B2 - FHNW Room 125

Urban planning instruments for implementing urban gardens and designing neighbourhoods

Chair: Silvio Caputo

Town planning, development patterns and the reduction of private gardens in the suburbia of Cyprus

Author: Byron Ioannou, Frederick University, Cyprus (b.ioannou@frederick.ac.cy)

Keywords: Urban Forms, Private Gardens, Reurbanisation, Soil Sealing

Private gardening was a widespread practice since the beginning of intensive urbanisation processes in Cyprus and was already in use before the 70's. During the last forty years, early suburbia retransformed and growing practices have weakened, on one hand due to the time distance of the new population from its rural past, and on the other hand due to the new development models that minimise green and unsealed soil.

The aim of this paper is to examine the reduction of private gardens. A residential quarter of the early suburban development in Nicosia is taken as a case study. The study of an early-developed suburb can provide a brief understanding of the alterations on the land cover and the development patterns of the past decades. The paper will measure the consequent shrinkage of space for green and gardening, and form hypotheses for its causes. The main argument of this research is that garden space reduction was caused by the town planning decisions and the transition of the development models. The first step for approaching the problem is to outline the background and the trends of private green for the whole city. In a district scale, dispersed densification process scoping to the increase of private land efficiency, has proved negative for soil sealing, environmental services and growing in cities. Auditing the current conditions within the boundaries of the selected study area is a second significant step. Field research and aerial photo observations inform on possible shrinkage in vegetation and gardening lots (both in terms of size and preferred species) in relation to the building development model applied in each period.

Artman, M. & Breuste, J., 2014, ‚Cities Built for and by Residents: Soil Sealing Management in the Eyes of Urban Dwellers in Germany', Journal of Urban Planning and Development 141(3), 1-12.

Ioannou, B., Moran, N., Sondermann, M., Certomà, C. & Hardman, M., 2016, Grassroots gar-dening movements. Towards cooperative forms of green urban development in S. Bell, R. Fox-Kämper, N. Keshavarz, M. Benson, S. Caputo, S. Noori, & A. Voigt (eds.), Urban Allotment Gardens in Europe, pp. 62-89, Routledge, New York.

Ioannou, B., 2014, Urban Community Gardens in Cyprus. Background and Recent trends, in R. Fox-Kämper & N. Keshavarz (eds.), Event Report Lisbon. Urban Allotment Gardens in Europe-an Cities – Future, Challenges and Lessons Learned (COST Action TU1201), from http://www.urbanallotments.eu/fileadmin/uag/media/Lisbon/Lisbon_report_NK8.pdf

Milder, J., 2012, Sustainable Urban Form, in E.M. van Bueren, H. van Bohemen, L. Itard & H. Visscher (eds.), Sustainable Urban Environments: An Ecosystem Approach, pp. 263-284, Springer, New York.

Environmental design solutions to promote safety in urban gardens

Authors: Sandra Treija, Riga Technical University, Latvia / Alisa Korolova, Riga Technical University, Latvia / Monika Latkowska, Warsaw University of Life Sciences, Poland (alisa-k@inbox.lv)

Keywords: Allotment Garden, Crime Prevention, Theft Prevention, Safe Environment, CPTED

Urban gardens in certain European countries often face problems of theft and vandalism. Whereas previous research shows that a proper design and effective use of the built environment contribute to a reduction of criminal activities. Based on this data, this paper aims to investigate which strategies gardeners use to prevent theft and vandalism in their gardens, and whether the chosen allotment areas correspond to any principles of Crime Prevention Through Environmental Design (CPTED) as well as which principles of CPTED can be applied in cases of urban gardens. The theory of Crime Prevention Through Environmental Design has certain principles already tested in practice, showing decrease in criminal activities. In order to test the current situation in allotment gardens and to find out which design principles are most likely to be implemented in such areas, it was decided to choose eight case studies: four allotment sites in Riga and four sites in Warsaw. Focusing on allotment sites with different locations (within the residential neighbourhoods and in outskirts), the research shows the relevance of CPTED principles in different situations, making it possible to develop guidelines suitable for different cases. Literature studies, observations, evaluation of existing design solutions according to the checklist developed on the CPTED principles, and semi-structured interviews with garden facilitators were chosen as a tool to analyze the current situation in allotment gardens in Latvia and in Poland. The collected data is used for comparison of previously and currently implemented strate-gies to prevent crime in the garden area with those proposed by CPTED. The results of this research show that, in addition to design principles, there are various factors influencing probability of theft and vandalism, such as location within the city, “public access”/openness to public, and integration into the city’s green structure.

References:

Pawlikowska-Piechotka, A., 2012, ‚Urban Greens and Sustainable Land Policy Management (Case Study in Warsaw)‘, European Countryside 4(2012), 251-268.

Fennelly, J.L. & Crowe, T., 2013, Crime Prevention Through Environmental Design, Butter-worth-Heinemann, Oxford.

Grönlund, B., 2012, Is Hammarby Sjöstad a Model Case? Crime Prevention Through Environ-mental Design in Stockholm, Sweden, in V.Ceccato (ed.), The Urban Fabric of Crime and Fear, pp. 283-310, Springer, Netherlands.

The influence of community gardening on the status of housing estates in Budapest

Authors: Adrienne Csizmady, Hungarian Academy of Sciences, Hungary / Zsuzsanna Fáczányi, Szent István University Ybl Miklós, Hungary (faczanyi.zsuzsa@ybl.szie.hu)

Keywords: Neighbourhood Community, Social Capital, Deterioration of Large Housing Estates, Civil Participation

The majority (75%) of the community gardens in Budapest are located in Large Housing Estates (LHEs), where more than one third of the population of the capital resides. These estates are characterised by a decreasing social status, combined with an increasing population change. Our earlier investigations observed that an upswing in housing construction could intensify their deterioration. To slow down this process, the tools of urban regeneration have been introduced. Local governments are increasingly turning to the community garden idea as a solution to social problems related to alienation, and as a tool to improve the public perception of LHEs in the long term. For our research we selected three community garden projects that have had con-trasting influences on the 1970s-era LHEs where they were founded, in order to show the so-cial-potential of the idea. The founders of these gardens used top-down structures, with the in-tention of creating self-sustaining and active community gardens. If the projects are successful, they could represent a powerful tool for social rehabilitation impacting the network of communi-ty, mobilisation of local populations and the public perception of housing estates. In this paper we will outline the first findings of the projects, with the intention to monitor the ongoing urban rehabilitation process and the changing status of LHEs.

References:

Benkő, M., 2016, ‚Budapest’s large prefab housing estates: Urban values of yesterday, today and tomorrow‘, Hungarian Studies 29(1-2)

Benkő, M., 2014, ‚Evaluating Factors in the Image of Housing Estates‘, Periodica Polytechnica Architecture 43(1), 33-36.

Hrabovszky-Horváth, S. & Szalay, Z., 2014, ‚Environmental Assessment of a Precast Concrete Building Stock in a Time Perspective‘, Environmental Engineering and Management Journal 13(11), 2997-2804.

Salat, S., 2011, Cities and Forms: on Sustainable Urbanism, Hermann, Paris.

Temelová, J., Novák, J., Ouredníček, M. & Puldová, P., 2011, ‚Housing Estates in the Czech Republic after Socialism: Various Trajectories and Inner Differentiation‘, Urban Studies 48(9), 1811-1834.

The future of urban allotment gardens in Latvian cities as reflected in spatial develop-ment plans

Authors: Kristīne Āboliņa, University of Latvia, Latvia/ Anna Skredele, University of Latvia, Lat-via/ Andis Zīlāns, University of Latvia, Latvia (kristine.abolina@lu.lv)

Keywords: Urban Gardening, Allotment Gardens, Urban Landuse Zoning, Spatial Planning

Allotment gardens in many European towns and cities are experiencing revitalisation and a di-versification of functions. In this context a rethinking of the appropriate designation and place of allotment gardens in urban development and spatial plans is needed. In Latvia, where urban greenspace is under intense development pressure, the need to define a renewed identity for allotment gardens is particularly relevant. The objective of the study was to identify how towns and cities in Latvia have addressed the allotment garden landuse function in their development policies. The study included an analysis of the development plans, maps and building codes of 51 towns and cities in Latvia with populations greater than 2000. Answers were sought to the following questions:

1. Is the allotment garden function defined as a ”development” or ”greenspace” landuse category in municipal development policies?
2. Is the allotment garden landuse function defined in municipal maps?
3. Is the allotment garden function defined as a ”temporary” or ”permanent” landuse function?

Although allotment gardens are actively used in all of the studied cities, only in about half is the land use explicitly defined in the development plans and accompanying maps. If urban development policies in Latvia continue to attach an ambiguous meaning to the allotment landuse function, this greenspace and its social functions could be lost to the many residents for whom it is vital.

References:

Bell, S., Fox-Kämper, R., Keshavarz, N., Benson, M., Caputo, S., Noori, S. & Voigt, A. (eds.), Urban Allotment Gardens in Europe, Routledge, New York.

C2 - FHNW Room 134

Enhancing resilience and ecosystem of cities

Chair: Andrzej Mizgajski

Water management & resilience of urban allotment gardens against climate risks

Author: Paulo Brito Luz, Instituto Nacional de Investigação Agrária e Veterinária INIAV, Portugal (paulo.luz@iniav.pt)

Keywords: Climatic Regions, Global Crisis, Water Cycle, Water Management, Water Scarcity

Nowadays, intergovernmental organizations like United Nations or OECD are reporting "world population growth", "food shortage" and "water supply" as thematic areas, closely inter-related, to be addressed within the scope of "global crisis". In addition to this situation, in many countries, climate variability and change are factors which are contributing to increase water supply restrictions. At (the?) national geographic level and with regard to (?) long-term annual averages, freshwater resources across almost all Europe exceed the thresholds widely accepted (Rijsberman 2005) to sustain domestic/economic sector's needs (EEA 2009); however, considering the water cycle variability and uncertainty, both spatially and temporally, problematic occurrences related to water scarcity are increasing in extent and intensity, overall in southern Europe. In this sense, historical series of water cycle variables (e.g. potential evapotranspiration – ET; precipitation - P) are crucial to provide information to forecast meteorological and hydrological conditions. Urban agriculture is a complex issue requiring guidelines to link its multifunctionality and sustainability to the water cycle, taking into account the potential risks of disturbing weather events and anomalies in climate trends. Within this framework, a rational use of water, more particularly in relation to urban allotment gardens (UAG) activities, involves several criteria and decisions related to irrigation, drainage, rainwater harvest and storage systems, comprising different plot areas. Based upon scenarios concerning various climatic semi-arid and temperate regions, with an annual aridity index (P/ET) (UNESCO 1979) ranging from 0.5 (semi-arid) to higher then 1 (temperate - but subject to years with dry periods), and approaching site-specific conditions (soil-plant-water), this paper aims to presents design/ and management options, for the above-mentioned systems, to evaluate the possibility of ensuring water volumes to plant requirements at all stages. Thus, such information may be of further interest to water balance and crop methodologies (Aquacrop – FAO 2015) and to facilitate decision-making regarding water availability and supply practical solutions, including the most affordable for low-income households.

EEA, 2009, Water resources across Europe – confronting water scarcity and drought. EEA Technical Report No. 2/2009. Copenhagen.

FAO, 2015, AquaCrop – Crop water Productivity Model. Software Version 5.0. Land and Water Division, FAO, Rome.

Rijsberman, F.R., 2005, ‚Water scarcity: Fact or fiction?', Agricultural Water Management 80(2006), 5-22.

