prerequisite to reach the peri-urban areas). One actor believes UA could take place in parks, although she points out that she does not believe the municipality would support that. Something that is confirmed by the municipality who do not believe parks are appropriate for UA because of maintenance reasons and that people then won't be able to overlook it from their windows. The mayor believes that the project in Studentski has not had any problems with vandalising because it is close to people's homes; something which would not be the case in the parks.

The municipality's view on the target group for UA is mainly all children, because of educative purposes. Interestingly enough the mayor does not believe UA would be an important activity for old people. He believes it is too physically demanding and that the inclusion of young people is a prerequisite for it to work. However, even here the problem is raised that young people, people in their 20's, are not interested in this. Apparently in Studentski the students are generally not interested in gardening and one reason could be that the students only live in the area temporarily and do not think of the buildings as their home. Rather it seems to be young families with children who have shown interest.

Knowledge about UA

The mayor of Studentski admits that he did not have much knowledge on UA before the project with biogarden in his area. However, the children's positive reactions on gardening and the great interest from schools and kindergardens has made an impression on him. Both the local mayor and the civil servant in the municipality believe that more knowledge on UA is needed within the municipality, something that is confirmed by the bottom-up initiatives who believe the level of understanding when it comes to UA is very low. The mayor also points out that UA is very specific and greatly differs from maintaining a park, why more knowledge is needed. The lack of knowledge regarding UA is perceived as a problem among the bottom-up initiatives; for example they state that it is very problematic if they are to put a policy on UA in place if they don't have sufficient knowledge about it. The University of Sofia offer a MA-program on urban planning, however UA is not included as a topic according to one of the interviewed PHD students.

However, the mayor states that without the support of the citizens UA cannot develop in Sofia. According to him it is more important that the citizens rather than the civil servants

have knowledge about for example community gardens and know that this is possible in Sofia. The mayor believes that there is not enough media coverage about these topics and the citizens do not know that this is possible in Sofia. If the information would reach the public and the municipality would be able to explain that they can provide support, this could increase the support from the public for UA.

How do the different UA stakeholders interact with each other?

Network for UA bottom-up initiatives

At the moment a network for actors interested or involved in UA exists in Sofia. The network consists of around 12 to 15 people and they have met 3-4 times. One of the organisers of Farmers Market initiated the first meeting and an architect who started a Fab lab in Sofia offered the space. The meeting was directed towards citizens interested in UA; both for those who had started something and those who wanted to. The network consists of a variety of UA actors such as; guerrilla gardeners, architects, scientists, farmers, food cooperative and Farmers Market organisers. The purpose of the network is to bring people with interest in UA together, share knowledge, map the different actors' interests, search for the right model as well as find places for and conduct pilot projects. However, not all actors interviewed in this study seem to be involved in this network. Some actors also believe the network meetings have not been successful because they have not managed to unite a project/way to go, something they believed would be the purpose of the network.

The above mentioned architect is involved in trying to create a network for beekeepers in Sofia and the NGO involved in creating biogardens wants to arrange a conference for UA in Sofia. The purpose of the conference is to gather both politicians and bottom-up initiatives involved in UA and spread the idea about biogardens and the idea of Sofia as a biocity.

My dream is that we are a few people that believe in this idea and I hope we will be more and can be a good example. (NGO, Sofia)

However collaboration between different UA actors in Sofia seem to be informal and something which occurs on a spontaneous basis, including the above mentioned network. There also seems to be some tension between some UA actors and someone states that no one has the aim to unite all the initiatives, despite the fact that such effort has been made with the above mentioned network. Others believes that not all actors wants to be together in one place and some people have left initiatives and started their own because of internal disagreements. What is interesting is that even though many of the interviewed actors mentions that they are open to collaboration many of them do not seem to be aware of each other. Several state that they are the only or the first ones doing community gardens, even though we met several who were doing the same things. Something which could be explained by the fact that many of the projects are new and the lack of formal collaboration. The lack of knowledge what other actors are doing is illustrated below;

We are the first initiative in Bulgaria that work with bio-gardens. (Bottom-up initiative)

At the moment there are no community gardens in Sofia. (Bottom-up initiative)

Collaboration between the municipality and bottom-up initiatives

It seems that collaboration between the municipality and bottom-up initiatives happen on a sporadeous basis and the municipality seem to learn about the UA-initiatives "accidentally" as the municipality puts it. The interviewed municipality representative doesn't seem to be aware of any collaboration with any associations when it comes to UA. However, during this study we saw at least two examples of the municipality's collaboration with UA-initiatives. The Farmers Market who receives support with some resources (mentioned below) and the NGO involved in biogardens who collaborates with the local Mayor of Studentski. The Mayor of Studentski also points out that he has met two organisations and four communities to discuss urban gardens and believes it is possible to establish one or two more gardens in his district. There might be more of these kind of collaborations that we did not have time to find out about. Further on it should be mentioned that the interviewed municipality representative is not aware of the municipality's project with pinpointing land for UA purposes (mentioned below). If this is a sign of lack of collaboration between different departments within the municipality or just the fact that we interviewed the "wrong" person for this is impossible to tell without further research.

