

Agricultural Knowledge Systems In Transition: Towards a more effective and efficient support of Learning and Innovation Networks for Sustainable Agriculture



LEARNING FOR SUSTAINABLE AGRICULTURE: URBAN GARDENING IN BERLIN

with particular focus on Allmende Kontor



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Project funded under the Seventh Research Framework Programme of the European Union		
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1 SUMMARY

In the last years Berlin has become a hot spot and an international "capital" of urban gardening. While in 2002 there were approximately just eight urban gardens in all of Germany - none of which were in Berlin—today ,there are more than 100 urban gardens in Germany's capital city. One important urban gardening initiative in Berlin is the "Allmende Kontor" at the former Tempelhof airport developed in 2011 and involving more than 900 gardeners on 5000 m². While it shares many similarities with other urban gardening initiatives in Berlin in terms of its emergence and the underlying motivations of actors, it is a particularly suitable case study to analyse in the context of the SOLINSA project because of its bigger size and the impressive number of people involved, its remarkable focus on environmental sustainability and its participatory governance approach.

To understand the dynamics of urban gardening in Berlin it is important to see it in the context of the underlying motivations and objectives of the individuals participating in the gardening activities. The purpose of such an organisation are remarkably diverse and address all aspects of sustainability - ranging from a strong focus on social aspects (social integration, contribution to urban development and education) and environmental ones (organic, local, healthy food, agrobiological diversity etc.) to economic considerations (access to gardens for underprivileged, reduce economic burden through contributions to food self-sufficiency). This broad range results in a diverse network of different people with different backgrounds that form a strong and growing network in Berlin.

Learning how to grow food in the "Allmende Kontor" is mainly based on informal learning networks such as conversations between gardeners and activists, seminars, online platforms, social media, billboards, plenary meetings, working groups etc. However, currently there are approaches to combine formal with informal learning, through an exchange of apprenticeships (including future gardeners), traineeships and outreach to interested persons with regard to the planning and maintenance of urban gardens. The participatory governance approach and the diverse network of actors also generate the exchange of knowledge and mutual understanding and respect among diverse groups of people.

The main success factors are a) highly motivated/ capable activists working on an honorary basis in well connected networks, b) the ease of access to urban gardening initiatives and a participatory governance approach and c) the (potential) availability of public (green) space. Generally, the local framework (particularly the openness of public administration) is more important than national or EU regulations policy frameworks.

On the other hand, identified barriers include: a) the fact that many gardens are planned on land that can only be used temporarily, b) a lack of financial support,

c) a lack of acknowledgement by public administration of the provisionary services gardens provide and d) a general lack of legal structures to define rights and duties of urban gardeners. In particular, one of the core demands of urban gardeners in Berlin for several years is to receive financial support in order to establish a coordination centre ("Koordinierungsstelle") for urban gardening in Berlin. This has yet to be realised.

2 INTRODUCTION AND OBJECTIVES

In the last decade Berlin has become a hot spot and the international "capital" of urban gardening:

In 2002 there were some eight urban gardens in Germany and none in Berlin, meanwhile (August 2013) there are more than 100 urban gardens in Berlin. This number doesn't even include traditional allotment gardens, school gardens, children farms etc.

The reasons why people get involved in urban gardening initiatives are manifold. However, urban gardens do share a simple principle in that they provide people without a professional agricultural background the opportunity to undertake gardening and small scale agriculture experiences. Their small size and mix of various actors result in a profoundly different exchange of knowledge and skills, bringing about different patterns than within other agricultural and gardening networks.

It is for this reason that urban gardening is an interesting case study within the European FP7 research project "SOLINSA – Support and Learning of Innovation for Sustainable Agriculture"¹. SOLINSA aims to identify barriers and success factors to the development of so called "Learning and Innovation Networks for Sustainable Agriculture" (LINSA). Within the project different innovative and successful networks are explored.

This paper will contribute to the objectives outlined in the SOLINSA project by analysing urban gardening initiatives in Berlin. It will focus on the following aspects:

- 1. First, this case study will shed a light on how urban gardening motivates community involvement with specific reference to the development of Berlin's urban gardening movement. It will also clarify the role of sustainability in these efforts and motivations.
- 2. Second, it will look for the success factors as well as barriers faced; with a particular focus on the role of governance structures, knowledge sharing and decision making processes.
- 3. Based on these observations first conclusions about the transferability of experiences to other regions and necessary preconditions will be provided.

¹ See www.solinsa.net

The analysis will relate to urban gardening in Berlin, but will highlight one of the bigger initiatives in the city, the "Allmende Kontor" on the former airport Berlin-Tempelhof, that has a particular emphasis on sustainability and a strong network to other urban gardens.

3 METHODS

For this analysis different methods of research have been used.

Important sources have been guided interviews with key experts and advocates of urban gardening initiatives in Berlin.

Special thanks in this regard go to the following interview partners:

- Ms. Gerda Münnich, who has been shaping the urban gardening and community garden movement in Berlin for many years in numerous ways. She is a founding member and part of the core organisation team of the "Allmende Kontor".
- Dr. Elisabeth Meyer-Renschhausen, also a founding member and part of the core organisation team of the "Allmende Kontor". She is also involved in several other urban agriculture initiatives including the community gardens "Gleisdreieck". She also co-founded a working group on small scale agriculture ("AG Kleinstlandwirtschaft") as early as 1997 – a group that proved to become an important forum for urban gardening activists in Berlin.
- Dr. Michael Gödde leads the department "Landscape planning and Nature Protection" within the Berlin Senate Department for Urban Development and the Environment². Although there is no official responsibility for urban gardening within the Berlin Senate administration he is involved in many processes that effect urban gardening activities.
- Dr. Annette Piorr, who heads the German BMBF research project INNSULA³ at the Leibniz Centre for Agricultural Landscape Research (ZALF). INNSULA explores the relevance of innovations in urban agriculture and their contributions towards sustainable development.
- Jens Lukas, who has been a gardener at the "Allmende Kontor" since the garden was opened in 2011.