UNESCO, 1979, Map of the World Distribution of Arid regions. MAB Technical Notes 7, Paris.

The influence of atmospheric particles on the elemental content of vegetables in urban gardens of Sao Paulo, Brazil

Authors: Luís Fernando Amato-Lourenco, University of Sao Paulo & National Institute for Integrated Analysis of Environmental Risk, Brazil/ Tiana Carla Lopes Moreira, University of Sao Paulo, Brazil / Vanessa Cristina de Oliveira Souza, University of Sao Paulo, Brazil / Fernando Barbosa Junior, University of Sao Paulo, Brazil/ Mitiko Saiki, Nuclear and Energy Research Institute & National Institute for Integrated Analysis of Environmental Risk, Brazil/ Paulo Hilário Nascimento Saldiva, University of Sao Paulo & National Institute for Integrated Analysis of Environmental Risk, Brazil/ Thais Mauad, University of Sao Paulo & National Institute for Integrated Analysis of Environmental Risk, Brazil (luisfamato@usp.br)

Keywords: Urban Gardens, Food Safety, Risk Assessment, ICP-MS, Urban Horticulture

Despite the benefits that urban horticulture provides to society, it is not clear to what extent are the vegetables contaminated by the absorption of chemical elements derived from atmospheric depositions. This study aims to quantify the concentrations of elements accumulated in the edible tissues of Brassica oleracea L. and Spinacia oleracea and their association to characteristics of urban environment. Standardized vegetables, soil and Tillandsia usneoides L. (TU) specimens, used as air-biomonitor, were exposed for periods of 30, 60 and 90 days in 10 community-gardens and one control site. Elemental content was characterized by ICP-MS. Principal Component Analysis was conducted to cluster the elemental concentrations and Generalized Linear Models (GLM) employed to assess the association of factor scores on the variables of urban environment. Elemental content was significant lower in the control site in contrast to urban gardens ($p<0.05$). Cadmium concentrations in spinach exceeded the regulatory values (FAO/WHO) in one garden during the exposition period of 60 days. Lead concentrations in spinach were surpassed in one garden during the 60 days of exposition and in three gardens during the 90 days period, while collard green levels were exceeded in one garden during the 60 days of exposure. There was no exceedance of chromium for both vegetables. Also, there were no exceedance of these three elements during the 30 days of exposure. Linear regression between TU and collard green concentrations were positively significant for 7 elements (adjusted $R^2>0.35$), while spinach presented 15 elements (adjusted $R^2>0.39$). The GLM results showed that the components comprising high loadings of traffic-related elements were positively associated with traffic density and negatively associated with climate, distance from major avenues and the presence of vertical obstacles. Air pollution exerts a direct influence in the absorption of urban particles, which may reach levels above the recommended values for consumption.

Anthropogenic flow of matter and energy through allotment gardens as a reflection of the method of management

Authors: Lidia Poniży, Adam Mickiewicz University, Poland / Marta Węglewska, Adam Mickiewicz University, Poland / Karolina Rzańska, Adam Mickiewicz University, Poland (lidkap@amu.edu.pl)

Keywords: Urban Metabolism, Input Flows, Output Flows, Anthropogenic Flows

Cities can be compared to living organisms as they transform raw materials, fuel, and water into built environment, human biomass and waste. Anthropogenic flows and transformation of material and energy may be regarded as urban metabolism. Urban allotment gardens participate in that process. The main aim of the study was to demonstrate the relationship between matter and energy flow through the ecosystems of allotment gardens and their usage. The first step was to identify the anthropogenic flows of matter and energy through allotment plots, and on this basis we prepared a questionnaire called 'The gardener's diary', which was the main tool for collecting the necessary data. From May to October of 2014, 17 plot users of Poznan allotment gardens (11 users from 4 AGs in the city core and 6 users from 4 AGs in the outskirts of the city) filled-in the forms. Based on the questionnaire we identified three types of plot usage: mainly for recreational purposes; mainly for food production; or mixed. The obtained data on the flow of matter and energy through allotment garden were then divided into two groups: „inputs" (e.g. water, chemical fertilizers) and „outputs" (e.g. sewage, fruits and vegetables). Next, all the data were converted to the same weight units [kg] as well as energy units [MJ] and referred to the plot area [m²]. To assess the anthropogenic flows of matter and energy through allotment gardens we used two indicators: (i) indicator of matter management efficiency – W (the ratio of the total weight „inputs" coefficient to the total weight „outputs" coefficient) and (ii) energy efficiency indicator –E (the ratio of the total energy „inputs" coefficient to the total energy „outputs" coefficient). The results allowed for a quantitative comparison of plots and showed differences resulting from the usage of allotment gardens. The recreational way of usage stands out with low weight coefficients for both input and output flows. Plots related to food production were characterized by high weight coefficients of input flows, which in turn have been dominated by water consumption through irrigation. However, weight coefficients of "outputs" were low. The mixed type of usage was characterized by relatively high and balanced "inputs" and "outputs". Water being the dominant „input". Moreover, the high use of fertilizers (organic and chemical) and pesticides was significant.

References:

Decker, H., Elliott, S., Smith, F.A., Blake, D.R., Sherwood Rowland. & F., 2000, ‚Energy and material flow through the urban ecosystem', Annual Review of Energy and the Environment 25 (2000), 685-740.

Kennedy, C.A., Cuddihy, J. & Engel Yan J., 2007, ‚The changing metabolism of cities', Journal of Industrial Ecology 2007(11), 43-59.

Wolman, A., 1965, ‚The metabolism of cities', Scientific American 213(3), 179-190.

Ecosystem goods and species pools: biodiversity maintenance through collective urban gardening

Authors: Ari Jokinen, University of Tampere, Finland / Pertti Ranta, University of Helsinki, Finland / Ville Viljanen, University of Tampere, Finland (ari.jokinen@uta.fi)

Keywords: Spontaneous Species, Urban Gardening, Species Pool, Vascular Plant, Urban Biodiversity, Urban Resident, Biodiversity Performance

Spontaneous plant species in urban gardens, i.e. wild species that are not intentionally introduced into gardens by the gardeners, are usually regarded as worthless cosmopolitan weeds. We tested an assumption that gardening practices in urban allotment and domestic gardens can serve as a filter that favours not only weeds but also valuable components of local floristic diversity. For this purpose we studied an open field allotment garden (3 ha, 250 plots without shelter) and its relations to the surrounding urban neighbourhood (2,000 homes) in Tampere, Finland. The allotment has been used for gardening from the 1940s, and the neighbourhood has been built during 1900–1930 by industrial workers. Most buildings were originally small wooden houses, but gentrification has gradually changed the neighbourhood. Research methods included systematic survey of vascular plant species in the allotment area and in 79 domestic gardens of the surrounding neighbourhood, and interviews with gardeners. A city-wide floristic survey was utilized in the analysis.

We found that (1) gardening in urban allotment and domestic gardens can maintain much of the surrounding floristic diversity, including some plant species that exist in the city only in that neighbourhood, and (2) these two forms of urban gardening complement each other in maintaining spontaneous vascular plant species, species numbers and rare species on the neighbourhood scale. These findings resonate with the species pool theory and show that both allotment and domestic gardening may have clear roles in maintaining biodiversity values of the urban landscape. The positive influence of gardeners on urban biodiversity and ecosystem services was higher than expected. The paper provides new understanding of the roles of urban residents in biodiversity maintenance, because allotments and domestic gardens, including their socio-ecological interactions and co-effect on urban biodiversity on the neighbourhood scale, are rarely studied in the same research.

References:

Latour, B., 2011, ‚From multiculturalism to multinaturalism: what rules of method for the new socio-scientific experiments?‘, Nature and Culture 6(1), 1-17.

Zobel, M., Maarel, E. & Dupré, C., 1998, ‚Species pool: the concept, its determination and significance for community restoration‘, Applied Vegetation Science 1(1), 55-66.

Enhancing ecosystem services in cities through multifunctional rooftop gardens - Insights from a co-designed pilot project in Barcelona, Spain

Authors: Johannes Langemeyer, Autonomous University of Barcelona, Spain / Lidia Calvo, EixVerd, Spain / Ana Isabel Abellán García,independent consultant, Spain / Francesc Baró, Autonomous University of Barcelona, Spain / Mònica Batalla, Polytechnic University of Catalonia, Spain / Martí Boleda i Torrent, Pompeu Fabra University, Spain / Vidal Guerrero, EixVerd, Spain / Esther Sanyé-Mengual, Autonomous University of Barcelona, Spain / Montserrat Bosch González, Polytechnic University of Catalonia, Spain (johannes.langemeyer@uab.cat)

Keywords: Ecosystem Services, Life-cycle Assessment, Rooftop Gardening, Green Infrastructure, Multifunctionality

In an ever stronger urbanizing world, multi-functional green spaces are gaining increasing attention in urban planning and green infrastructure strategies. Urban gardens have a proven ability to enhance human well-being in cities through the provision of a variety of ecosystem services. Nevertheless, large parts of cities have not yet been explored for their capacity to host multi-functional urban gardens. Flat rooftops in densely populated Mediterranean cities provide large potentials to increase the amount of gardens in cities, for example, 1.764,4 ha (67%) of the houses in Barcelona, Spain, possess of flat rooftop terraces theoretically apt for carrying rooftop gardens.

In this transdisciplinary study, we assess the capacity of urban rooftop gardens in Barcelona to provide multiple ecosystem services. In an initial phase, we assess provisioning and regulating services from a 60 m2 pilot rooftop garden. In a second phase, we also consider cultural and habitat services provided by an urban rooftop farm of 3000 m2. This novel creation of rooftop gardens is based on a holistic co-design process initiated by an interdisciplinary group of scientists, architects, public planners and private business entities in collaboration with potential user groups. Within this experimental setting, we control for environmental factors such as water use, substrate types, substrate depth, energy use, installation weight, species diversity, and reduction of particulate matter; social factors, such as the demographic profiles and specific demands and interests of garden users, as well as economic costs and paybacks.

This innovative urban garden initiative is supposed to develop a new model of multi-functional urban rooftop gardens to enhance the generation of ecosystem services in cities, especially through: i) the local production of high quality and highly valued food; ii) as part of green belts and corridors for the maintenance of biodiversity and pollinators; as well as for iii) the provision of cultural ecosystem services, including environmental education and social cohesion. However, the capacity to enhance ecosystem services in cities through urban rooftop gardens depends on the possibility to upscale this novel rooftop gardening approach. Its success depends on the balance between the described benefits of rooftop gardens and their requirements in terms of material, energy, social and financial inputs in comparison.

A crucial question for our study is also, if multi-functional rooftop garden can be sustainable from a market perspective through the commercialization of food produce and recreational activities, or if public (green infrastructure) policies are required to foster urban rooftop gardening and the related stewardship of ecosystem services. Regardless if through private or public initi-

ative, the successful upscaling of co-designed, urban rooftop garden – including to other Mediterranean cities – seems a promising approach for enhancing human wellbeing in densely populated cities like Barcelona.

Conducted at larger scales, urban rooftop gardens could also provide larger benefits through the provision of regulating services, such as a reduction of the heat island effect and a filtration of PM10 (particulate matter), or as a secondary benefit from locally produced food from the reduction of GHG emissions resulting from transport.