Involving bottom-up initiatives in urban planning

When it comes to involving bottom-up initiatives in the process of developing policies and urban planning it is clear that this is a sensitive topic. The municipality representative did not understand how these questions were related to UA and was clearly uncomfortable answering any questions relating to citizen participation. Results indicate that the municipality is following the law when it comes to public discussion (which they were very clear on pointing out) but are not trying to take it one step further to involve citizens in decision making. It is mentioned by one of the NGOs involved in citizen participation that there are several problems with the public discussions; they are not motivating to attend and many feel that that the municipality is not listening to the propositions from the citizens, the municipality publish information with time and place too short in advance, the meetings can be held in the time of the day (for example in the afternoons) when people cannot attend. The NGO emphasises that in order for public participation to work there is a need for people who can facilitate the meeting; people with other backgrounds like sociologists. Otherwise there will be a clash between the civil servants and the citizens.

The general picture provided from the bottom-up initiatives is that the authorities do not include them in decisions regarding urban planning, UA, developing strategies for local food or other aspects that relate to their businesses. For one actor even the question if they are involved in the planning processes or development of strategys seemed absurd; "*They don't ask anyone*". For example one mentions that the municipality is building a lot of kindergardens but they are not asked to give input which is explained by the fact that they do not believe the municipality knows about them. Although, according to one NGO the municipality initiated a working group one and a half year ago consisting of NGOs, different departments of the municipality and municipal counsellors. The purpose was to analyse

the problems and shortages in urban mobility planning and green space development policies. The group meets occasionally but only when the NGO push for them to meet which is explained by the fact that the municipality did not appoint anyone in the municipality who is responsible for organising the meetings, take notes and so forth which means that nothing happens if the NGO does not push for it. This is perceived as problematic. The organisers of Farmers Market also describes that there was a working group that was initiated by the last government within the Ministry of Agriculture. They invited different stakeholders (farmers associations, supermarkets, NGOs etc) to three meetings. However, these meetings were not perceived as effective because of too many different interests and an inability to reach a common strategy. With the new Government this was then abandoned.

Several actors believe it is a hassle to be involved and to get support from the municipality. The lack of involvement has led to some stakeholders choosing to work around the central municipality or national governments and authorities. Some work straight towards Bulgarian ministers in the European Parliament while others believe that the most effective way is to go straight through the local districts rather than the central municipality. This is because the districts are responsible for local management which makes the process easier. Working with the ecologist in the districts rather than speaking with the Green system facility (who are responsible for all parks and so forth) is perceived as easier. The organisers of the Farmers Market state that the problem is not that they don't know who to contact within the municipality the problem is to get things done; *"It is not difficult to approach authorities but it's difficult to get outcomes"*. Others have decided to proceed without the formal support meaning that they do not regard the regulations and rules, as is the case with the guerilla gardeners.

However, it should be mentioned that one NGO believes the municipality is improving when it comes to including them. The municipality itself does not regard it to be their responsibility to initiate any contact with bottom-up initiatives and UA should according to the municipality be a bottom-up process where it is up to the bottom-up initiatives to approach the municipality with their ideas, which the municipality will then consider. Even though the interviewed municipality representative is not aware of any official collaborations, as mentioned above, he states he believes it is fruitful to collaborate with UA initiatives and that their experience with collaborating with NGOs in other areas has been successful. It is also mentioned that when certain mechanisms have been established the collaboration seems easier. This picture that it is up to the bottom-up initiatives to approach the ministries and municipality is confirmed by the bottom-up initiatives, as one stakeholder puts it; *"Working bottom-up and not the other way is more effective"*. Something which was also illustrated above with the NGO who has to push for meetings to be held in the working group. The NGO involved in the biogarden projects approached the local mayor and received support. This has turned out to be a fruitful collaboration which has resulted in support from the city mayor. Thanks to the collaboration the NGO has also been involved in speaking in other districts in Sofia on how to start similar projects.

Several bottom-up initiatives states that there is a communication problem between the authorities and the civil society and they believe the municipality doesn't know how to communicate with the citizens. As one put it; *"They know about us but they don't know how to work with us"*. Several stakeholders emphasize that in order to understand the information about for example urban planning on the municipality's homepage you need to

be an expert. It is stated that even though there is a discussion platform on the municipality's site you would need juridical competence in order to reply to the proposals. One bottom-up initiative points out that even though their efforts have gained public attention in media they haven't got any response from the municipality. When describing to the municipality that some bottom-up UA initiatives experience difficulties in contacting the municipality because of being transferred to many different departments the answer was simply: *"Maybe they didn't try hard enough to find the right people"*. The municipality's belief is that the NGOs need to organise themselves and that the problem is not within the municipality, the municipality is organised the way it should be.

In summary the problem seems to be; 1.) The municipality doesn't know about the initiatives 2.) The municipality doesn't know how to communicate with the initiatives. However, when it comes to citizen participation and influence in Sofia it should be said that in order to draw any final conclusions there is a need for further research on the topic.

Support from the municipality/authorities

How the municipality can support UA

The municipality believes there are several ways how they can support the growth of UA and bottom-up initiatives involved in UA. However, they are clear that they cannot support projects financially. Both the mayor and the interviewed civil servant points out that the municipality's role is to support the administrative functions and the municipality can only help with limiting resources. This is confirmed by the bottom-up initiatives and as one actor explained it; "The municipality is interested in these kind of efforts as long as they don't have to do the work". Results indicate that the municipality has to a limited degree supported UA in other ways than financially. The Farmers Market get support from the council who provides them with equipments, materials and advertisement and the town hall recognises their activity. The municipality provided the NGO who works with biogardens with land, trash cans and material to build benches. In one occasion the municipality also choose to bend the rules regarding the regulations that were required for a fair organised by the Farmers Market.