Moreover, the participation in the following meetings provided useful information:

• The first official meeting between urban gardeners in Berlin and the public administration (*"Werkstattgespräch urban gardening*", April 8, 2013, that took place at the Berlin Senate Department for Urban Development and the Environment).

² Referatsleitung Landschaftsplanung und Naturschutz, Senatsverwaltung für Stadtentwicklung und Umwelt, Abteilung I

³ INNSULA – Innovationsanalyse Urbane Landwirtschaft – see http://project2.zalf.de/innsula/projekt.php

• The "Research working group" ("*AG Forschung*") of the "Allmende Kontor" - Participation in one of the working group meetings and the follow up conversation with Dörte Martens provided helpful insights into existing studies and information dealing with urban gardening in Berlin.

Online information⁴ was also very helpful, given that a) the development of urban gardening is very dynamic and difficult to track by traditional sources and b) social media and the internet play an important role within knowledge exchange of urban gardeners.

4 SCOPE: URBAN GARDENING VERSUS URBAN AGRICULTURE

This case study will focus on the "new" forms of urban gardening in Berlin, such as the "Allmende Kontor".

This category includes urban gardening initiatives that a) do not produce beyond self-sufficiency, b) are community gardens by nature, and; c) don't keep animals (with the exception of beekeepers that can often be found in urban gardening initiatives).

A recently published map⁵ of urban gardens in Berlin (also focussing on the so called "new" initiatives) currently counts 100 initiatives in Berlin.

This category excludes longer established garden initiatives such as traditional allotment gardens ("*Kleingärten*", "*Schrebergärten*"), children farms ("*Kinderbauernhöfe*") and schoolgardens ("*Schulgärten*" and "*Gartenarbeitsschulen*"), although they have many common objectives as described below. It also excludes guerrilla gardens, rooftop gardens and planted tree bases ("*Baumscheiben*").

Urban gardening can therefore be described as being different to "urban agriculture". Urban agriculture can include mixed farming (arable farming and stock breeding), and often relates to conventional farms that are close to the city (Gödde 2013). Urban agriculture also tends to be more sales oriented then urban gardening initiatives (SenStadtUm 2012). However, there are overlaps between the above mentioned categories and other definitions can be found by other stakeholders (Meyer-Renschhausen 2013).

⁴ Used sources will be cited throughout the text.

⁵ The map was developed within the project "Urban Gardening in Berlin - Qualifizierung, Netzwerkbildung und modellhafte Umsetzung im Garten- und Landbau" supported by the environmental foundation DBU "Deutsche Bundesstiftung Umwelt". It shows all urban gardening initiatives in Berlin that have been registered through the website "Stadtacker.net" until May 2013– an online communication platform for urban gardening initiatives in Germany. Since July 2013 its available for download at http://gartenkarte.de/gartenplane/.

5 URBAN GARDENING IN BERLIN: MOTIVATIONS

In the last 5-10 years urban gardening has become a popular activity that has seen significant growth both in the number of people participating and the landarea that gardens take up in Berlin. People have different motivations for getting involved but there are some reoccurring themes. First, people living in cities are attracted to urban gardening because it is a non-commercial and hands on hobby that requires physical work (Radix 2012b). Most people involved in urban gardening also have an interest in connecting to nature, "getting their hands dirty" and sharing knowledge about how food is grown and what to eat. There is also a shared appreciation for access to healthy, regional organic food (SenstadtUm 2012). Beyond individual motivations there are community-centred motivations. Many people participating in urban gardening share a desire to influence the quality of life in their neighbourhood, to be involved and to contribute with a "do it yourself" approach (SenStadtUm 2012, Gödde 2013). There is often a shared concern to contribute towards sustainable urban development and environmental protection SenStadtUm 2012, Meyer-Renschhausen in Bütikofer 2012, Gödde 2013). Interestingly, community gardens have also served as important places for certain social groups, particularly segregated groups such as refugees or ethnic minorities or unemployed to work together and produce food through shared labour meanwhile building new friendships that are inter-generational in nature with children, parents and grandparents participating (Meyer-Renschhausen in Bütikofer 2012). Urban gardening also provides communities and families with low-cost alternatives to buying cheap food by giving them an opportunity to grow some of their own (Mever-Renschhausen 2013, Münnich 2013). Finally, urban gardening provides communities and individuals with an educational exchange.

Basic motivations are therefore broad and tackle all facets of sustainability. It can be noticed though that there are differences between each of the urban gardens in Berlin: While some particularly focus on intercultural gardens (e.g. Intercultural garden "Perivoli"), others have a much more prominent emphasis on environmental issues (such as the "Allmende Kontor"). However, most urban gardens in Berlin are motivated by some ecological considerations, such as use of old and rare varieties, avoidance of pesticides, permaculture principles etc⁶.

⁶ There are also Initiatives in Berlin that have a close link to urban gardens but not their own area (such as the Initiative "Social seeds" that promotes the exchange of seeds between urban gardens and others in order to promote agro-biodiversity).