D2 - FHNW Room 135

Quality of soils, groundwater and vegetables in urban gardens versus environmental pressures

Chairs: Béatrice Bechet & Salvatore Engel di Mauro

Strategies for reducing heavy metal accumulation in urban-grown food

Authors: Giuseppina Pennisi, University of Bologna, Italy/ Francesco Orsini, University of Bologna, Italy/ Livia Vittori Antisari, University of Bologna, Italy / Gilmo Vianello, University of Bologna, Italy/ Giorgio Gianquinto, University of Bologna, Italy (f.orsini@unibo.it)

Keywords: Soilless, Organic, Allotment Gardens, Synthetic Fertilizer

Urban agriculture is increasingly popular for social and economic benefits. However, edible crops grown in cities can be contaminated by airborne pollutants, thus leading to serious health risks. Therefore, a better understanding of contamination risks of urban cultivation is needed in order to define safe practices. The present study addresses the determination of heavy metal risk in horticultural crops grown in urban gardens of Bologna, Italy. Seven experiments were conducted between June 2015 and November 2015, using the following crop species: tomato (Solanum lycopersicum), sweet basil (Ocimum basilicum), onion (Allium cepa), lettuce (Lactuca sativa), black cabbage (Brassica oleracea), fennel (Foeniculum vulgare) and radish (Raphanus sativus). Treatments included two growing system (soil vs. soilless) and two fertilization management (conventional vs. organic). Heavy metals concentrations were quantified by inductively coupled plasma optical emission spectrometry (ICP-OES). Samples included soils and substrates as well as plant tissues. For all crop species, accumulations in plants edible portions were considered; for tomato, sweet basil, lettuce and black cabbage partitioning analysis were conducted to identify where the heavy metals were preferentially translocated. Among studied vegetables, radish presented higher heavy metal uptake (expressed by BioAccumulation Factor, BAF) and associated risks (expressed by Health Risk Index, HRI). Peat grown crops presented reduced heavy metal load, including Cr (-70%), Cu (-61%), Pb (-45%) and Ni (-81%), as compared with those grown on soil. The present work identify pollution and risk assessment monitoring guidelines specifically adapted to urban gardening in order to make cultivation safer in cities. Furthermore, it suggests possible growing techniques enabling to reduce contamination risks in polluted environments.

Evaluation of soil, groundwater and vegetable quality in Lisbon urban allotment gardens

Authors: Teresa E. Leitão, National Laboratory for Civil Engineering, Portugal/ Maria do Rosário Cameira, University of Lisbon, Portugal/ Miguel Mourato, University of Lisbon, Portugal/ Maria José Henriques, National Laboratory for Civil Engineering, Portugal/ Luísa Louro Martins, University of Lisbon, Portugal/ Hugo D. Costa, former MSc from University of Lisboa, Portugal/ João Miguel Pacheco, former MSc from University of Lisboa, Portugal (tleitao@lnec.pt)

Keywords: Urban Allotment Gardens, Quality, Soil, Water, Vegetables, Lisbon

The food safety of vegetables produced in an urban environment is often questioned due to its proximity to a range of city pressures including road traffic, aircraft corridors, fuel filling stations, and industrial areas. Besides, past urban/industrial activities might have contaminated city soils, namely throughout air pollution deposition. In addition, the agricultural and in particular the horticultural land management practices themselves may lead to potential inputs from inadequate management of applied materials, such as fertilizers, composts and pesticides, as well as household items (e.g. fences, including materials such as paints or asbestos). These products can be an additional source of contamination for soil, water and edible vegetables, with harmful impacts on humans and other species. Moreover, the intrinsic concentration of soils can be high, depending on the chemical composition of the parent-rock (Kabata-Pendias, 2001). In this context, Lisbon Municipality, based on the decision to open, in partnership with the National Laboratory for Civil Engineering (LNEC), a new public urban allotment garden (UAG) in LNEC campus, a potentially sensitive area due to its proximity to the airport, has decided to promote a protocol to study this situation with the local government Junta de Freguesia de Alvalade and, on this scope, enlarge this cooperation to other UAG in the city. This study aimed to analyse the quality of soil, ground- and irrigation water, and plant species in UAG, and to correlate its nature and characteristics with their location within the city and the gardening activity. Materials and methods included the quality assessment of wet atmospheric deposition, manure, soil, vadose zone water and plant species, for six UAG in Lisbon. Results were compared with other EU studies (e.g. Hursthouse et al., 2004). As an overall conclusion, despite the fact that concentrations in soils and waters have exceeded the recommended values in some areas, the vegetables rarely presented contamination.

Spatial distribution of trace elements in urban allotment gardens: influence of and on land-use change

Authors: Cécile le Guern, Regional geological survey Pays de la Loire, France / Liliane Jean-Soro, The French institute of science and technology for transport, development and networks & Federative Research Institute on Science and Technology of the city, France / Béatrice Bechet, The French institute of science and technology for transport, development and networks & Federative Research Institute on Science and Technology of the city, France (c.leguern@brgm.fr)

Keywords: Soil, Urban Allotment Gardens, Contamination, Land Use, Trace Elements, Origin, Map, Decision Help

As part of a large program on urban allotment gardens (UAGs) in Nantes (France), a detailed diagnosis of soil quality was carried out on 8 gardens with trace element contamination. The objective of the study was to examine how former land use influences the current trace element spatial distribution in soils and how this latter is taken into account in further land-use. The land-use changes were determined using a historical analysis of the human activities for each site. Measurements of trace elements content in topsoils and soil profiles were carried out during dry periods using a portable X-Ray fluorescence analyser, with additional laboratory analyses to calibrate the results. The origin of trace elements and their spatial distribution in soils were interpreted in light of land-use changes. On most sites, the analysis of land-use evolution induced a more efficient sampling strategy and interpretation of the results (spatial distribution and origin of trace elements). In three UAGs used previously for market gardening, the source of trace elements has nevertheless to be validated. The mapping of trace element distribution was used to discuss the soil management options with the stakeholders. The management options often led to maintaining the gardening activity. However a change in land use was decided for some allotments due to improper soil geochemical quality. Successive human activities such as industry, backfilling, agricultural crops... appear as key factors of trace element distribution in soils. However, it is not always sufficient to encompass the source of trace elements. That is why soil geochemistry is also a main parameter in soil management and further land use.

An exploration of potential airborne contamination of urban garden in Rome, Italy

Author: Salvatore Engel-Di Mauro, Department of Geography, State University of New York at New Paltz, United States (engeldis@newpaltz.edu)

Keywords: Atmospheric Deposition, Soils, Heavy Metals, Crop Contamination

A preliminary study carried out in Rome (Italy) revealed potential for Arsenic and Lead contamination of vegetables by means of general atmospheric deposition rather than soils or gardening inputs (Schreck et al. 2012). Two urban gardens were selected on the basis of previously known contamination issues. Atmospheric deposition, parent material (Pouyat et al. 2007), soils properties affecting heavy metals' mobility (Impellitteri et al. 2001), and various anthropogenic inputs (De Miguel et al. 1998) were considered. Soil samples were taken at depth from two points in each garden, within five cm of sampled crops. In one garden, Brassica oleracea L. var. palmifolia (palm cabbage) and Solanum lycopersicum (tomatoes) were grown on raised beds composed of material from nearby urbic technosols and covered with straw. Phaseolus vulgaris (string beans) comprised the other garden's crops, grown in two adjacent areas and respectively characterised by spolic technosols and imported 'organic soil' material. Inputs and crop parts were sampled and analysed for Arsenic and Lead content. A rain and dust gauge was set up in each garden for the duration of 93 days (late spring to late summer) to sample atmospheric deposition (Vallack 1995). Atmospheric deposition was high at both sites and gardening inputs had little to no contaminants present. Soil properties were more conducive to crop uptake of Arsenic than Lead. Negligible Lead content was found in vegetable crops, but the Arsenic content exceeded the amount available through soils and was highest in the leaves. These preliminary results suggest that atmospheric deposition can be a major contributing source of heavy metal contamination in urban garden vegetables even in areas well away from point sources of pollution. Further studies are necessary to verify the extent and nature of the problem relative to broader urban gardening conditions in Rome.

References:

De Miguel, E., Jimenez de Grado, M., Llamas, J.F., Martin-Dorado, A., & Mazadiego, L.F., 1998, ‚The overlooked contribution of compost application to the trace element load in the urban soil of Madrid (Spain)', The Science of the Total Environment 215(1-2), 113-122.

Impellitteri, C.A., Allen, H.E., Yin, Y., You, S.-J., & Saxe, J.K., 2001, Soil properties controlling metal partitioning, in H.M. Selim & D.L. Sparks (eds.), Heavy metals release in soils, pp. 149-167,Lewis Publishers, Boca Raton.

Pouyat, R.V., Yesilonis, I.D., Russell-Anelli, J., & Neerchal, N.K., 2007, ‚Soil chemical and physical properties that differentiate urban land-use and cover types', Soil Science Society of America Journal 71(3), 1010-1019.

Schreck, E., Foucault, Y., Sarret, G., Sobanska, S., Cécillon, L., Castrec-Rouelle, M., Uzu, G., & Dumat, C., 2012, ‚Metal and metalloid foliar uptake by various plant species exposed to atmospheric industrial fallout: Mechanisms involved for lead', Science of the Total Environment 427-428, 253-262.

Vallack, H.W., 1995, Protocol for Using the Dry Frisbee Dust Deposit Gauge, Stockholm Environment Institute, Stockholm.

Variability transfer of potential toxic elements transfer in vegetables grown on urban allotment gardens – A case study from the West of Scotland.

Authors: Alaba Agboola, University of the West of Scotland, United Kingdom / Andrew Hursthouse, University of the West of Scotland, United Kingdom/ Simon Cuthbert, University of the West of Scotland, United Kingdom / Roslyn McIntosh, Inverclyde Council, United Kingdom (andrew.hursthouse@uws.ac.uk)

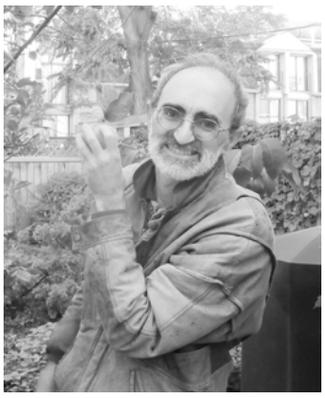
Keywords: Potentially Toxic Elements, Soil Quality, Plant Transfer, Variability

Soil acts as a sink for potentially toxic elements (PTEs- predominantly metals) in urban environments. In particular soil in urban allotment gardens potentially receives increased inputs from the gardening practice and location of the allotment site in relation to other sources of environmental emissions. This has a spatial and temporal context due to the historical use of individual plots, their location in relation to background soil properties and the dynamic relationship to urban infrastructure. Consequently individual plot soil metal inventories are highly variable. A wide range of fruit and vegetable produce is typically generated on domestic allotment sites and is potentially exposed to soil metal content for up take.

The aim of this study was to assess the nature of uptake from soil to vegetables from a number of plots in allotment gardens form West Scotland and examine factors responsible for bio-availability and uptake. Soil samples were collected at an allotment in Greenock, formerly heavily industrialised region, where previous assessment had indicated significant variation in total Pb content. A second site in Ayr was selected to provide a comparable use but differing background parent materials. The soil samples were collected from 0-20cm depth using W sampling pattern and a standard soil coring device. Spot and composite samples were dried and digested with aqua regia and analysed using ICP-MS. Vegetable samples (Spinach, lettuce, kale, leeks, turnip, fennel and beetroot) were collected from the same plots. Samples were carefully washed and dried then digested with nitric acid and analysed using ICP-MS. Total (aqua regia) data for PTEs uptake and availability to plants (vegetables) was estimated by the EDTA extraction; both correlation analysis and stepwise regression were adopted to illustrate the relationship between extractable PTEs and soil parameters. There are wide variations in the correlation between parameters linked to both elemental behaviour and management of the individual plots. The result showed that the concentrations of PTEs in these vegetables were close to limits for food safety standards for some elements (EC, 2006; CODEX, CF/5 INF/1, 2011).