The support the municipality can offer can be divided into the following categories; Provide land, Integrate UA in other programs, Internal meetings, Raise public attention, Letter of support.

*Provide land:*The municipality emphasize they can support UA by providing agricultural land that is owned by the municipality. According to the interviewed mayor meetings have been initiated by the mayor of Sofia in order to map areas where UA could be developed. The idea is to pinpoint locations which could be provided for free to bottom-up initiatives.

*Integrate UA in other programs:*There are municipal programs in which UA can be integrated, like for example *Green Sofia* where the municipality support a block of apartments with plants, benches and so forth in order to arrange the outside space.

Internal meetings: Within the central municipality there are internal meetings regarding green systems of Sofia which meet 2-3 times a month where the topic of UA could be discussed.

Raise public attention: The interviewed mayor states they can put up pictures and projects about UA on their website as well as help out finding people who can run UA-projects. However, the civil servant believes it is not their role to do campaigning work about UA.

Letter of support: The interviewed mayor states they can support an UA initiative by a letter of support showing the municipality's support for the project, which can be used when applying for private funding.

How the bottom-up initiatives need the municipality/authorities to support UA

Several of the instruments the municipality mentions they could use in order to support UA are in line with the suggestions from the bottom-up initiatives. However, in order for some of them to be valid for UA they need to be re-structured, for example the program Green Sofia since presently it is perceived to be more about sport and leisure activities than about gardening. Further it is suggested that UA could be integrated in cultural projects run in Sofia; where teaching about how to make gardens, compost etc. could be included.

The need for support from the municipality can be divided into the following categories:

New regulation/legislations: There is a need for old regulations to be restructured in order to be in line with UA-initiatives. At the moment these are not perceived to compel with current needs and the legislation needs to be adjusted to small producers. When it comes to provision of land several actors request that there are clearer regulations about how the citizens can use the land for agricultural purposes.

Policy and strategy to promote local and organic food: There is a need for the municipality to develop a policy and strategy which promotes local and organic food in order to support UA-initiatives. It is highlighted that it should be easier to access local produced food than it is today.

Support with resources: Among some actors there is a need for financial support, material support (such as soil and electricity), support with advertisement and promotion of UA initiatives, support with transport (eg. the municipality has a compost but it's outside of Sofia which makes transportation a problem) etc. Something else that is requested is more space at the Farmers Market, which is pointed out both by the organisers of the Farmers Market and the producers attending. For example at the Roman Wall Farmers there is a maximum of 30 participating farmers but according to the organisers they need 60 participants in order to be economically sustainable. The producers in the Farmers Market also requests a greater event around Farmers Market, with for example people cooking food right upfront. However, due to regulations this is perceived as not possible, why they need support with this. Further on there seems to be a need for an independent actor who can test the soil since there is a fear of polluted land among several of the actors.

Less bureaucracy and more collaboration between the different departments: There is a need for less paper and administrative work among several of the actors, something especially emphasised by the producers. Relating to this is the perceived problem that

different departments do not collaborate; which has the effect that the producer needs to fill in the same papers several times. It is requested that it should be enough to contact one department.

Open towards dialogue and small scale initiatives: There is a need for the municipality to improve their communication about the working process of urban development projects as well as a dialogue between the municipality and bottom-up initiatives. Bottom-up initiatives also requests for the municipality and ministry to be more open to small scale efforts (farmers, urban efforts etc). According to one stakeholder citizens aren't motivated to be involved with the municipality because they don't get any feedback on their propositions and don't believe they can have any influence on for example policys. Further on there is a need for the municipality to organize for example show-gardens in order to demonstrate for the citizens how gardening can be realised in Sofia.

Educational programs: There is a need for educational programs (which are not only aimed towards children)in order to teach people how to garden because of lack of knowledge.One actor also mentions the need for a training school for beekeeping.

Prerequisites for UA in Sofia

Potential

It seems that a good relationship with the municipality or ministries is crucial if you want your UA to succeed. The biogarden has through a good relationship with the district mayor been connected with the city mayor and a politician within the European Parliament. Thanks to this good relationship they have now got permission to develop a new biogarden in the city centre outside of the city hall. The small dairy farmer also states that a good relationship with the village mayor has been helpful and thanks to this they have used him as a good model for small farms. Also the organisers of the Farmers Markets state that a good relationship with the Ministry of Agriculture is crucial to have a chance to be involved in organising a particular fair for producers next year. It seems that for those actors who have not build up a relationship with someone from the authorities they have not managed as well. For example a bottom-up initiative wanted a plot in the park but the deputy mayor declined the proposal with no explanation. Someone states that it is very dependent on the particular person within the authorities whether you receive support or not, indicating that it helps if you built up a relationship with someone who can help you.

Even though this study is too small to draw any final conclusions on the prerequisites for UA in Sofia the results indicate a number of factors that are favourable for developing UA in Sofia; • Existence of Farmers Markets, food cooperatives and potential for developing CSA•Unused public spaces/Green wedges•UA education in schools• Including UA in the environmental movement.