6 EMERGENCE OF URBAN GARDENS IN GERMANY AND BERLIN

The roots of urban gardening activities in Germany go back many decades and have had a positive impact on the current growth of urban gardening in Berlin. They are also the foundation of many peoples' motivation to get involved in urban gardening activities nowadays.

- gardens allotment ("Kleingärten" or 1. The development of "Schrebergärten") - small gardens (each max 400m²) in urban areas goes back to the mid 19th century when industrialisation lead to a dramatic increase of illness particularly among children. The professor and doctor, Daniel Gottlob Moritz Schreber advocated that working outdoors would improve health and reconnect children with nature (so called "Schrebergärten"). During First World War more than 130.000 of these gardens existed in Germany and provided a significant boost to domestic food production. After the Second World War these allotment gardens also provided temporary homes ("Behelfsheime") for dislocated people resulting from the wartime destruction of homes nationwide. During the economic recovery in the sixties and seventies land allocated to gardens came under pressure as sites became valuable for the real estate market (WDR 2013). To protect gardens amidst the pressure of expanding development, a law was passed in 1983 that protected allotment gardens ("Bundeskleingartengesetz") by securing low rents. In parallel it defined requirements for the use of allotment gardens, with for instance the rule that one third of gardens had to be used to grow food. Such requirements helped secure and establish allotment gardens as places that continued to serve the public interest by providing recreational areas and space for the production of food. Today, there are more than 1 million allotment gardens in Germany, organized through 15 000 registered associations covering an area of more than 46 000 ha (which equals 0.25 % of Germanys agricultural areas). Compared to other regions Berlin has the most members (70.000) (Gartenfreunde Berlin 2013).
- 2. Peri-urban⁷ agriculture was also popular with East German farmers within the GDR. Back then farmers who were members within an agricultural production cooperative (*"Landwirtschaftliche Produktionsgenossenschaft"*(*"LPG"*) were able to receive land use rights for small parcels of land (0.5 ha per family) for individual production (*"Individuelle Hauswirtschaft"*). The income generated was exempted from taxation which provided a relevant incentive to produce food for one's own consumption and for sale. Although the importance of this branch of (private) production was rather neglected in the GDR, it played an important macroeconomic role (Schier 2001).

⁷ Urban agriculture in or around villages or towns

3. The core motivation of the first community gardens in Germany aimed to achieve solidarity among political refugees and immigrants. The first association in Germany was founded in 1998 in Göttingen, partially on the initiative of in-migrated families that missed garden activities that they were used to in their home countries. Gardens seemed to be an ideal location because immigrants and refugees often came from small farming communities but were unable to apply their farming knowledge in Germany. Other goals were to motivate refugees and immigrants to become active, learn German and promote social contacts between refugees, immigrants and natives.

Building on these historic developments the first urban gardening initiative in Berlin started in 2003. Milestones of the emergence of the urban gardening specifically to Berlin are described in the table below:

-	1
1997	Establishment of the informal Berlin working group "small scale agriculture" (" <i>AG Kleinstlandwirtschaft</i> " ⁸) based at the Humboldt University (later at the Free University Berlin), discussing the social and environmental impact of small-scale agriculture and community gardens in towns and rural areas all over the world. Activities also included several publications and the organisation of national and international conferences.
1997	Berlin's Agenda-Process began at local level in 1993. In 1997 the Berlin Agenda-Office was established in the Senate Department and still co-ordinates and assists the Agenda-Process at the entire municipal level. At the same time, the "Round Table for Sustainable Development in Berlin and Brandenburg" was set up (Berlin Senate Department 2013).
June 21, 2003	Establishment of the first community garden in Berlin (" <i>Wuhlegarten</i> "), in the context of Berlin's Agenda 21 process.
2003	Establishment of the foundation "Stiftung Interkultur" (as part/project of the foundation "anstiftung & ertomis") that concentrates on the support of community gardens/ intercultural gardens.
March 2004	Community gardens /intercultural gardens became a pilot project within the draft of Berlin's Local Agenda 21 ⁹ .

Table 1Milestones of the emergence of the urban gardening specifically toBerlin

⁸ The website of the working group (http://userpage.fu-berlin.de/~garten/) is used since 1998, later moved towards the platform "urbanacker.net" in 2005 and to the platform "stadtacker.net" in 2012.

⁹ Pilot project ("Leitprojekt") title: "Naturschutz interkulturell – Umsetzung interkultureller ökologischer Gärten im Rahmen der Lokalen Agenda 21 Berlin"

July 2005	Financial support of the Local Agenda 21 community gardens pilot project ¹⁰
November 2005	Inspired by the community garden " <i>Wuhlegarten</i> " in and around Berlin 23 intercultural gardens have been established (Münnich 2010).
December 2005	The website "urbanacker.net" is established as an online platform to exchange information about community gardens and urban agriculture.
April 2006	Establishment of the Berlin-Brandenburg working group on intercultural gardens ("AG Interkulturelle Gärten").
2006	Berlin's Local Agenda 21 supports the establishment of community gardens and recommends two community gardens for each of the 12 districs (<i>"Bezirke"</i>) within Berlin.
April 2011	Establishment of the community garden project "Allmende Kontor" at the former Tempelhof airport (see chapter below)
2012	Establishment of the online platform " <i>stadtacker.net</i> " (which can be translated as "urban field") that partly replaces/continues and broadens the efforts of the online platform "urbanacker.net" with financial support of the German BMBF research project "INNSULA". " <i>stadtacker</i> " aims to provide an interactive web platform for knowledge, activities and projects of urban agriculture in Germany (Berges 2013).
August 2013	Hundred community gardens in Berlin have been established/ have entered a profile at the online platform "Stadtacker.net".