YOU ARE LEAVING
THE VEGETABLE SECTOR
SIE VERLASSEN DEN GEMÜSE SEKTOR
YOU ARE ENTERING
THE PERENNIAL SECTOR
SIE BETRETEN DEN STAUDEN SEKTOR
M.W.

Keynotes Saturday, 10.9.2016



The allotment and its cousins: Typologies and trends, a North American view

Keynote by Joe Nasr, Associate of the Centre for Studies in Food Security at Ryerson University, Toronto, Canada

To many, the ‘allotment’ appears to be quintessentially English. Of course it has siblings in the form of the German Schrebergarten, the French jardin ouvrier and others. Yet across the Atlantic in the US, there is no such thing – at least at first glance.

The American ‘community garden’ has in fact crossed the ocean towards Europe in recent decades, often posited in specific contrast to the allotment – its close but conflicting cousin. Meanwhile, in Canada, both models have coexisted side by side, in both the Anglophone and Francophone parts of the country. These variations raise a number of questions about the essential characteristics of the practice of gardening with or in proximity to others in some form of common space, with some level of oversight. T

his talk will consider what such characteristics might be. It will consider differences and commonalities that can be identified, across countries, within this large family of gardening spaces and practices. Using comparisons through cases beyond Europe, particularly in North America, typologies will be attempted based on the key characteristics. Old models as well as new trends will show what common ground may exist among forms of gardening together, and whether recent developments are mixing the bloodlines in this family.

Joe Nasr is an independent scholar, lecturer and consultant based in Toronto who has been exploring urban agriculture and food security issues for over two decades. An Associate of the Centre for Studies in Food Security at Ryerson University, he co-curated the traveling exhibit, book and website Carrot City: Designing for Urban Agriculture (www.carrotcity.org), and coordinated the programming for the 2012 Urban Agriculture Summit (www.urbanagsummit.org) in Toronto. Joe is co-founder of Toronto Urban Growers (www.torontourbangrowers.org) and member of the Toronto Food Policy Council (www.tfpc.to).

He is co-author or co-editor of four books and dozens of articles, including the seminal book Urban Agriculture (www.jacsmit.com/book). He is co-editor of a new Urban Agriculture Book Series (www.springer.com/series/11815).

Joe has taught at a number of universities in several countries and received several fellowships.

What is the Future of Growing in Cities in China: Typologies, Challenges and Way-out

Keynote by Jianming Cai, Professor at Institute of Geographic Sciences & Natural Resources Research, Chinese Academy of Sciences, Beijing, China

Over long history in rural China, it has always been the popular practice to grow edible food in courtyard. This practice has been lost in urban China for a long time during various reasons such as restriction policies, small residence unit in households, unavailable urban land, state-ownership of land-use, etc. However, as the boom of agro-tourism in peri-urban China since 2000, some traditional and new types of growing food in intra-urban regions have begun to emerge in China. This movement was greatly promoted and popularized in last 10 years due to the fact that 1) the enlarged household unit per capita provides extra space for growing green plantation in house; 2) the increasing of retirees and elders bring new demand for growing food in house as a more healthy hobby; 3) the acute food safety problem stimulates young white col-lars to enjoy vertical or rooftop farming in their working places; 4) the relaxation of policies for farming in cities encourages the edible gardening in green parks, public open spaces and peo-ple's civil squares, etc. This paper is thus trying to inventory the topologies of growing in cities in China at first, and then explore the various challenges accompanying with this new movement. Finally, the paper will put forward some recommendations and suggestions to address these challenges.

Jianming CAI is a full professor at the Institute of Geographical Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences (CAS). He got his First Degree on urban planning and economic geography from Beijing University and Master Degree on GIS for urban applications from ITC of the Netherlands, and his Ph.D. on sustainable urban development from the University of Hong Kong. He has published more than 140 papers in academic journals both in Chinese and English, plus many consultant reports. He frequently serves as a senior consultant or expert on urbanization, sustainable regional and urban devel-opment urban agriculture and food security to both international agencies such as World Bank, ADB, EU, Ford, IDRC, DGIS, Lincoln Institute and Chinese governments, as well as private sec-tors such as Shui On Land. He is also the active member of many academic associations such as the Vice-chairman of Chinese Urban Agriculture and Recreational Agriculture Association. Cai's current research focuses on urban sustainable development with emphases on urban and peri-urban urban agriculture including agro-tourism, urban-rural linkages, spatial restructuring from cultural perspectives, innovative space making.


Canon
EOS 70D


A-73


SORRY ABOUT YOUR WIN

Parallel Sessions 3

A3 - FHNW Room 115 -> page 84

Community gardens as spaces for knowledge, learning & action

Chairs: Bent Egberg Mikkelsen & Pernille Malberg Dyg

School gardens in Denmark – organization and effects of the Gardens for Bellies school garden program

Author: Pernille Malberg Dyg, Metropolitan University College Copenhagen, Denmark

Seeding social capital? Community gardening and social capital

Authors: Søren Christensen, University College Zealand, Denmark / Tania Dræbel, University College Zealand, Denmark

Activity enhancing urban spaces – new green potentials for local action

Author: Bent Egberg Mikkelsen, Aalborg University, Denmark

Agronomical and collective knowledge: comparative analysis of two urban gardens in Greece

Authors: Vasiliki Giatsidou, Aristotle University of Thessaloniki, Greece / Maria Partalidou, Aristotle University of Thessaloniki, Greece

B3 - FHNW Room 125 -> page 88

Between bottom up and top-down: Urban gardens as laboratories for democratization in urban planning?

Chair: Mart Külvik

“A new season for planning”. Urban gardening as informal planning in Rome

Author: Chiara Certomà, Scuola Superiore Sant‘Anna, Italy

Combining top-down and bottom-up gardens in Lisbon as an improved planning strategy

Author: Maria Sousa, University Institute of Lisbon, Portugal

Urban gardening and democratic planning: critical perspectives on examples from Greece and Germany

Authors: Sofia Nikolaidou, Panteion University of Social and Political Sciences, Greece / Martin Sondermann, Leibniz University, Germany

The emergence of urban agriculture as part of new urban governance constellation: allotments and farm gardens in Israeli cities

Authors: Efrat Eizenberg, Technion, Israel / Tali Alon-Mozes, Technion, Israel

C3 - FHNW Room 134 -> page 92

Motivations for environmental behaviour in urban gardens

Chair: Johan Barstad

Motivations and barriers for adopting ecological gardening practices in Swiss urban gardens

Authors: Robert Home, Research Institute of Organic Agriculture FiBL, Switzerland / Stéphanie Lichtsteiner, Research Institute of Organic Agriculture FiBL, Switzerland

Urban gardening and just freedoms: Case studies from the UK and Ireland

Author: Alma Clavin, University of Northampton, United Kingdom

Allotment gardens in Warsaw – studies on ways of plot use & gardening practices

Authors: Monika Joanna Latkowska, Warsaw University of Life Sciences, Poland / Monica Pauline Stępień, Warsaw University of Life Sciences, Poland / Izabela Kulińska, Warsaw University of Life Sciences, Poland

The garden is what one makes of it. Researching the environmental behaviour of urban allotment gardeners and its impact

Authors: Annette Voigt, Alpen-Adria-University Klagenfurt, Austria / Andrew Hursthouse, University West of Scotland, United Kingdom

D3 - FHNW Room 135 -> page 96

Models and scenarios for scaling up urban gardening; reasons for success or failure

Chair: Simon Bell

Critically exploring macro urban agriculture. The viability of urban farming

Authors: Michael Hardman, University of Salford, United Kingdom / Simon Hutchinson, University of Salford, United Kingdom / Paul Longshaw, Salford City Council, United Kingdom / Graeme Sherriff, University of Salford, UK

The challenges of Warsaw allotment gardens development

Authors: Hanna Szumilas, Warsaw University of Life Sciences, Poland/ Renata Giedych, Warsar University of Life Sciences, Poland

Urban gardens in Switzerland: current challenges and visions for the future

Authors: Mathias Hofmann, Swiss Federal Institute for Forest, Snow and Landscape Research, Switzerland/ Simone Tappert & Tanja Klöti, University of Applied Sciences Northwestern Switzerland, Switzerland / Rebekka Weidmann, ETH Zurich, Switzerland/ Stéphanie Lichtsteiner & Robert Home, Research Institute of Organic Agriculture, Switzerland

Urban wastelands and their potential to deliver CICES community services

Authors: Beata J. Gawryszewska, Anna Wilczyńska & Maciej Łepkowski, all: Warsaw University of Life Sciences, Poland

A3 - FHNW Room 115

Community gardens as spaces for knowledge, learning & action

Chairs: Bent Egberg Mikkelsen & Pernille Malberg Dyg

School gardens in Denmark – organization and effects of the Gardens for Bellies school garden program

Author: Pernille Malberg Dyg, Metropolitan University College Copenhagen, Denmark (pedy@phmetropol.dk)

Keywords: School Gardens, Community Gardening, Food Literacy, Connectedness to Nature, Community Involvement

Studies show that school gardening helps children enhance their understanding of science and promotes their interaction with the environment gaining historical, cultural and ecological under-standings (Chenhall 2010; Dyg 2014; Green 2013; Johnson 2012; McCarty 2010; Sloan 2013). School gardens are sprouting in rural and urban areas across Denmark. This case study re-search sheds new light on various school garden models under the Gardens for Bellies program in Denmark, including school-, community-based and central school gardens. This study aims to document the organization of school gardens, which is not studied in international research. It also analyses immediate effects according to pupils and other stakeholders.

The research is based on five explorative case studies, involving observations and interviews. The findings show that school gardens open up opportunities for involving a range of new stakeholders. Garden-based learning has a number of positive immediate effects on pupils' food knowledge, cooking skills, and well-being.

Seeding social capital? Community gardening and social capital

Authors: Søren Christensen, University College Zealand, Denmark/ Tania Aese Dræbel, University College Zealand, Denmark (scr@ucsj.dk)

Keywords: Urban Community Gardening, Social Interaction, Systematic Review, Community Development, Innovative Health Promotion

There is a continuing debate regarding urban community gardening's benefits to local communi-ties, and a particularly interesting branch of this debate has focused on community gardens ca-pacity to encourage and facilitate social interaction, which may generate social capital. Social capital is an increasingly important concept in international health research (Harpham, Grant & Thomas 2002) and measures of social capital have been associated with various measures of health, including mortality, overall health status, crime rates etc.

This paper scrutinizes how socially desirable outcomes of urban community gardening are un-folded, through the concept of social capital, in a systematic review of the academic literature between 2009 and 2015. It is argued in that while the academic literature between 2009 and 20015 does not convincingly demonstrate that urban community gardening generates social capital, this paper points to a number of seemingly remarkable and fruitful desirable social out-comes of community gardening. These include, among other things, that higher levels of boundary activity in community gardening, does increase the a greater amount and a wider di-versity of people in its activities, and that community gardens represent a particular promising subset of arenas in cities that can generate multiple learning streams revolving around self-organization and social enterprising. It is further argued that to demonstrate and analyse valua-ble social aspects of urban community gardening, a promising strategy would be to operational-ize the concept of social capital in another way than the concept has been employed in the aca-demic literature between 2009 and 20015 to capture the multifaceted desirable social outcomes of urban community gardening, and (ii) to employ participant observation revealing how agents involved in urban community gardening articulate valuable benefits related to this involvement, with the use of interpretive methods that focus on the meanings people ascribe to their experiences.