Existence of Farmers Markets, food cooperatives and potential for developing CSA

Small scale agriculture would according to the interviewed professor specialised in soil be beneficial from an environmental aspect since there are mainly monocultures in Bulgaria. According to the professor in the long term people will feel the need to have small gardens to produce food for food security. Although he is very clear that small scale production will face a great problem in terms of competition from large scale producers and wouldn't be able to compete with imported vegetables. Even though he seems to have a mindset towards large scale production he still makes quite a few points which actually indicate favourable conditions for small scale producers; there are prerequisites to grow all plants that work in this climate and it could be beneficial with orchards in family gardens for small scale production.

In Sofia there are two Farmers Markets and a number of food cooperatives and some of the small scale farmers have their customer base in Sofia believing it is easier to find customers in the city who value organic food. This indicates that there is an interest for local food among certain groups. Farmers Market is according to the organisers a way to promote family farmers and a way to supply organic food to the consumers. The fact that the organisers feel that the municipality understands the importance of this, even though they are not supporting it officially, is a good prerequisite for further development and collaborations. Even though those interested in UA are often mainly educated young middle class (according to one interviewed PHD student) the food cooperatives has managed to reach out to other groups, something which has been managed through personal connections. The food cooperatives are according to the same respondent inspired by the CSA model (Community Supported Agriculture), although the farms they collaborate with are not CSAs. Even though some believe that an obstacle for developing CSAs in Bulgaria is the fact that farmers are generally specialised on around two products, the results in this study indicate there could be potential for CSA here. For example the small dairy farmer that was interviewed admits that even though he has not discussed prepayment with his customers he believes that if he would ask them they would probably agree to this. Neither the organic vegetable farmer has not discussed prepayments with his customers; he does not believe this would work in Bulgaria because of a problem with trust (idiosyncrasy). However, he admits that he has built up this trust with his regular customers and the fact that he has a number of 400 people on his mailing list and 90 customers ordering each week in the active season and around 50 otherwise is a good base for starting a CSA. The food cooperatives have also built up a network of informed food consumers, and they might be interested in joining a CSA. Those farms who deliver to the food cooperatives might also be interested in the model, since they have already built up a customer base. More research needs to be conducted in order to draw any conclusions on the potential for CSA in Bulgaria and particularly Sofia, but this could be a solution for small scale producers to sustain and make a living.

Unused public spaces/Green wedges

One potential that is raised is to make use of unused public spaces. Several actors believe that if people would have the possibility to use the land people would also be more engaged in what is happening in the public spaces. Something which in turn could promote social interaction. According to the interviewed architect Delcho Delchev there are big spaces that

could be used for UA in Sofia. For example the space between apartment blocks, terraces, flats, roofs or other common spaces in the buildings such as staircases offer a potential for gardening. In the same time the blocks around these gardens could take advantage of having places where people could meet, arrange meetings and so forth. Today there are often no places to hold for example residential meetings where issues on how to maintain the building is discussed. According to the architect the gardens could provide a space for meetings, educational purpose, sharing space for working with computers and so forth. There seems to be some support from the authorities for this idea as well which is a good prerequisite for being able to use unused spaces between residential buildings for UA. The local Mayor of Studentski believes that the biogarden should be considered as a model for how to develop the 'green' areas in between apartment blocks. The city mayor is according to both the mayor of Studentski and the NGO involved in the biogardens also positive regarding these projects. Further on the mayor of Studentski is also convinced that other districts would also support this idea. However, whether this is accurate that other districts are as positive would need further research. Another architect, Dimitar Paskalev, has done some studies on his own regarding the potential of the barren lands in so called "Green Wedges" in Sofia. He concludes there is great potential for UA in these green wedges and this should be further investigated.

UA-education in schools

Several bottom-up initiatives speak about the importance of introducing children to agriculture and that this should be included in the school curriculum. Possibly introduction of agriculture in schools could in a long term perspective change people's negative perception of agriculture in cities. The issue though seems to be who should introduce the program to the schools. According to one bottom-up initiative the program should initially be initiated and carried out by bottom-up initiatives in order to be able to have an impact on the content of the training. In Sofia some of the NGOs are already involved in such educative activities, for example: *Bulgarian Environmental Partnership Association* had a project with several different kindergardens where they built small gardens and taught the children about gardening and *Biocity Sofia* has a collaboration with 4-5 private schools in which they teach gardening. According to *Biocity Sofia* an important aspect to their success has been the fact that the schools have been involved in their biogarden. One of these NGOs points out that in the kindergardens the parents trust the teachers and the activities that are carried out, why they haven't meet the same resistance as organisations trying to establish community gardens in residential areas. The fact that the mayor of Studentski also understands the importance of involving children in gardening and is using the project with biogardens as a role model in other districts is also a good prerequisite for including it in the education.

Including UA in the environmental movement

According to one interviewed PHD student the environmental movement is one of the strongest grass-root movements in Bulgaria. Some NGOs like the *Bulgarian Environmental Partnership Association* is already involved in UA but UA should be integrated in the work of other environmental organisations (if it isn't already).

Challenges

Even though there is potential for developing UA in Sofia the bottom-up initiatives are experiencing a number of challenges, which needs to be addressed if UA is to develop. These challenges can be divided into the following categories: • Lack of trust and community spirit • Lack of interest in farming • Regulations, rules and bureaucracy • The promotion of large scale production.