7 THE "ALLMENDE KONTOR"

7.1 Characteristics and emergence

The "Allmende Kontor" – loosely translated as "office for community spaces" (Tempelhof Projekt GmbH (2013a)¹¹ – is an open community garden and a temporary pioneer project on the former airport Berlin-Tempelhof, which is currently a public park in Berlin¹². The garden comprises 5.000 m² and has room for 280 self-constructed raised beds (Radix 2012a). There are currently 900 gardeners that actively use the space (Stadtacker 2013).

Following a series of demonstrations and protests led by residents and students as well as organisations such as the *AG Kleinstlandwirtschaft* (see above) of the Humboldt-University Berlin and the Tempelgärten group, the airport was

¹⁰ supported with financial sources of the lottery ("Stiftung Deutsche Klassenlotterie")

¹¹ The Tempelhof Project GmbH is responsible for the website of the "Tempelhofer Freiheit". "Tempelhofer Freiheit" is the park that is established on the former site of Berlin Tempelhof airport and now home to many "pioneer projects" such as the Allmende Kontor.

¹² The garden is accessible to everyone during the opening hours of the park, as there are no fences.

formally opened to the public on May 8, 2010 (Meyer-Renschhausen 2013, Bütikofer 2012). The first gardening activities took place on April 16, 2011.

When the park opened, the city of Berlin issued a call for proposals for pioneer projects as temporary uses for the former airport area. In autumn 2010, the proposal of the "Allmende Kontor" as a so called "pioneer project" for the temporary use of the airport was submitted. In April 2011, the first seed sowing took place (Stadtacker 2013). Over the course of the last two years the gardening project has bloomed into a mismatched sprawling of boxes, containers and beds holding a wide variety of vegetables, flowers and fruits. The initial permit to garden at Tempelhof, however, is coming to a close as the permission only gave a three year lease of the land. However, it is somewhat likely that the lease will be extended to 2016. However, long-term plans are uncertain as the city has announced plans to restructure Tempelhof for other uses not yet discerned (Tempelhof Projekt GmbH 2013b).

At Tempelhof gardens, all beds are required to be raised and planting is not allowed to touch or penetrate the soil of the ground. The reason for this is that the airport's soil is potentially contaminated from years of use as an airport, and also because the garden is temporary.









7.2 Objectives, self-conception and activities

In terms of goals the "Allmende Kontor" describes itself as eager to create a contact and networking site – a reservoir of knowledge, a place to learn and a garden – for all new and existing urban gardening initiatives, for interested individuals and anyone involved in community gardens and urban farming in Berlin. The goal is to establish joint and garden-oriented use of free space in the city and to network the movement on all levels (Tempelhof Projekt GmbH 2013a).

It also considers social and environmental objectives as very important (Stadtacker 2013).

Going beyond the traditional three pillars of sustainability (environmental, social, economic) the "Allmende Kontor" puts a focus on a forth, institutional pillar. Through its activities the project initiators want to find out more about:

- what forms of organisation and of good governance are needed for a sustainable society,
- how to shape processes of organisation and practices to use common goods sustainably and
- how can temporary uses impact urban development in the long run (Radix 2012a).

The "Allmende Kontor" sees itself as a means for participative involvement of citizens in issues of climate protection, biodiversity, urban ecology and city planning. It wants to prove that participative sustainable urban development that brings together civil society, policy actors and administration is possible (Radix 2012a).

Although the "Allmende Kontor" is deeply integrated in the urban gardening movement of Berlin (Gödde 2013) it is unique in so far as:

- It is a particularly large project involving many people (more then 900).
- The core organisation team is a group of individuals that are particularly well connected with most of them having long established experiences and networks with regards to urban gardening in Berlin (Gödde 2013). They came together interested in gardens but also with a distinctly political motivation to use the "Allmende Kontor"to influence Berlin's land selling policy (*"Liegenschaftspolitik"*) and to advocate through example an alternative to global industrial agriculture. Underlying their emphasis on locally grown food is a purely educational purpose of raising awareness about how food is grown, what grows during which seasons and to generate opportunities for urban people to partake in this process by actually doing the gardening themselves (Meyer-Renschhausen 2013).
- It aims to be an information hub within Berlin for other garden initiatives. This is also reflected in the name: "Allmende" was chosen to refer to the commons and Karl Linns call to "reclaim the commons" (Linn 2008), whereas "Kontor" – an old German word for "office" - reflected the hope that the "Allmende Kontor" will function as a coordination office for the urban gardening movement (Meyer-Renschhausen 2013).

The "Allmende Kontor" therefore provides several activities beyond gardening: they organize seed exchanges and seminars on certain issues (e.g. how to build a raised bed, how to deal with root voules, what is involved in participative city planning, how to keep bees and harvest honey, what to consider about composting etc.). They are a host of research activities and workshops (e.g. architects building multifunctional garden furniture) which are often accompanied with picnics and sharing of produce among gardeners and interested people.

Next to that, the initiative keeps close contact with the broader public and has an active media presence. It also conducts guided tours and public events and encourages knowledge exchanges between other urban gardening initiatives, foundations and researchers¹³ (Radix 2012a, Münnich 2010, Tempelhof Projekt GmbH 2013a). Particularly, the members of the core organization team are also actively involved in the knowledge and political exchange between administrations¹⁴, policy, NGOs etc.