Activity enhancing urban spaces – new green potentials for local action

Author: Bent Egberg Mikkelsen, Aalborg University, Denmark (bemi@dcm.aau.dk)

Keywords: School Gardens, Community Gardens, Stakeholder Approach, Urban Place-Making

Urban agriculture and gardening strategies are increasing in popularity in metropolitan areas as a mean of developing smarter and more sustainable cites. For citizens, gardening represents a way to reconnect with nature and gain more control over the local food system – a way to in-crease food sovereignty, food justice and food citizenship (Wekerle 2004). It also offers an op-portunity to increase social cohesion in the urban neighbourhoods (Kweon et al. 1998). For young people in educational settings there are reports that hands-on school gardening might positively affect food intake. For instance, Ratcliffe et al. (2010) found an increased consumption of vegetables in schools that had gardens compared to those that did not. Also a number of studies suggest that there is a link between hands-on food activities and food literacy among young people. However, the literature that looks at how different social groups and stakeholders in the local community work together to establish and maintain gardening action is more limited. Evidence suggests that development of successful gardening initiatives in local communities is a challenging process that seems to be dependent on the resources, commitment and mobilization of multiple stakeholders (de Zeeuw & Dubbeling 2015).

References:

De Zeeuw, H. & Dubbeling, M., 2015, Process and tools for multi-stakeholder planning of the urban agro-food system, in H. de Zeeuw & P. Drechel (eds.), Cities and Agriculture: Developing Resilient Urban Food, pp. 56-87, Routledge, New York.

Kweon, B.S., Sullivan, W.C. & Angel, R., 1998, ‚Green Common Spaces and the Social Integra-tion of Inner-City Older Adults‘, Environment and Behavior 30(6), 832-858.

Ratcliffe, M., (2007), Garden-based education in school settings: The effects on children’s vege-table consumption, vegetable preferences and ecoliteracy, Tufts University’s Friedman School of Nutrition Science and Policy.

Wekerle, G., 2004, ‚Food Justice Movements: Policy, Planning, and Networks‘, Journal of Plan-ning Education and Research 23(4), 378-386.

Agronomical and collective knowledge: comparative analysis of two urban gardens in Greece

Authors: Vasiliki Giatsidou, Aristotle University of Thessaloniki, Greece / Maria Partalidou, Aristotle University of Thessaloniki, Greece (vasso1806@yahoo.gr)

Keywords: Communities of Practice (CoP), Collective Learning, Greece, Knowledge

Urban gardens in Greece are not only about food and coping with economic hardship. Gardeners gain also a sense of accomplishment and belonging within a community created. This paper goes on a step further to research the intangible benefits of urban gardens and especially the creation and diffusion of agronomical and collective knowledge. A grassroots community garden and a municipal allotment garden in the city of Thessaloniki in Greece were researched.

We used participant observation from January 2015 to February 2016 and a structured question-naire to 131 gardeners. The conceptual framework of Communities of Practice (Bendt et al. 2013) was useful in explaining the collective and learning dimensions in the gardens. According to our results, in the first garden people share the management of the commons and develop collective skills apart from agronomical ones. It is in this garden that CoP are created based on shared identity, commitment and common practices on solving problems. The challenge now lies on the cohesion of the community between old and new members and the level of their in-volvement in managing the commons. In the second garden, embedded in the public strategy to tackle poverty, no CoP was established. Gardeners depend on the agronomical support provided by the municipality and learning is done individually referring only to agronomical knowledge. They see the garden as their personal shelter amidst the crisis and a means to have access to fresh-affordable food.

The critical issue is the role of the municipality and the goals they will set for the garden in the future. What can be derived from both cases is that urban gardens in Greece have manifold benefits and may also serve as a tool for agronomical and collective learning but only in the case that communities embedded in trust and reciprocity are created.

B3 - FHNW Room 125

Between bottom up and top-down: Urban gardens as laboratories for democratization in urban planning?

Chair: Mart Külvik

“A new season for planning”. Urban Gardening as informal planning in Rome

Author: Chiara Certomà, Scuola Superiore Sant‘Anna,Italy (c.certoma@sssup.it)

Keywords: Urban Gardening, Informal Planning, Urban Informality, Counterplanning

The paper investigates the relationship between urban gardening and planning by building upon the results of a field-research on gardening initiatives in the city of Rome, Italy. The work is aimed at suggesting that, while often associated in geography and planning literature with urban informality practices (e.g. accidental city or self-made urbanism), urban gardening actually presents the character of a distinctive form of people’s interaction with urban space, here defined as “informal planning”. This includes practices that are intentionally put forward by local dwellers with the intent of planning the urban space and organising public life in absence of legal definition, guidance and founds provided by both public authorities or private sector. Urban gardening cases in Rome exemplify the emergence of informal planning and show how, by questioning the counterplanning tradition that understands urban gardening as an antagonist spatial practice opposing institutional planning, informal planning can rather open collaborative possibilities. A new mode of interaction between citizens’ agency and the formal planning initiatives of local administration, in fact, can lead to creative solutions to address some of the problems associated with the neoliberal transformation of the city space, most notably the decrease of public space and its deterioration.

Becker, J., Cellamare, C., Hanussek, C., Perin, A. & Perin, S., 2013, Self-made urbanism Rome Informal Common Grounds of a Metropolitan Area, NGBK, Berlin.

Boudreau, J., 2007, ‘Making new political space: mobilizing spatial imaginaries, instrumentalizing spatial practices, and strategically using spatial tools’, Environment and Planning A 39(11), 2593-2611.

Brenner, N. & Theodore, N., 2002, ‘Cities and the geographies of “actually existing neoliberalism”’, Antipode 34(3), 349-379.

Comune di Roma, 2013, Bando ricognitivo per l’affidamento in forma volontaria delle aree a verde pubblico, viewed on 15 October, from http://www.comune.roma.it/PCR/resources/cms/documents/BANDO_RICOGNITIVO_CUSTODIA_4_AREE.pdf

D’Albergo E. & Moini, G., 2013, ‚Politics, power and the economy in Rome: continuity and change in an urban regime‘, Métropoles 12, 1-24

Hou, J., 2010, Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities, Taylor and Francis, New York.

Jiménez, A.C., 2014, ‚The right to infrastructure: a prototype for open source Urbanism‘, Environment and Planning D 32(2), 342-362.

Lefebvre, H., 1968, Le droit a la ville, Anthropos, Paris.

McKay, G. (2011): Radical gardening. London, Frances Lincoln Limited

Miraftab, F., 2009, ‘Insurgent Planning: Situating Radical Planning in the Global South’, Planning Theory 8(32): 32-50.

Roy, A., 2005, ‘Urban Informality: Toward an Epistemology of Planning’, Journal of the American Planning Association 71(2), 147-158.

Schmelzkopf, K., 1995, ‘Urban community gardens as a contested space’, Geographical Review 85(3): 364-381.

Combining top-down and bottom-up gardens in Lisbon as an improved planning strategy

Author: Maria Raquel Sousa, University Institute of Lisbon, Portugal (biosite.formacao@gmail.com)

Keywords: Combination Strategy, City Planning, Urban Management, Participation, Community Projects

This paper compares two concepts of urban agriculture (UA): a) top-down allotment gardens and b) bottom-up participative gardens. The example studied for the former are: 3 Parques Hortícolas of Lisbon city council (LCCHP), which are horticultural parks that include playgrounds, bike paths, etc., on public land. The case study for the latter is Horta do Baldio (HB), a participative garden on private land. The goal is to identify the advantages of a possible combination of the two concepts for planning. This study includes two methods: a questionnaire and the comparison of characteristics of LCCHP and HB such as waiting lists, costs and the motivations of the gardeners. The data gained was analysed by using the following indicators: social characterization of the gardeners, their opinions about the garden's role in city life, their reasons for participation, cultural initiatives, waiting lists, access to general public, time consumption and costs. The questionnaire led to similar answers in both garden types except that only HB gardeners included participation and communitarian spirit as important factors. Both types of garden have their strengths but the bottom-up initiative has relevant advantages: participation and communitarian spirit caused "hands-on" implementation and maintenance of the garden, encouraging cultural activities. There are no waiting lists and the garden also costs less than those in the top-down projects because more human resources were involved in the creation and maintenance. On the other hand HB is more time consuming since volunteers are involved in the planning and management, which can cause conflicts e.g. when planning the future of the garden. The integration of urban gardening bottom-up initiatives on city planning, on both public and private land, could catapult Lisbon UA to a higher level of sustainability. Promotion of bottom-up initiatives or combining both strategies could increase participation, optimize community initiatives and costs, decrease waiting lists, create different public access experiences and increase gardening areas which better support the continuity of the city green structure (CGS).

Di Iacovo F. & Cinà G., 2015, ‚Integrating top down policies and bottom up practices in Urban and Peri urban Agriculture: an Italian dilemma' Future of food: Journal on food agriculture and society 3(1).

Luokkala, R., 2014, Food and Urban Gardening in Planning: An Exploration in Helsinki and Stockholm, Master thesis, Department of Human Geography, Stockholm University.

Mansfield, B. & Mendes, W., 2013, ‚Municipal Food Strategies and Integrated Approaches to Urban Agriculture: Exploring Three Cases from the Global North', International Planning Studies 18(1), 37-60.

Morgan, K., 2013, ‚The Rise of Urban Food Planning', International Planning Studies 18(1), 1-4.

Wekerle G. R. & Classens M., 2015, ‚Food production in the city: (re)negotiating land, food and property', Local Environment 20(10), 1175-1193.

Urban gardening and democratic planning: critical perspectives on examples from Greece and Germany

Authors: Sofia Nikolaidou, Panteion University of Social and Political Sciences, Greece / Martin Sondermann, Leibniz University, Germany (so_nikk@hotmail.com)

Keywords: Urban Gardening, Collaborative Governance, Democratic Planning, Grassroots Initiatives

A wide range of new collective forms of urban gardening are broadly emerging worldwide via alternative citizen-led practices and public participation. This illustrates the increasing significance of the role of civil society in urban governance mechanisms and poses questions on the democratic dimension of urban planning and development (Adams & Hardman 2014; Ernwein 2014; Nikolaïdou et al. 2016; Rosol 2010). Based on research on urban gardening initiatives in Greece and Germany, this paper analyses in a comparative perspective various aspects of practices that emerge in different governance settings. The purpose is to highlight forms of cooperation between civil society and political-administrative actors and critically examine the democratic potentials, limitations and opportunities of cooperative urban development. The focus of analysis is on governance-settings and practices.

In conclusion it is shown, that despite different socio-economic and political contexts similar conflicts arise in both countries: The traditional state-centred forms of decision and policy-making processes are challenged by the recent urban gardening movement that prioritises civic engagement encompassing innovative and experimental practices in urban development. In Germany the decentralised planning system and a longer tradition in communicative planning facilitate the development of cooperative planning cultures in urban greening on local level. In Greece, by contrast, urban planning is much more centralised with a deficient practice of collaboration. Corresponding with the recent rise of urban gardening initiatives and a stronger movement towards direct democracy in Greece, planning cultures in both countries currently seem to change towards an active role of civil society and a more democratic urban development.