Lack of trust and community spirit

The lack of trust and the absence of community spirit is brought up by several stakeholders as a challenge towards urban agricultural activities. This especially seems to be a problem when it comes to creating community gardens or gardens between apartment blocks since it seems difficult to get the residents to come together and organize themselves for such activities. According to some there is a lack of commitment from the civil society and it is not common that you do something for the community for free. Some people believe the lack of trust has historical explanations and as one puts it; *"45 years of socialism broke something"*. Some bottom-up initiatives emphasize the need for support in how to change the image of UA in order to convince citizens that UA could be beneficial for Sofia.

Lack of interest in farming

The negative view on farming activities (because of the idea that farming means low income and constant work) in combination with many citizens perceiving the idea of being an urban farmer as a completely foreign idea is brought up as a challenge for UA. This has resulted in some resistance towards several of the UA-initiatives, something which has been problematic for the bottom-up initiatives. However, neighbours as well as the district mayor who did not believe it was going to work in the beginning have now changed their mind about community gardens, showing that it is possible to change peoples' perceptions of UA if projects can be carried out.

Several stakeholders also mentions that along with the urbanisation people have lost agricultural skills and presently not many citizens are prepared to move back to the country side to be a farmer. The need for agricultural training and knowledge about UA is therefore highlighted. Some farmers also mention the problem of finding expert competence when it comes to organic farming (for example organic agronomists) and workforce who understands the logic behind organic farming.

Regulations, rules and bureaucracy

Several of the small scale farmers as well as the organisers of Farmers Market believe that rules, regulations and bureaucracy can work as a hindrance for small scale production and UA. Many small scale farmers don't have the means to make all the investments required by the regulations. One stakeholder points out that small scale farmers often don't have the administrative capacity to handle all the regulations and it is difficult for them to have a 'relevant' dialogue with the Ministry of Agriculture about these issues. As mentioned above there is no policy that promotes local and organic food which is a challenge. Also EU-

requirements that require you to have at least 10 cows in order to receive subsidies was raised as an obstacle. Some believe that the procurement act is an obstacle and that many municipalities use this as an excuse to not promote local and organic food. However, the reason for this can according to one stakeholder be explained by civil servants' lack of knowledge and fear of doing something that is against the law, showing the need for more competence on how procurement acts can be used to promote local and organic food.

The promotion of large scale production

Something that is also raised as a challenge towards UA is the fact that small scale producers in Bulgaria are getting fewer. Someone states that the general policy is to support large scale producers which could be seen in subsidies; which are very small for vegetable production and quite large for cereal production and such. Some stakeholders believe there is a lack of understanding among the agricultural institutions and that they don't understand the value or the purpose of local food and UA. This is related to the obstacle that is mentioned regarding the absence of an official policy for local or organic food.

Infrastructural problems

Another challenge brought up is the issue with infrastructure and facilities for UA. Water supply systems; security, fences and surveillance; canopies, shelters and other light constructions for workshops, educational and social activities; garbage containers, market and laboratories for monitoring are brought up as examples of what is needed. The infrastructure for using water for gardening is not developed in the city and it is pointed out that it is neither legal nor good for the environment to use potable water from the residential buildings. It is suggested that a possible idea would be to contract independent organizations to collect water rainwater and water from rivers and put it in tanks for UA-initiatives to use, however this issue needs to be dealt with by the authorities. Another issue is transportation to peri-urban areas, which presently often requires a car.

Other challenges

Other challenges that are mentioned is a mindset among consumers of what produce can be available when (eg people wanting tomatoes and cucumbers all year round and so forth), that it is unpredictable how much they as a farmer will be able to sell and above all the problem with citizens as well as the municipality selling agricultural land to be used for other purposes. From the interviews with the municipality the impression is that the laws and regulations for preserving agricultural land is rather weak; properties seem to be prioritized over keeping agricultural land. However this needs to be investigated further.

Conclusion

In summary we can conclude that UA in Sofia is of a social and educational character rather than food supply. Many actors believe that urban agriculture is important because it could improve the social interaction in public spaces. The purpose of peri-UA is food production, education and leisure and peri-UA actors interviewed they have adapted to citizens with on-farm and off-farm activities. Climate, soil and property structure affect type of agriculture and the agriculture in Sofia Metropolitan Region is limited by the climate, the soil typologies and the property structure. It is noted that Sofia has two farmers markets created by the civil society. These are points, where small farmers, not only from Sofia, can sell their production directly to the costumers.

The study has shown that there are a number of stakeholders involved in UA in Sofia of which some seems to be aware of each other while others are not. There is no official network for the different bottom-up initiatives; however there have been efforts to bring them together. The quite recent initiative with an unofficial network for bottom-up initiatives involved in UA shows there might be a will to collaborate. However, in general there seems to be a lack of collaboration between stakeholders (both between bottom-up initiatives and between bottom-up authorities and authorities). There also seems to be some conflicts and tension among certain bottom-up initiatives. Since the network is still in its infancy it's hard to tell what effects this could have on the development of UA in Sofia, however it is recommended that this process is followed during the next few years. Most of the interviewed bottom-up initiators have a high education and some of the farmers have worked in completely different fields holding managerial positions before they decided to start farming.