7.3 Governance and knowledge exchange

Good governance, participation and self-organisation are principles that are at the very heart of the "Allmende Kontor" objectives (Radix 2012a). This is reflected by the chosen governance structure:

The "Allmende Kontor" works non-profit and is self governed by a core team of thirteen people¹⁵ (10 of which are also founding members). Beyond the core organisation group that meets regularly in a plenum to discuss and make decisions, there are strong connections to approximately 100 Berlin garden activists that are deeper involved in networking with the "Allmende Kontor"/ development of the "Allmende Kontor". Additionally, there are 800 individuals interested in the "Allmende Kontor" activities (supporters, neighbours, gardeners) - with 600 of these 800 being actively involved in the "Allmende Kontor" (gardening) activities (Radix 2012a).

The gardeners themselves are a diverse crowd made up of several nationalities (including but not limited to, German, Arab, French and Turkish) of different ages and different social backgrounds (families, singles, students, academics, unemployed etc.) (Tempelhof Projekt GmbH 2013a).

¹³ e.g. through the Allmende Kontor's research working group ("AG Forschung") that meets regularly and is open for external researchers dealing with urban gardening.

¹⁴ e.g. three members of the core organization team supported the development of Berlin' participation handbook (SenStadtUm 2011), that aimed at informing employees of the Berlin administration about participation and encouraging them to use participative methods by introducing them to useful examples and instructions/guidance (Rima 2012). Beyond this, many urban gardening activists of the "Allmende Kontor" are also involved in other exchanges with the local and municipal administration (Rima 2012).

¹⁵ The core team consists of experienced community gardeners and scientists that are diverse in age, origin (East and West German), background/profession etc.

People also organise working groups/subprojects according to their interests, such as the working group research ("*AG Forschung*") and the working group on communication and responsibility ("*AG Kommunikation und Verantwortung*"), a sub project on bees ("*Schaut mal: Bienen*") etc. The "Allmende Kontor" generally encourages the formation of such groups and allows motivated individuals to take over responsibility. This participatory approach works out very well and is positively acknowledged by the gardeners (Rima 2012).

The participatory approach also benefits a lot from its location. Given that the park is an attraction to both people from the neighbourhood, but also from other quarters and for tourists, there are a lot of people that become curious by the unusual and creative setting of the garden (Bütikofer, 2012).

Formally, the "Allmende Kontor" is a registered association ("*eingetragener Verein (e.V.)*"). Thus far it has been part of the "Ideenwerkstatt Berlin e.V." (Workstation 2013), which is a platform for the realisation and networking of projects and initiatives in Berlin. However, it is possible that the "Allmende Kontor" itself will become a registered association in the near future given the growing structures and work load to organise the "Allmende Kontor" (Meyer-Renschhausen 2013) - rather than being officially organized through the Workstation Ideenwerkstatt e.V.¹⁶.

To become a gardener at the "Allmende Kontor" there are no requirements in relation to experience, nationality or age. The only precondition is to come to the garden and if there is a free bed (although currently there aren't free beds anymore), to leave one's name, the number of the assigned bed and an email address. To welcome new gardeners or interested people, every Saturday, informal, introductory meetings take place.

There are also no obligations to take part in plenary meetings and no obligation to pay a certain fee, as the garden should also be open for all people who couldn't otherwise afford to participate.

Since 2013 though there was a "reform" in the organisation of the beds, meaning that all existing beds have been clustered in 10 subgroups of beds¹⁷ (now called "neighbourhoods") and a new requirement for all gardeners has been introduced to ensure the water supply of the garden¹⁸. Now all neighbourhoods are (in rotation) responsible to self-organise within their groups that the water supply is distributed in a way that meets the needs of their members.

¹⁶ The current solution was necessary given that the requirement for all proposals aiming to become a pioneer project at the former Tempelhof airport was that they are organized within a registered association. As this would have been a time intensive procedure, the existing association "Workstation Ideenwerkstatt" became the project executing organisation (Meyer-Renschhausen 2013).

¹⁷ Clustered in beds that are close to each other. They are marked with differently colored flags. However, whoever feels that he/ she belongs to a neighborhood that is located somewhere else in the garden, simply marks his/ her bed with the according colour.

¹⁸ which is not available on the field, and tanks need to be filled up with a water supply that is located close to the garden

The new structure also ensures that one person per neighbourhood takes part in the plenary meetings. They also have own emails lists.

As mentioned, another characteristic of the "Allmende Kontor" is that it started with hardly any rules for the gardeners¹⁹. Within a group learning process though, it became obvious that there is a need to commonly agree on a few rules, which have been and are set up according to the groups needs²⁰.

The governance structure at the "Allmende Kontor" also allows many (other) ways of knowledge exchange and discussions and supports informal learning (Piorr 2013), be it on core gardening topics²¹, the development of the neighbourhood or other issues.

Very common mechanisms of group governance are simply conversations between gardeners while they are working in the garden as well as seminars and regular plenary meetings. Moreover, there are mailing lists, the above mentioned sub-organisation of neighbourhoods and the website *stadtacker.net* ("urbanfield") that informs members regularly about activities in Berlin's urban gardens and other relevant issues²². A billboard in the garden informs about relevant news and provides information for people interested in the project and urban gardening activities in general.

The working basis for the people active within the Allmende Kontor is similar to most other urban gardening initiatives in Berlin: People work on an honorary basis and do not get paid²³. However, given the contract with the city as a pilot project the "Allmende Kontor" is not even allowed to conduct any commercial activities, such as selling drinks on the field. This is different to other pilot projects within the park. The lack of indirect (such as favourable contract requirements) or direct (e.g. financed staff) financial support provides a certain barrier to the engagement of the involved activists²⁴.