References:

Adams, D. & Hardman, M., 2014, ‚Observing Guerrillas in the Wild: Reinterpreting Practices of Informal Guerrilla Gardening‘, Urban Studies 51(6), 1103-1119.

Ernwein, M., 2014, ‚Framing urban gardening and agriculture: On space, scale, and the public‘, Geoforum 56, 77-86.

Nikolaïdou, S., Klöti, T., Tappert, S. & Drilling, M., 2016, ‚Urban Gardening and Green Space Governance: Towards New Collaborative Planning Practices‘, Urban Planning 1(1): 5-19.

Rosol, M., 2010, ‚Public participation in post-Fordist urban green space governance: The case of community gardens in Berlin‘, International Journal of Urban and Regional Research 34(3), 548-563.

The emergence of urban agriculture as part of new urban governance constellation: allotments and farm gardens in Israeli cities

Authors: Efrat Eizenberg, Technion, Israel/ Tali Alon-Mozes, Technion, Israel (efrate@technion.ac.il)

Keywords: Policy, NGOs, Urban Planning, Temporal Spaces, Neoliberalism

While North America and parts of Europe have a long standing tradition of urban agriculture, in other places allotments and farm gardens are an emerging phenomenon and provide new perspectives regarding landscape forms and planning dynamics. This is also the case of Israeli cities where urban gardening dates only one decade back after many years of separation between the urban and the rural realm. These new sites of urban agriculture can be understood as part of the growing capacity of municipalities to initiate untraditionally productive as well as non-productive land uses within their jurisdiction. They are also a result of the growing role that various NGOs play in producing urban space, fulfilling (as many claim) the voids created by the withdrawal of the state. Based on interviews with municipal and civil organizations' representatives and analysis of secondary materials on urban agriculture initiatives in two cities in Israel – Rishon LeZion and Bat-Yam – this paper examines two different manifestations of this new phenomenon; one shows municipality initiated and managed allotments, and the second shows NGOs initiation and management of allotments and farms. The results suggest that while both models progress without a policy guiding their development, urban agriculture in Israeli cities emerges in a top-down form, through the collaborations of various stakeholders. While urban space is allocated to enable allotments and farms gardens, there is no grand vision that may sustain their future and the potential development of additional sites. Thus, contemporary urban landscape is constructed and organized through temporary constellations by provisional stakeholders.

References:

Eizenberg, E., 2012, ‚The changing meaning of community space: Two models of NGO management of community gardens in New York City', International Journal of Urban and Regional Research 36(1), 106-120.

Lovell, S.T., 2010, ‚Multifunctional urban agriculture for sustainable land use planning in the United States', Sustainability 2(8), 2499-2522.

McClintock, N., 2014, ‚Radical, reformist, and garden-variety neoliberal: coming to terms with urban agriculture's contradictions', Local Environment 19(2), 147-171.

C3 - FHNW Room 134

Motivations for environmental behaviour in urban gardens

Chair: Johan Barstad

Motivations and barriers for adopting ecological gardening practices in Swiss urban gardens

Authors: Robert Home, Research Institute of Organic Agriculture FiBL, Switzerland/ Stéphanie Lichtsteiner, Research Institute of Organic Agriculture FiBL, Switzerland (robert.home@fibl.org)

Keywords: Urban Gardening, Ecosystem Services, Biodiversity, Behaviour, Management Practices

Urbanization is increasing rapidly worldwide and a growing number of urban residents experience negative effects caused by disconnection from natural environments (Kiesling 2010). It has been shown that gardens can have a positive influence on health and well-being and that the activity of gardening can help to mitigate the consequences of reduced access to nature (Van den Berg 2010). Furthermore, gardens that are high in biodiversity contribute more to health and well-being than gardens with low biodiversity. Gardeners can influence the diversity and abundance of plant and animal species by their choices of how to structure and manage their gardens (van Heezik 2013), but there has been little research into why gardeners decide to apply certain management practices in their gardens (Kiesling, 2010). The aim of the study is therefore to examine the factors that enable or hinder private and allotment gardeners in Switzerland to adopt natural gardening practices that encourage biodiversity. Semi-structured interviews were conducted with 18 gardeners in Zürich, Switzerland. The responses were classified according to their content, which show that the decision-making process is strongly influenced by the function a garden assumes for a person or their family. Furthermore, gardeners perceive pressure from neighbours to have neat, rather than species rich gardens. Furthermore gardeners often have limited knowledge of the processes and benefits of ecological gardening. Interpreting the results in light of Ajzen's (1991) theory of planned behaviour allowed a first development of strategies to encourage the enablers and to remove the barriers to ecologically sound gardening. Fundamental to these strategies is that efforts should be made to convince gardeners by illustrating the practicability, along with the benefits and advantages, of more natural ecologically sound garden practices.

References:

Ajzen, I., 1991, ‚The Theory of Planned Behavior', Organizational Behavior and Human Decision Processes 50, 179-211.

Kiesling, F.M. & Manning, C.M., 2010, ‚How green is your thumb? Environmental gardening identity and ecological gardening practices', Journal of Environmental Psychology 30(3), 315-327.

Lindenmann-Matthies, P. & Marty, T., 2013, ‚Does ecological gardening increase species richness and aesthetic quality of a garden?' Biological Conservation 159, 37-44.

Van den Berg, A. & Winsum-Westra, M., 2010, ‚Manicured, romantic, or wild? The relation between need for structure and preferences for garden styles', Urban Forestry & Urban Greening 9(3), 179-186.

Urban gardening and just freedoms: Case studies from the UK and Ireland

Author: Alma Clavin, University of Northampton, United Kingdom (alma.clavin@northampton.ac.uk)

Keywords: Capability Approach, Sustainability, Human Agency, Wellbeing, Critical Enquiry

The way in which space is produced in urban areas limits opportunities for individual and collective freedoms (Harvey 1990), impacting on opportunities for more critical and participative urban engagement. Community gardens are one type of urban space that may bring both positive agency and wellbeing benefits to users (Clavin 2011). Some authors assert that such sites may be limited in their ability to truly enhance political freedoms (Rosol 2012), and demonstrate light green, weak approaches to urban sustainability (Eizenberg & Fenster 2015). In this way community gardens may maintain neoliberal forms of both unsustainable and uneven development rather than enhancing the freedom to develop a truly oppositional discourse of practice. This paper examines a particular type of community garden – those that are designed using ecological principles and associated features. It focuses on the potential for these sites to enhance both human agency and ecological sustainability in urban areas. In order to examine the freedoms valued within these spaces, Amartya Sens Capability Approach (CA) (Alkire 2003) was operationalised in five such sites in the UK and Ireland. Here, the CA was utilised as an agency-led approach to evaluating human wellbeing. Qualitative, ethnographic methods were employed in exploring links between the sustainable, just use of urban resources and the wellbeing of users. A set of beings, doings and havings that users valued and had reason to value in using the sites were established – these were termed interbeings. Interbeings have particular wellbeing (agency) and ecological components (flux and dynamic balance). It is purported here that interbeings can be used to re-conceptualise the triad of human-environment-society relations in these urban sites in order to enhance both the ecological capacity of urban space and the relational agency of users. Furthermore, such a re-conceptualisation is significant in realising the potential role of community gardens in enhancing the critical and participative capacity for engagement in urban areas.

References:

Alkire, S., 2003, Valuing Freedoms: Sen’s Capability Approach and Poverty Reduction, Oxford University Press, Oxford.

Clavin, A., 2011, ‚Realising Ecological Sustainability in Community Gardens: A Capability Approach‘, Local Environment 16(10), 945-962.

Eizenberg, E. & Fenster, T., 2015, ‚Reframing Urban Controlled Spaces: Community gardens in Jerusalem and Tel Aviv-Jaffa‘, ACME 14(4), 1132-1160.

Harvey, D., 2008, ‚The Right to the City‘, New Left Review 53(Sept-October), 23-39.

Rosol M., 2012, ‚Community Volunteering as Neoliberal Strategy?: Green Space Production in Berlin‘, Antipode 44(1), 239-257.

Allotment gardens in Warsaw – studies on ways of plot use and gardening practices

Authors: Monika Joanna Latkowska, Warsaw University of Life Sciences, Poland / Monica Pauline Stępień, Warsaw University of Life Sciences, Poland / Izabela Kulińska, Warsaw University of Life Sciences, Poland (monika_latkowska@sggw.pl)

Keywords: Cultivation Practices, Family Allotment Gardens, Species Composition, Urban Gardening

Allotment gardens (AGs), with their share of ca. 2.3 % in the city area, are an important element of Warsaw's green infrastructure. By offering several ecosystem services they play an important role in the life of city inhabitants. Their functions and use have changed over time, from mainly food production - in the past - to recreation - nowadays. Paper presents current state of the selected Warsaw's AGs. Users' group, ways of plot use, cultivation practices and plants grown in the gardens were studied in 6 family allotment gardens' colonies, located in different districts of Warsaw. Semi-structured interviews were carried out in 2013 with 180 randomly selected plot holders (30 per colony), as well as on site observations. Users over 40 years old were in predomination in all AGs. Length of plot usage period differed between AGs studied. In all gardens both ornamental and edible plants (vegetables, herbs, fruits) were grown, but ornamental species dominated over other groups (over 70% in all plant species). AGs were used for recreation and contact with nature all over the year. In the high season (spring-autumn) ca. 50% of the users visited their plots every day, whereas in the winter most of them do that once a month. In all AGs both chemical and natural means were used for plant protection and fertilization. Usage of chemical pesticides predominated slightly over the natural preparations, whereas organic fertilizers were more often used than the chemical ones. Compost was produced in all AGs, as members of the Polish Association of Allotment Gardeners were obligated to recycle organic wastes from their gardens. Not all of the gardening practices observed in AGs studied were environmentally friendly, however usage of natural methods of fertilization and plant protection, as well as care for the wild animals indicates some ecological consciousness of their users.

References:

Dunnet, N. & Qasim, M., 2000, ‚Perceived benefits to human well-being of urban gardens', HortTechnology 10(1), 40-45.

Duś, E., 2014, ‚Recreational use and health functions of allotment gardens in the Katowice conurbation', Environmental & Socio-economic Studies 2(2), 16-25.

Kronenberg, J., Bergier, T. & Lisicki, P., 2013, ‚Usługi ekosystemów w praktyce a ogrody działkowe [Ecosystem services in practice and allotment gardens]', Przegląd Komunalny 2, 53-56 (in Polish).

Pawlikowska-Piechotka, A., 2011, ‚Active recreation space „for all": family gardens in Poland', Studies in Physical Culture and Tourism 18(4), 351-359.

Szkup R., 2013, Użytkowanie rodzinnych ogrodów działkowych przez społeczność wielkomiejską [The usage of the family allotment gardens by the metropolitan community] Wydawnictwo Uniwersytetu Łódzkiego, pp. 224 (in Polish)

The garden is what one makes of it. Researching the environmental behaviour of urban allotment gardeners and its impact

Authors: Annette Voigt, Alpen-Adria-University Klagenfurt, Austria/ Andrew Hursthouse, University West of Scotland, United Kingdom (net.voigt@gmx.de)

Keywords: Urban (Allotment) Gardens, Research Methodology, Environmental Behaviour, Horticultural Practice, Ecological Effects

The rapidly emerging interest in urban gardening from the public as well from planning authorities appears to be due to its pivotal position in providing a route to integrate social benefits, recreation, health, food, and improvement of urban ecosystems (Barthel et al. 2010). Despite (or because) of this enthusiasm, some problems are not in the spotlight. Urban gardens are often subject to environmental pressures also through the practice of the gardeners themselves, i.e. the use of fertilizers or pesticides or the introduction of potentially invasive species (Hursthouse & Leitão 2016). The influence of plot management and horticultural practices on the environmental conditions has not yet been the subject of much analysis (Voigt et al. 2015). Although gardeners' attitudes, their motivations, and horticultural/ecological knowledge or beliefs influence activities, and activities have measurable effects on the environment and gardeners' health, previous research has mainly focused on either social or on natural aspects but not on their relation. However, an adequate linking of these perspectives will allow an integrated understanding of urban gardens as complex and adaptive social-ecological systems and of the causes, processes, and feedbacks affecting them.