The work with UA within the municipality seems to be in its infancy and presently there seems to be a lack of knowledge on UA within the municipality. The municipality and Ministry of Agriculture do not seem to be aware of all the initiatives that are going on and so far they have not adjusted policies and guidelines according to the needs of the bottom-up initiatives. There is for example no policy in place for local nor organic food and the procedure to have an impact on the municipality's work is perceived as long and complicated and to require expert competence in urban planning. It is unclear which department within the municipality who is responsible for UA. We believe that this is not clear to the municipality itself and that there is no particular department in charge of UA and local food. It's not possible to draw any conclusion in how active the municipality is in establishing a policy for UA and local food because of the low number of interviews conducted.

There is no platform where the municipality can meet all the UA initiatives and it is clear that there is a lack of communication between the municipality and the bottom-up initiatives. There is a need for better communication and many bottom-up initiatives requests for the municipality to initiate a dialogue with them. Although it should be mentioned that not all bottom-up initiatives are interested in collaboration with the municipality and it is clear that some do not want all the demands they associate with having a contract or collaboration with the municipality. The bottom-up initiatives generally seems to know how to get involved with the municipality, however since there is

no particular person or department responsible they have chosen to contact those they believe will have the means and will to help them in the most effective manner. For some it has been the local mayor and for others it has been politicians within the European Parliament. What seems clear is that it is perceived more effective to contact the local districts rather than the central municipality. It seems that a good relationship with the municipality or ministries is crucial if you want your UA to succeed, although in order to draw any final conclusions on this more research is needed.

Suggestions

In order to proceed with UA in Sofia we suggest a number of actions to be taken:

- **Map unused spaces for UA purposes:** UA can be supported through a promotion of community gardens between blocks of households and preservation of the structures in neighborhoods where they still keep family gardens. This agriculture does not only provide leisure, education for children, social relationships between users, it also generates food and helps to increase biodiversity within the city. The food produced in the community gardens could be distributed between the gardeners or NGO or charity associations. In order to do this a first step should be to map all the unused spaces between residential blocks and green wedges which could be used for UA purposes (farms, community gardens, educational gardens, CSA etc.). The municipality has according to the Mayor of Studentski started mapping areas of where UA could be conducted and it should be ensured that all the empty spaces between blocks and the so called "green wedges" are included in this mapping project.
- **Introduce educational gardens in schools:** Agriculture has not to be seen only as an educational tool for kindergartens (less than 6 years old), it can be also transferred to primary school. The use of agriculture is an educational tool that can be done using different subjects and also can help improve the social perception of the agriculture in Sofia and Bulgaria. In order for this to happen a dialogue needs to be initiated with the Ministry of Education as well as the Municipality of Sofia regarding introducing educational gardens in kindergartens and primary schools.
- **Training for city farmers:** Many stakeholders mentions the problem with young people not being interested in farming or moving back to the rural areas. Therefore a suggestion is to explore the possibility of starting a separate training school for city farmers. Inspiration could be gathered from the Canadian training school 'City Farm School' run by a Canadian NGO in Montreal (www.cityfarmschool.com).
- **Integrate UA within university courses:** UA should be introduced as a topic in the MsC program on Urban Planning at the Sofia University as well as in the agricultural programs.
- **Research on developing CSA in Sofia:** Research should be conducted on the potential for CSA in and around Sofia. Market the concept for small scale farmers and bottom-up UA initiatives.
- **Integrate UA in the environmental movement:** There are a number of environmental NGOs active in UA-projects. Since the environmental movement is supposed to be rather strong in Bulgaria this is something that should be taken advantage of for developing UA in Sofia.

- ***Creation of labels for local food and promotion of agricultural artisan's products:*** In order to keep crop production around Sofia public administration should consider creating labels for local food as well as promote agricultural artisan's products often produced on a small scale. If we talk of peri-urban commercial agriculture, it should increase the production of vegetables and fruits. However, it should be bare in mind that this process is not always easy because it is subject to the use of varieties, which their cycles are adapted to the Sofia's climate or use of technology for vegetables production (heated greenhouses, fertigation ...) that are not easily to introduce due to the high cost of implantation.
- ***Encouragement of the diversification of farms:*** The diversification of farms should be encourage, either farming, introducing new varieties or species, or food processing (flours, dairy products, meat products, jams, marmalades, pickles, sauces, juices, spirits and liquors, breweries ...); or providing services to the citizens (educational, cultural, social, tourism, gastronomy ...). Farm diversification is very important because the climate determines the production of fresh products (vegetables and fruits).The small size of farms can be a determining factor and therefore small-scale farmers should be encouraged (and enabled) to collaborate by for example coordinating the production and the food distribution.
- ***Establish a 'Food Council' in Sofia:*** During the recent years a number of different working groups or loose networks have been initiated. However none of these have managed to either sustain or to bring all the different stakeholders together. A food council should therefore be established with representatives from both bottom-up initiatives, farmers and the authorities (Sofia municipality, Ministry of Agriculture, Ministry of Social Affairs etc.). The council should meet about once a month and the first task could be to develop a policy and action plan for UA and local food in Sofia. For such a policy to be successful it is crucial that both bottom up initiatives and farmers are involved in this process, and the council could be a working platform for this. Inspiration and knowledge on how to start a food council can be gathered from for example:
 - Cork Food Policy Council in Ireland.
 - Edmonton Food Council.
 - Guelph-Wellington Food Round Table (GWFRT).
 - Nourishing communities Sustainable Local Food Systems Research grou

References

Krunić, N., Maksin, M. Milijić S., Bakić O., Đurđević J., 2014. Population Dynamics and Land Cover Changes of Urban Areas. *Spatium International Review* 31 22-29.