¹⁹ except those that were defined in their use contract for the area

²⁰ such as the size of beds, how to deal with "orphan" beds, garbage-problems, if benches or shacks are allowed etc.

²¹ such as about growing practices and biological pest control, seed exchanges etc.

²² Stadtacker.net is an interactive online platform for collecting and sharing knowledge, experiences, activities and projects of urban gardening that was initiated as part of a project funded by the federal ministry of education and research (BMBF) executed by the Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF) e. V. and developed in cooperation with experts from science and practice.

²³ Some though were supported by the public job creation schemes ("one Euro Jobs"), others such as the "*Prinzessinnengärten*" earned enough funds to be able to employ people.

²⁴ as for example faced by the research working group ("*AG Forschung*"). In the last years there have been so many research activities and interview requests, that there is some discussion within the core organisation team how far these requests can be further answered given time needed and the imbalance between researchers paid within their projects and activists working in an honorary capacity that provide the information. See also chapter on barriers and success factors.

Box: Characteristics of the "Allmende Kontor" as a LINSA (Learning and Innovation Network for Sustainable Agriculture)

- It is a learning network that has developed outside the main agricultural knowledge systems. However, there are several ways in which the "Allmende Kontor" supports learning and innovation for sustainable agriculture: e.g. through conversations between gardeners and activists, seminars, online platforms, billboards, plenary meetings, working groups etc.
- It is innovative in the way it operates (actors and governance) and how it addresses agriculture in a much broader context of urban development, social integration etc.
- It operates on the principle of knowledge and information sharing and learning.
- It includes diverse players (civil society, local administrations, NGOs, scientists etc.) and aims for a participatory approach.

7.4 Financial and other support mechanisms

While all of the organisational and practical work at the "Allmende Kontor" is carried out on a voluntary unpaid basis, there are some costs that need to be covered and investments that need to be undertaken.

First, each year the group has to pay a fixed user fee of 5000 Euro. Second, investments are and were needed to e.g. build infrastructure, get building material and soil, design a website and cover the running costs.

As for income streams the following are the most important:

- Donations by gardeners and other private donors
- Foundation support ("Stiftung Interkultur" and "anstiftung & ertomis")
- Support provided by research projects not exclusively for the "Allmende Kontor", but many more Berlin urban gardening projects, e.g.
 - Through the establishment and maintenance of the website "Stadtacker.net" (an interactive web platform for knowledge, activities and projects of urban agriculture in Germany) as a common effort of different associations, foundations and research groups ²⁵.
 - Within a project of the German Environmental Foundation DBU ("Deutsche Bundesstiftung Umwelt") apprentices (including future

²⁵ On stadtacker.net everybody can participate, create garden/farm profiles, announce upcoming events and share knowledge with other urban farmers. It thus serves for information, networking and mutual support. Stadtacker.net was initiated by various practitioner organizations, e.g. urbanacker.net, Allmende-Kontor, Bundesverband Deutscher Gartenfreunde e.V., Stiftungsgemeinschaft anstiftung & ertomis (and many more) as well as the BMBF research project INNSULA of the Leibniz-Centre for Agricultural Landscape Research (ZALF) and the DBU Project "Education in Urban Gardening in Berlin" of the Humboldt University of Berlin (Berges 2013).

gardeners), trainees and interested persons can learn the skills necessary to plan and maintain urban gardens. The project combines formal and informal learning. Within the project four urban gardening projects in Berlin are supported including the "Allmende Kontor" (development of an irrigation concept) (DBU 2013).

 The establishment of an advisory network and advisory platform *"Neues urbanes Grün"* (New urban green) at another of Berlins prominent urban gardens called *"Prinzessinnengarten"*, supported by the German Federal Environmental Ministry and the Federal Environment Agency (Prinzessinnengarten 2013).

8 IMPACTS

Meanwhile, a couple of research projects have been started in Germany that analyse the development, the innovation potential, necessary political frameworks etc. of urban gardening activities. However, the environmental impact of urban gardening is not yet scientifically explored and assessed (Piorr, A 2013 and Hartmann et al. 2012)²⁶.

What has been evident though is that urban gardening initiatives in Berlin have catalyzed discussions about the development and use of fallow land and unused spaces in urban areas as temporary or permanent use forms (Piorr 2013).

The "Allmende Kontor" is also recognized to be "an excellent sustainability initiative" and certificated as such since 2012 by the by the "*Rat für nachhaltige Entwicklung*" (German Council for Sustainable Development)²⁷.

9 BARRIERS, SUCCESS FACTORS, REQUIREMENTS

In order to transfer Berlin's experiences to other cities and countries it is important to know about barriers and success factors. Factors that make urban gardens successful as well as those that constitute barriers to success vary greatly depending on the individuals involved, the space, the local governance structure and the regulatory and economic conditions (Piorr 2013).

²⁶ Also, no research projects are known, that address the question why urban gardening projects in Berlin failed. Remarkably, there have been only very few that failed (4-6 in 10 years) (Münnich 2013). However, in order to analyse important prerequirements for the success of urban gardening initiatives, it might be just as helpful to analyse those projects that failed.

²⁷ The so called "Werkstatt N" is a certificate for excellent sustainability initiatives (including the "Allmende Kontor"), issued by the German Council for Sustainable Development ("*Rat für nachhaltige Entwicklung*").

However, the following elements play a particular role for most urban gardens in Berlin, including the "Allmende Kontor". The list will be concluded by requirements to policy makers by urban gardening activists in Berlin.