With the aim to identify conclusive research directions and to provide an interdisciplinary and multiscale conceptual approach to guide future studies, we discuss gaps and methodological issues in disciplinary and interdisciplinary research on environmental relevant behaviour in urban allotment and community gardens. This discussion is based on our experiences from comparative case studies on this topic in Europe as well as results from a critical literature reviews. Research challenges encountered include problems with interview surveys such as using terms which bias answers and that people give socially desirable responses. Also gaps between self-perception and attitudes pose problems, e.g. that gardeners believe they behave in an environmentally friendly manner, despite the use or absence of pesticides. Empirical data from soil analysis can help support evaluation, but present soil properties may not be related to what has done recently by gardeners. For an international comparison, differences in both environment and culture are challenging.

Barthel, S., Folke, C.& Colding, J., 2010, ‚Social–ecological memory in urban gardens—Retaining the capacity for management of ecosystem services', Global Environmental Change 20(2), 255-265

Hursthouse, A. & Leitão, T., 2016, ‚Environmental pressures on and the status of urban allotments', in S. Bell, R. Fox-Kämper, N. Keshavarz, M. Benson, S. Caputo, S. Noori, & A. Voigt (eds.), Urban Allotment Gardens in Europe, pp. 142-164, Routledge, New York.

Voigt, A.; Latkowska, M.; Rutecka, A.; Poniży, L.; Mizgajski, A.; Breuste, J.; Haas, K.; Artmann, M.; Hursthouse, A.; Agboola, A.J.; Külvik, M.; Olonen, A;. Leitão, T. & Costa, H., 2015, ‚Environmental behaviour of urban allotment gardeners in Europe'. in S. Bell et al. (eds.), Landscape in Flux (peer reviewed proceedings of ECLAS 2015 Conference). Department of Landscape Architecture, Estonian University of Life Science, Tartu, Estonia.

Voigt, A. & Leitão, T., 2016, ‚Lessons learned: Indicators and good practice for an environmentally-friendly urban garden', in S. Bell, R. Fox-Kämper, N. Keshavarz, M. Benson, S. Caputo, S. Noori, & A. Voigt (eds.), Urban Allotment Gardens in Europe, pp. 165-198, Routledge, New York.

D3 - FHNW Room 135

Models and scenarios for scaling up urban gardening; reasons for success or failure

Chair: Simon Bell

Critically exploring macro urban agriculture. The viability of urban farming

Authors: Michael Hardman, University of Salford, United Kingdom/ Simon Hutchinson, University of Salford, United Kingdom/ Paul Longshaw, Salford City Council, United Kingdom/ Graeme Sherriff, University of Salford, United Kingdom (m.hardman@salford.ac.uk)

Keywords: Urban Agriculture, Urban Farming, Green Cities, Planning

Whilst there is a nascent literature base on urban agriculture and its value in deprived areas, there is little evidence on urban farms and their role within such settings (Hardman & Larkham 2014; Tornaghi 2014; Wiskerke & Viljoen 2012). Throughout Europe, and particularly in the UK, many local authorities are adopting the concept as a way of bringing food to the city and as a way of offering employment opportunities to deprived urban communities. Such actors view the urban farms as a way of improving health and wellbeing; enabling inner-city populations to have access to fresh produce. One such local authority is Salford, a city in the North West of England, has embedded an urban farm in the heart its £650,000,000 regeneration strategy; in this case, the urban farm is designed as a central hub to bring together wider urban agricultural practices across the cityscape.

This paper predominantly draws on an interdisciplinary research project around urban farming commissioned by the Pendleton Cooperative. The overarching aim of the piece is to critically explore the concept and the realities of such forms of urban agriculture on the ground: we explore why so many fail within cities and the ingredients required for success. We begin by analysing the practice across Europe, focussing on a city in the Northern, Southern, Western and Eastern edges of the continent. We then proceed to focus explicitly on Salford through using a range of both qualitative and quantitative datasets, from interviews with exemplar projects across the UK to data on yield and soil quality, to critically evaluate the concept of an urban farm and its value within a city setting. Through using such data, we identify different models of urban farms and why some are more successful than others.

References:

Hardman, M. & Larkham, P., 2014, Informal Urban Agriculture: The Secret Lives of Guerrilla Gardeners, Springer, London.

Tornaghi, C., 2014, ‚Critical Geography of Urban Agriculture', Progress in Human Geography 38(4), 551-567.

Wiskerke J. S. C. & Viljoen, A., 2012, Sustainable Urban Food Provisioning: Challenges for Scientists, Policymakers, Planners and Designers, in A. Viljoen & J.S.C. Wiskerke (eds.), Sustainable Food Planning: Evolving Theory and Practice, pp. 19-36, Wageningen Academic Publishers, Wageningen.

The challenges of Warsaw allotment gardens development

Authors: Hanna Szumilas, Warsaw University of Life Sciences, Poland/ Renata Giedych, Warsar University of Life Sciences, Poland (hanna_szumilas@sggw.pl)

Keywords: Green Infrastructure, Scenario Method, Alternative Futures Method, Urban Gardening, Sustainable Development

Allotment gardens constitute a significant element of Warsaw green structure. They account for almost 20% of all green areas of the city and occupy a larger area than parks. Despite more than a century of history of AG in Warsaw and obvious benefits of their presence in the city structure as providers of a variety of ecosystem services, their presence is threatened (Barthel, Folke & Colding 2010; Speak, Mizgajski & Borysiak 2015; Buckingham 2003). It is due to relaxation of law on AG, urban pressure and lack of will to treat AG as development target. The main aim of this study is to identify different possibilities of development of Warsaw allotment gardens using the scenario method, also known as alternatives futures. The scenarios are based on analysis of country- and municipality-level rules and procedures, which support the development of allotment gardens. These include: legislation on allotment gardens, municipal spatial policy as well as the power of different stakeholders in relation to allotment gardens development (Spilková & Vágner 2016; Scheromm 2015). The analysis revealed that allotment gardens in Poland are supported by many acts of law and regulations. However their position in the city development framework is dependent on many factors, e.g.: land ownership, supply of areas for grey and green infrastructure development, the attitude to allotment gardens in public discourse (Spilková & Vágner 2016). In the case of Warsaw the main drivers of AG development are: claims for the land nationalised after World War II, plans of the municipality to change allotment gardens areas into public parks and the ambiguous perception of allotment gardens by the municipality and AG users. Given the above analysis we developed four scenarios of AG development, depending on willingness of Warsaw municipality to cooperate with AG associations and public demand for AG growth. In response to these problems, the scenarios present: an optimistic model where the city council cooperates with AG associations and there is a high demand from the potential users; two conservative models characterized by either low cooperation of AG associations with the city council or a lack of interest in AG from their potential users; and a pessimistic one where there is both low cooperation and moderate interest from the potential users to become a gardener. For each of the scenarios, conditions for its implementation are developed and presented as a possible future of AG in Warsaw.

References:

Barthel, S., Folke, C. & Colding J., 2010, ‚Social–ecological memory in urban gardens—Retaining the capacity for management of ecosystem services', Global Environmental Change 20(2), 255-265.

Buckingham, S., 2003, Allotments and community gardens: a DIY approach to environmental sustainability, in S. Buckingham & K. Theobald (eds.), Local Environmental Sustainability, pp. 195-212, Woodhead Publishing, Cambridge.

Scheromm, P., 2015, ‚Motivations and practices of gardeners in urban collective gardens: The case of Montpellier', Urban Forestry & Urban Greening 14(3), 735-742.

Speak, A.F., Mizgajski, A. & Borysiak, J., 2015, ‚Allotment gardens and parks: Provision of ecosystem services with an emphasis on biodiversity', Urban Forestry & Urban Greening 14(4), 772-781.

Spilková, J. & Vágner, J., 2016, ‚The loss of land devoted to allotment gardening: The context of the contrasting pressures of urban planning, public and private interests in Prague, Czezia', Land Use Policy 52, 232-239.

Urban gardens in Switzerland: current challenges and visions for the future

Authors: Mathias Hofmann, Swiss Federal Institute for Forest, Snow and Landscape Research, Switzerland / Simone Tappert, University of Applied Sciences Northwestern Switzerland, Switzerland / Tanja Klöti, University of Applied Sciences Northwestern Switzerland, Switzerland / Rebekka Weidmann, ETH Zurich, Switzerland / Stéphanie Lichtsteiner, Research Institute of Organic Agriculture, Switzerland / Robert Home, Research Institute of Organic Agriculture, Switzerland (mathias.hofmann@wsl.ch)

Keywords: Urban Gardening, Allotment Gardens, Scenarios, Public policy, Gardening Motivations

The nature of urban gardening is constantly changing. A number of driving factors are becoming increasingly apparent which herald rather fundamental changes for urban gardening in Switzerland in the next few decades; especially to its most prevalent form: allotment gardens. Foremost among them are the increasing compaction of cities and the consequent changes in land use; but demographic changes, a decreasing readiness to volunteer for management positions in allotment garden societies, and demands for different forms of urban gardening are also included. This contribution is based on expert interviews conducted with city officials and urban gardeners in management positions of allotment gardens. The interviews were used to gather and order the current and foreseeable challenges. Building on these interviews, two workshops were conducted in which important gardening stakeholders used scenario techniques to identify and evaluate visions for the future of urban gardening in Switzerland. The results of these interviews and workshops are presented and discussed, and the present and future challenges are named. The consequences of future developments of these factors are presented qualitatively and the developed visions for the future are described.

Urban wastelands and their potential to deliver CICES community services

Authors: Beata J. Gawryszewska, Warsaw University of Life Sciences, Poland/ Anna Wilczyńska, Warsaw University of Life Sciences, Poland/ Maciej Łepkowski, Warsaw University of Life Sciences, Poland (beata.gawryszewska@gmail.com)

Keywords: Cultural Ecosystem Services, Urban Wastelands, Community Gardens, Public Goods, CICES-Be, CICES, Creative Attitude

The main assumption of this paper is to consider urban wastelands as part of the cultural ecosystem services in cities, providing physical and intellectual interactions with biota and landscapes by social cohesion, creative behaviour, physical, social and mental well- being, as well as spiritual and symbolic interactions with biota, the benefits of which are identity, sense of place, sense of possession of skills or willingness to preserve nature. The authors have researched wastelands that are localised closely to residential areas, to see, if the residents use them for recreation by developing them as a part of their inhabited space. Wastelands appeared to be in various stages of indwelling, and indicators for it were territorial markers: spontaneous paths, handmade constructions for leisure, gardens or even informal parks maintained by the community. Research methods were based on the comparative method of case studies, confronted with the Common International Classification of Ecosystem Services (CICES, Turkelboom et al. 2013). Case studies of 9 bottom-up and grass-roots initiatives, located in European countries (Poland, Estonia, Germany, Spain) were researched. To study the cases presented, the authors have conducted: inventories of main components, territorial markers, functions and values of landscape, qualitative interviews and an aesthetics preference survey to describe the profiles of users, their preferences and needs.