Ministry of Agriculture, 2013. Annual Report on the Situation and Development of Agriculture. Available from: <www.mzh.government.bg/MZH/Libraries/AgryReports/2013.sflb.ashx> [31 March 2015].

Sofia Municipality, 2004. Master Plan of the city of Sofia and Sofia Municipality – Summary Report. Available from: <http://investinsofia.eu/sofia/index.php?option=com_content&task=view&id=25&Itemid=35> [31 March 2015].

Staddon C., Mollov B., 2000. City profile Sofia, Bulgaria. *Cities* 17 (5) 379 – 387.

Webpages:

City Farm School (2015-04-17) City Farm School webpage.

Available: <http://www.cityfarmschool.com> [2015-02-16].

Cork Food Policy Council (2015-04-17) Cork Food Policy Council webpage. Available:

<http://www.corkfoodpolicycouncil.com> [2015-04-17].

Cork Food Policy Council (2015-04-17) Cork Food Policy Council Facebook page. Available:

<https://www.facebook.com/CorkFoodPolicyCouncil> [2015-04-17].

Edmonton Food Council (2015-04-17) Edmonton Food Council webpage. Available:

http://www.edmonton.ca/city_government/urban_planning_and_design/edmonton-food-council.aspx [2015-04-17].

Guelph-Wellington Food Round Table (GWFRT) (2015-04-17) Guelph-Wellington Food Round Table webpage. Available: <http://www.gwfrt.com/> [2015-04-17].

Nourishing communities Sustainable Local Food Systems Research group (2015-04-17).

Nourishing communities Sustainable Local Food Systems Research group webpage.

Available: <http://nourishingontario.ca/blog/tag/food-policy-council/>

Appendix

Interview guides

Jenny's interview guides

1. Interview guide bottom-up initiatives

Background

- Tell me about your NGO/project
- Year of foundation?
- Years of activity?
- Number of members?
- Production area (approx. ha or square meter)
- Total area (approx. ha or square meter)
- Employed persons (paid, full time equivalent)
- Involved persons (volunteers, approx)
- Kind of crops and livestock:
- Production system (i.e. integrated, organic certified, organic, permaculture, conventional...)
- Main activity
- Main services (i.e. educational activities, business events...) (What is the offer of the enterprise/project)
- What is the overall goal of the project? – for the individual, for the group/organisation?
 - What is the approach used to achieve it?
- Results
- Has it led to new activities? Yes/no – why?
- How would you describe the specific demand or need, which your enterprise/project can cover with its offer?

- What makes your products or services unique compared to alternative providers?
- Which marketing channels are used to hand out products and services to clients?

Organisation

- How is the project organized? Please characterize the organizational structure of your project (enterprise, association, project?)
- Has the project a defined legal form? (eg cooperative, association...)
- How is the decision process in the project – who is deciding and who is responsible for management and/or supervision?
- How are you financed?

Success factors/Obstacles

- Success factors: Which factors (reasons) make your activities successful?
- Which are the principal problems/obstacles/challenges that your activities are facing?

Collaboration with other groups involved in urban farming

- Do you have contact with other *aktörer* (other organisations, municipality – different departments etc.)?
- Are you involved in any partnerships? (f.e. professional organizations, marketing alliances...) or collaborate with any in any other way?
- Do you have a clear picture of other initiatives regarding urban farming/urban gardening in Sofia?
- Is it easy to collect information about this?
- Is there a common platform/network where you can meet and exchange ideas, experiences, and collaborate?
- Do you think it would be fruitful to collaborate? If yes/no why?
- What could the other NGO's contribute with when it comes to urban farming/gardening?
- How can learning be encouraged/fostered between the different stakeholders?

Contact/collaboration with the municipality

Relationship with the municipality

- Tell me about your relationship with the municipality

- How is the public support of your project/organisation/enterprise? Does the project get support from advisory services?
 - Does the project get public subsidies, and if yes, under which schemes/programs? (ie. do the municipality support you financially or with practical help such as administration?)
 - Does the public pay for management and/or work in the project?
 - How is the landownership?(ie. who owns the land where you operate. Municipality/private owner? Do you rent it, or borrow the land?)
- Does the municipality understand the importance of your work?
- Do you collaborate? If yes how does this work? If no; why?
 - Are you satisfied with the collaboration? If yes; why? If no; why?
- Which propositions, expectations and wishes do you or the management of the project have towards public support for your activities (including Common Agricultural Policy) and participants/clients?

Obstacles

- How does the public limit your enterprise?

Planning process

- Does the municipality involve you in their work with urban farming/urban gardening? (i.e. do the municipality involve them in decisionmaking, urban planning and so forth?)
- Are you and other NGOs involved in the decision processes regarding urban farming/local food?
- How is the physical planning designation for your operation? (f.e.e agricultural zone, industrial zone, residential zone, nature reserve....)
- Does the Common Agricultural Policy affect your operation? Positively? Please give examples: Negatively? Please give examples.
 - Does it support the project, and if yes how?