9.1 Barriers:

- Lack of a legal structure for urban gardens²⁸/ fair balance of rights and duties for urban gardeners, which is e.g. expressed by the need of urban gardeners to have a statutory framework that defines a fair balance between rights and duties for a (temporary) urban gardening use between users and the owner of the site (Haertel 2013). The Senate Department for Urban Development and the Environment is currently developing a blueprint for a potential "cooperation treaty" (*Kooperationsvertrag*) (Gödde 2013).
- Uncertainty of future use/follow up use of temporary gardens (Haertel 2013)²⁹. In one sense, the temporary use of land may make it easier to obtain a permit and is certainly more simple and inexpensive than obtaining formal permanent ownership. However, this very same factor creates a sense of uncertainty and can be demoralizing to communities that have spent years building a space and community around a garden that will at some stage will need to be closed.
- Limited access to (new) areas for urban gardening
- Limitations of urban activists to get engaged (for societal benefits) on a strictly unpaid/voluntary basis: The organisation of gardens can be a lot of work, particularly in the beginning stages of establishment. The fact that most positions are unpaid and voluntary makes it difficult for dedicated leaders to give the time and energy necessary to run the project.
- **Too little acknowledgement** by policy and administration for the efforts and achievements of urban gardeners (Haertel 2013, Meyer-Renschhausen 2010): Many urban gardens provide indirect benefits and social services to communities but are not recognized by formal institutions for doing so.
- No clear responsibility within local administration and no coordination of different aspects of urban gardens through the administration (Haertel 2013).

²⁸ different to allotment gardens and private gardens, which have a legal basis

²⁹ Most gardens have the approval to use their areas between 1-10 years, but no security afterwards (Haertel 2013).

9.2 Success factors

- **People involved/honorary engagement**: The success of the initiative largely depends on the communication and cooperation abilities of individuals with regard to public relations, application for funds, and communication with the administration etc. (Haertel 2013). Experience and motivation are also determining factors (Münnich 2013). In Berlin there is a well connected network of many highly engaged urban gardening activists, who almost all work on an honorary basis and play a strong role in the emergence and further development of urban gardening in Berlin.
- Ease of access to urban gardening initiatives: Little requirements to get involved in urban gardens (different to e.g. allotment gardens) seem to attract a growing number of people (Gödde 2013).
- Available funds/ income and if or not the project has been often and positively be subject of **media attention** are also important success factors (Haertel 2013)
- Location of the garden: Inner city gardens receive more attention and are more likely to get supported (Haertel 2013).
- Inclusion of all relevant departments within administration (departments for urban development, environment, aliens department etc.) as early as possible in the set up/maintenance of a (new) urban garden early in the planning process (Münnich 2013).
- **Nomadic status:** Even if one of the main concerns of urban gardeners is to secure their gardens in the long-term, it might have been a success factor for the increase of urban gardens in Berlin that many of them were first established as temporary uses. This improved the willingness of administration and owners of certain sites to agree to an (often experimental) short term use. The nomadic design (prohibition to roots in the ground, raised beds, portable containers etc.) might also improve the flexibility of urban gardeners to relocate to other areas once it is needed (Radix 2012b, Meyer-Renschhausen 2010).
- Availability of "green areas": Even if not explicitly mentioned in any of the interviews, studies etc. and despite the demand of urban gardeners to secure new areas for urban gardens it can be assumed that the relative high amount of "green" area which is approximately 44% of the land in Berlin, is relatively high compared to other capitals such as London (33%) or Paris (11%) (data according to SenStadtUm 2012). Berlin also has a uniquely conscientious consumer base with a high emphasis on environmental sustainability, particularly on local and organically grown food. Moreover, Berlin has a lot of creative potential and students from more than four universities, which is likely to have had a positive impact in the growth of urban gardening initiatives in Berlin.

9.3 Other important variables (which can act either as success factors or barriers)

- **Local administration** is the most relevant level of governance in relation to urban gardening and having the political support from local politicians is beneficial (Haertel 2013). In this regard, national, EU and/ or international policy frameworks are less important for the success of urban gardening initiatives in Berlin³⁰.
- Interaction with the owner of the site (Haertel 2013) is a factor that comes into play when negotiating the duration of the use permission, allowance of changes etc.
- If/ how networks are used (Haertel 2013) impacts e.g. if public support can be built up etc.
- **Public acceptance**/balancing different interests, e.g. if urban gardens exclude others by a fence or allow public access³¹.
- Interaction between urban gardeners and the responsible administration/ personal continuity: While it is characteristic for urban gardening initiatives that they often are informally organized, for the administration it is often easier if requests (e.g. to use a certain public space) come from clearly legitimated persons (e.g. the chairperson of a registered association) and/or if there is a continuity of contact persons from urban gardening initiatives that approach the administration (Gödde 2013)³².
- Multitude of benefits: There are many benefits that urban gardening can provide. However, it would be a barrier to prescribe all of these potential benefits and/ or make them a precondition for support, as it would be an unnecessary burden for the usually very committed but voluntary and unpaid activists (Gödde 2013) that in the very first place want to enjoy themselves and their gardens.
- Moreover, the **tendency to predefine results** within financially supported projects can provide a barrier for urban gardening projects as they limit the flexibility of development (Münnich 2013)³³.