Support

- What kind of support/help would you need in your project in order to continue long-term? From the municipality? Residents? Other stakeholders?
- In an ideal situation how would the collaboration work, what would the municipality offer, what would be your role?
- What kind of competence is needed? Eg regarding gardening, land ownership, NGO work)
- Do you need knowledge/support/information about:

- Ways to go, who to contact within: the different departments within the municipality/residents/gardeners/landlords/landowner etc?
 - Develop and use social media, build a website, volunteers, how to attract volunteers?
 - Get access to plants, greenhouse, soil, manure, storage room for tools, place for meetings, contracts regarding land use, marketing etc.
- Needs for structure? (Strukturbehov) – internal, from the surrounding community

2. Interview guide Sofia – Municipality

Background

- Tell me about your work?

Local food/urban farming – policies, guidelines and so forth

- Is local food prioritized within the municipality? (f.e. is this reflected in procurement processes and so on?)
- Is organic food prioritized within the municipality? (f.e. is this reflected in procurement processes and so on?)
- How important is the local/regional market and the national/international market (rough estimate in %)
- What is your impression of urban farming in Sofia?
- Is this an important aspect for the citizens of Sofia?
- What is the municipality's role when it comes to urban farming?
- What existing structures/processes/programs/policies regarding following exist?
 - local food/organic food/urban farming/urban gardening
 - If there aren't any why?
 - How should they be strengthened?
 - Which are missing and need to be developed in order to create prerequisites for co-creating...? (medskapande)
- Urban Planning: Land preservation of agricultural land– designated areas for urban farming/gardening? *In the compact city, agricultural land has been turned into housing complexes, e.g., the districts of Mladost and Darvenitza were constructed on fertile agricultural land.*
- Is urban gardening/farming in Sofia project based? (projektbaserat)
- What could the NGO's contribute with when it comes to urban farming/gardening?

Success factors/Obstacles

- Which factors (reasons) make the work with urban farming successful?
- Which are the principal problems/obstacles/challenges that you think urban farming/gardening is facing?

Collaboration

- Tell me about your relationship with the NGOs
- Do you have contact with the different actors involved in urban farming/gardening (other organisations, municipality – different departments etc.)?
- Is the municipality involved in any partnerships? Or collaborate with them in any other way? If yes how does this work? If no; why?
 - Are you satisfied with the collaboration? If yes; why? If no; why?
 - In an ideal situation how would the collaboration work/what would be your role
- How is the public support of the project/organisation/enterprise? Does the projects get support from advisory services?
 - Does the projects get public subsidies, and if yes, under which schemes/programs? (ie. do the municipality support you financially or with practical help such as administration?)
 - Does the public pay for management and/or work in the project?
 - How is the landownership?
- Do you have a clear picture of all the initiatives regarding urban farming/urban gardening in Sofia?
- Is it easy to collect information about this?
- Is there a common platform/network where you can meet and exchange ideas, experiences, and collaborate?
- Do you think it would be fruitful to collaborate?/To have a common platform?
- How can learning be encouraged/fostered between the different stakeholders?

Planning process

- Do the municipality involve the NGOs in their work with urban farming/urban gardening? (i.e. do the municipality involve them in decisionmaking, urban planning and so forth?)
- Are NGOs involved in the decision processes regarding urban farming/local food?
- Does the planning department regard urban farming in their planning policys, guidelines, work?

- Does the Common Agricultural Policy affect your operation? Positively? Please give examples: Negatively? Please give examples.
 - Does it support the project, and if yes how?

Support

- How can the public encourage and support bottom-up initiatives? (i.e. What kind of support/help can you give in order for them to continue long-term?)
- How can the public limit the bottom-up initiatives?
- What kind of competence do civil servants need regarding this?
- Do you need knowledge/support/information about ways to go, who to contact within the different bottom-up initiatives?
- Is there a need for structure? – internal – to coordinate the work with urban farming?



COST- the acronym for European COoperation in the field of Scientific and Technical Research- is the oldest and widest European intergovernmental network for cooperation in research. Established by the Ministerial Conference in November 1971, COST is presently used by the scientific communities of 35 European countries to cooperate in common research projects supported by national funds.

The funds provided by COST - less than 1% of the total value of the projects - support the COST cooperation networks (COST Actions) through which, with EUR 30 million per year, more than 30.000 European scientists are involved in research having a total value which exceeds EUR 2 billion per year. This is the financial worth of the European added value which COST achieves.

A “bottom up approach” (the initiative of launching a COST Action comes from the European scientists themselves), “à la carte participation” (only countries interested in the Action participate), “equality of access” (participation is open also to the scientific communities of countries not belonging to the European Union) and “flexible structure” (easy implementation and light management of the research initiatives) are the main characteristics of COST.

As precursor of advanced multidisciplinary research COST has a very important role for the realisation of the European Research Area (ERA) anticipating and complementing the activities of the Framework Programmes, constituting a “bridge” towards the scientific communities of emerging countries, increasing the mobility of researchers across Europe and fostering the establishment of “Networks of Excellence” in many key scientific domains such as: Biomedicine and Molecular Biosciences; Food and Agriculture; Forests, their Products and Services; Materials, Physical and Nanosciences; Chemistry and Molecular Sciences and Technologies; Earth System Science and Environmental Management; Information and Communication Technologies; Transport and Urban Development; Individuals, Societies, Cultures and Health. It covers basic and more applied research and also addresses issues of pre-normative nature or of societal importance.csd