³⁰ also since they do not receive payments through the Common Agriculture Policy of the EU 31 One main issue in developing urban gardens on public spaces is if they have or have not a restricted access for the public, e.g. by a fence or other demarcation. While fences can reduce vandalism or reduce undesired other uses (dog walks etc.) they exclude others and hence are a potential barrier for public acceptance. In order to balance interests, the responsible administration from the Berlin Senate aims for a preferably open access of urban gardens on public land (Gödde 2013).

³² There were a number of Berlin urban gardening activists, that were frequently involved in Berlins urban development and urban gardening activities (Agenda 21, urban development strategies, handbook for public participation etc.), some of them belonging to the core team of the Allmende Kontor. This personal continuity can be seen as a success factor for cooperation with Berlin's administration (Gödde 2013).

³³ For example, in the Allmende Kontor, rules were not defined in advance but only when there was a growing need and debate in the group. This approach requires trust in the competence and

Interestingly, according to Haertel 2013 – even if this is not based on an empiric analysis – urban gardening initiatives that were established in a bottom up process were just as successful as those established in a top-down process.

9.4 Requirements to policy makers and administration by urban gardening activists

- Establishment of a coordination office/information hub with staff on a paid basis that provides that can serve as an information hub for urban gardening activits and interested people³⁴ (Haertel 2013, Münnich 2013, Meyer-Renschhausen 2013, Münnich 2010)
- Secure the areas of existing (temporary) gardens for future use (Haertel 2013)
- **Provide access to land**/ the opportunity to establish new gardens (Meyer-Renschhausen 2013), e.g. a certain percentage of the city area (Meyer-Renschhausen 2010)
- Set up financial schemes/projects that support civil society engagement in urban gardening projects that do not predefine all results/ potential achievements (Münnich 2013, Radix 2012a), and neither just follow the logic of achieving a single objective³⁵. The main areas where funds are needed in urban gardening projects are:
 a) personal continuity, i.e. receive a financial support for core staff, b) support for investments in (built) infrastructure and c) assistance for educational activities (Haertel 2013).
- **Provide a clear overview of responsibilities** and contact persons within administration.
- Establish/ improve horizontal cooperation between different departments within administration (education, nature protection, alien department, health, urban development, etc) together with urban gardening activists (Haertel 2013, Radix 2012a).
- Establish regular coordination and exchange opportunities/meetings between urban gardening activists and administration, collaborate in planning events (Haertel 2013).

capability of the main actors and the group rather than the trust in prescribing activities and results (Münnich 2013), but it may well achieve results that are longer lasting, and better enable social and/ or environmental innovation.

³⁴ to help answering questions about the establishment of a garden, who to contact/ negotiate with, who to prepare a cooperation contract, which legal status is appropriate, which financial sources can be tapped/ used, answer research questions, overviews all projects and can be a contact and can represent the interests of urban gardeners (Haertel 2013). In the ideal case this staff would be recruited from those activists that are already very experiences and integrated in Berlins urban gardening activist scene (Meyer-Renschhausen 2013).

³⁵ As many support schemes come from a certain department this is often the case (Münnich 2013).

10CONCLUSIONS

The analysis has shown the diverse motivations, actors and impacts of urban gardening activities in Berlin. Within this complex, the network and urban garden "Allmende Kontor" at the former Tempelhof airport should not be seen separately from the other urban gardens in Berlin but rather as a part of a general movement. However, it is a particularly suitable case study as it has an innovative approach to governance, networking and learning for sustainable agriculture.

With regard to the research questions of the SOLINSA project and transferability of Berlin's urban gardening experiences to other cities/ regions the following aspects are of particular relevance:

- The "Allmende Kontor" has developed outside of traditional agricultural structures and their knowledge systems. In fact, its emergence is partly a reaction to conventional agriculture.
- The motivations and activities of urban gardeners in Berlin are manifold, and the scope is remarkably broad, ranging from a strong focus on social (social integration, contribution to urban development, education) to environmental aspects (organic, local, healthy food, agrobiological diversity etc.) as well as economic considerations (access to gardens for underprivileged, reduce economic burden through contributions to food self-sufficiency). Urban gardening in Berlin therefore aims to address different aspects of the whole spectrum of sustainability and provides an integrated approach to sustainable (urban) agriculture.
- The broad range of activities of urban gardens is hardly acknowledged and insufficiently supported since structures/ departments/responsibilities in local administration do not follow an integrated but segregated structure, so there is currently a lack of integrated and tailored solutions to further support urban gardening in Berlin.
- Education about growing food in the "Allmende Kontor" is mainly based on informal learning such as conversations between gardeners, sharing or resources, knowledge, traditions and skills. Additionally, there are seminars, online platforms, billboards, plenary meetings, working groups etc. However, most of the learning takes place spontaneously on the field itself. More recently, there are approaches to combine formal with informal learning, through an exchange of apprenticeships (including future gardeners), trainees and interested persons with regard to the planning and maintenance of urban gardens, too. The participatory governance approach and the diverse network of actors also stimulates the exchange of knowledge, practices etc.
- Three important success factors are a) having highly motivated/ capable activists working on an honorary basis in well connected networks, b) the ease of access to urban gardening initiatives and c) the (potential) availability of public (green) space. Generally, the local framework (particularly the openness of public administration) is more important than national / EU regulations policy frameworks.

• On the other hand, concerns about the future use of the temporary gardens is exacerbated by a) a general lack of financial support, b) limited acknowledgement by public administration and c) the lack of legal structures defining the rights and duties of urban gardeners. In particular, one of the core demands of urban gardeners in Berlin is to receive financial support in order to establish a coordination centre (*"Koordinierungsstelle"*) for urban gardening in the city. This has yet to be realized.

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