The authors have noticed that in modern cities there seems to be a lack of places for spontaneous creation and, paradoxically, the main feature of UW is their “freedom of use” for human and non-human users which leads to the creation of community centres. Thus, UW may be treated as complementary to functions and benefits of urban greenery. Grass-roots and bottom-up initiatives are characterised by more informal places. They imply territorial markers made by inhabitants in the process of creation and so supply the structure of inhabiting landscape and comply with conditions of cultural ecosystem services. UW, full of bottom-up and grass-roots initiatives, enrich the CICES classification and improve tools for identifying and evaluating urban green areas as a potential of cultural ecosystem services, which is especially visible in the creativity of users.

References:

Common International Classification of Ecosystem Services (CICES), viewed 14 February, from http://biodiversity.europa.eu/maes/common-international-classification-of-ecosystem-services-cices-classification-version-4.3

Turkelboom, F., Raquez, P., Dufrêne, M., Raes, L., Simoens, I., Jacobs, S., Stevens, M., De Vreese, R., Panis, J.A.E., Hermy, M., Thoonen, M., Liekens, I., Fontaine, C., Dendoncker, N., van der Biest, K., Casaer, J., Heyrman, H., Meiresonne, L., Turkekboom, H.K., 2013, CICES going local: Ecosystem services classification adapted for a highly populated country, in S. Jacobs, N. Dendoncker & H. Keune (eds.), Ecosystem Services. Global Issues, Local Practices, pp. 223-247, Elsevier, San Diego.

Parallel Sessions 4

A4 - FHNW Room 115 -> page 102

Evidence-based therapeutic gardening

Chair: Sin-Ae Park & Maria Pálsdóttir

The use of gardening and horticulture in post-stroke rehabilitation – nature-based rehabilitation in Alnarp Rehabilitation Garden

Authors: Anna-María Pálsdóttir, Swedish University of Agricultural Sciences, Sweden / Kjerstin Stigmar, Lund University & Skåne University Hospital, Sweden / Gerd Anderson, Skåne University Hospital, Sweden / Patrik Grahn, Swedish University of Agricultural Sciences, Sweden / Mikael Åström, Skåne University Hospital, Sweden / Bo Norrving & Héléne Pessah-Rasmussen, Lund University & Skåne University Hospital, Sweden

Gardening intervention for improving physical and psychological health conditions of elderly women aged over 70 years

Authors: Sin-Ae Park & A-Young Lee, Konkuk University, South Korea / Hee Geun Park & Dae-Sik Kim, Chungnam National University, South Korea / Ki-Cheol Son, Konkuk University, South Korea / Chang-Won Park, Rural Research Institute of Korea Rural Community Corporation, South Korea / Wang-Lok Lee, Chungnam National University, South Korea

Kinematic and kinetics analysis of two gardening activities for applying in a rehabilitation treatment

Authors: A-Young Lee & Sin-Ae Park, Konkuk University, South Korea / Jai-Jeong Kim, Hanbat National University, South Korea / Jae-Moo So & Ki-Cheol Son, Konkuk University, South Korea

Investigating the effect of garden biodiversity on well-being

Authors: Christopher Young / David Frey / Marco Moretti / Nicole Bauer, all: Swiss Federal Institute for Forest, Snow and Landscape Research, Switzerland

B4 - FHNW Room 125 -> page 106

Public space - contested space?

Chair: Martin Sondermann

Contested spaces of Prague allotments: Right of access and/or justice?

Authors: Petr Gibas, Czech Academy of Sciences, Czech Republic/ Arnošt Novák, Charles University Prague, Czech Republic

Municipal involvement in urban gardening and agriculture: Against contestation?

Author: Marion Ernwein, University of Fribourg, Switzerland

Temporal urban landscapes and urban gardening: re-inventing open space in Greece and Switzerland

Author: Sofia Nikolaidou, Panteion Univ. of Social & Political Sciences, Greece

Self-organised urban green initiatives and their practices of commoning

Authors: Lucia Wieger, University of Vienna, Austria / Christina Schraml, University of Applied Arts Vienna, Austria

C4 - FHNW Room 134 -> page 110

The role of urban gardening research - urban gardening after disasters

Chair: Chiara Certomà

Community gardening – an approach towards trans-disciplinary research

Author: Dörte Martens, Eberswalde Univ.for Sustainable Development, Germany

Growing together - A network-analysis of research-networks on „Growing in and around Cities“

Authors: Zoe Heuschkel, Univ.of Applied Sciences Osnabrueck, Germany / Darya Hirsch & Christian Meyer, Bonn-Rhein-Sieg Univ.of Applied Sciences, Germany

Neighbourhood self-sufficiency in Tokyo: How much can hobby farms contribute?

Authors: Giles Bruno Sioen, The University of Tokyo, Belgium / Toru Terada, The University of Tokyo, Japan / Makoto Yokohari, The University of Tokyo, Japan

Enhancing community resilience: The role of urban community gardens in earthquake recovery-a Christchurch (NZ) case study

Authors: Naomi Shimpo, University of Tsukuba, Japan / Andreas Wesener, Lincoln University, New Zealand / Wendy McWilliam, Lincoln University, New Zealand

D4 - FHNW Room 135 -> page 114

From theory to practice (II). Exploring innovative initiatives from Europe and beyond

Chair: Runrid Fox-Kämper

A yard out of nothing: Building a common landscape experience and place-making in Kipos3, Thessaloniki

Authors: Eleftheria Gavriilidou & Maria Ritou, Kipos3 project & Aristotle University of Thessaloniki, Greece

A garden for everybody

Authors: Irene Grabherr & Angela Salchegger, all: Urban Renewal Office Vienna for the 9th, 17th and 18th district, Austria

Urban Agriculture in Pune and Mumbai, India

Authors: Sophia Hildebrandt & Ulrike Weiland, all: University of Leipzig, Germany

A4 - FHNW Room 115

Evidence-based therapeutic gardening

Chair: Sin-Ae Park & Maria Pálsdóttir

The use of gardening and horticulture in post-stroke rehabilitation – nature-based rehabilitation in Alnarp Rehabilitation Garden

Authors: Anna-María Pálsdóttir, Swedish University of Agricultural Sciences, Sweden / Kjerstin Stigmar, Lund University & Skåne University Hospital, Sweden / Gerd Anderson, Skåne University Hospital, Sweden / Patrik Grahn, Swedish University of Agricultural Sciences, Sweden / Mikael Åström, Skåne University Hospital, Sweden / Bo Norrving, Lund University & Skåne University Hospital, Sweden / Héléne Pessah-Rasmussen, Lund University & Skåne University Hospital, Sweden (anna.maria.palsdottir@slu.se)

Keywords: Horticulture Therapy, Nature-assisted Therapy, Post-stroke Mental Fatigue, Supportive Environment

The study examines the participants' experience of post-stroke nature-based rehabilitation at Alnarp Rehabilitation Garden. A total of 101 patients were randomized; 50 to control group (standard care) and 51 to nature-based intervention as an add-on to standard care (Clinical Trial.gov Identifier: NCT02435043). A strategic sample, among the patients in the intervention group, was asked to participate in a semi-structured interview. The aim of the study was to find out how the patients experienced and perceived the nature-based intervention, Data was analysed with an Interpretative Phenomenological Analysis approach as it can explore and illuminate how the participants recovering from post-stroke experienced the nature-based intervention. The sub-group consisted of 27 participants (11 female, 12 male) all of whom completed the nature-based intervention. The nature-based intervention was grounded in environmental psychology and occupational therapy, supported by a multimodal rehabilitation team that utilized a specially designed garden for sensory stimulation and body awareness through meaningful horticultural and garden activities. The programme was outlined as a 10 weeks group therapy, consisting of up to eight persons/group and was scheduled for two days a week, each day lasting three and a half hours and was led by an occupational therapist assisted by a horticulturist. The participants could take part in various plant propagation activities e.g. sowing; taking cuttings; harvest the seasonal crops and post-harvest activities. The 2ha garden was divided into different compartments including areas such as traditional vegetable garden, upraised growing beds, fruit orchard, flower meadow and traditional flowerbeds facilitating a range of different opportunities physical and mental training. New results will be presented at the conference.

The results will describe how the participants experience and perceive the nature-based rehabilitation. This knowledge is important for further development of nature-based intervention as a new treatment options for post-stroke recovery.

Gardening intervention for improving physical and psychological health conditions of elderly women aged over 70 years

Authors: Sin-Ae Park, Konkuk University, South Korea / A-Young Lee, Konkuk University, South Korea / Hee Geun Park, Chungnam National University, South Korea / Dae-Sik Kim, Chungnam National University, South Korea / Ki-Cheol Son, Konkuk University, South Korea / Chang-Won Park, Rural Research Institute of Korea Rural Community Corporation, South Korea / Wang-Lok Lee, Chungnam National University, South Korea (sapark42@gmail.com)

Keywords: Cardiovascular System, Gardening, Horticultural Therapy, Immunity, Human Issues in Horticulture

The process of aging is inevitable and unavoidable (Rowe & Kahn 1997), and is characterized by a decrease in complex functional abilities related to the physical, psychological, cognitive, and social aspects of life (Brandtstädter & Greve 1994). This study was conducted to improve physical and psychological health conditions of elderly women by participating in a gardening program as a physical activity intervention. A total of 50 elderly women aged over 70 years were recruited from the community, Seoul, South Korea. Twenty four elderly women of senior community centre located in Seoul were participated in a 15-session gardening program (twice a week, average 50 minutes per session) in the period of Sep. to Nov. 2015. The rest of the elderly women were in the control group. Before and after the gardening program, physical health conditions such as height, weight, body mass index, waist size, blood pressure, hand function ability, physical functional ability, immunity system, and cholesterol level were assessed. Moreover, psychological health conditions such as depression, sociality, and cognitive ability were evaluated. As the results, the elderly women in the gardening group improved significantly in the hand function ability, physical functional abilities, and cognitive ability and reduced waist size and blood pressure ($p<0.05$). On the other hands, the elderly women in the control group significantly increased depression symptom ($p<0.001$) and decreased agility and muscle mass ($p<0.05$). Finally, our results suggested that the 15-session gardening program as a physical activity intervention lead positive effects on the physical and psychological health conditions of elderly women aged over 70 years. Future studies need to have a larger population and longer gardening intervention period to determine the effects of the intervention and improve the health conditions of the elderly subjects.

References:

Brandtstädter, J. & Greve., W., 1994, ‚The aging self: Stabilizing and protective processes‘, Developmental Review 14(1), 52-80.

Rowe, J.W. & Kahn., R.L., 1997, ‚Successful aging‘, The Gerontologist 37(4), 433-440.

Kinematic and kinetics analysis of two gardening activities for applying in a rehabilitation treatment

Authors: A-Young Lee, Konkuk University, South Korea / Sin-Ae Park, Konkuk University, South Korea / Jai-Jeong Kim, Hanbat National University, South Korea/ Jae-Moo So, Konkuk University, South Korea / Ki-Cheol Son, Konkuk University, South Korea (danapre@nate.com)

Keywords: Horticultural Therapy, Reaching and Grasping, 3D Motion Analysis, Muscle Activation, Electromyography

Kinematic and kinetics analysis were utilized to understanding characteristics and strategy for human movement in a variety of fields, such as sports, rehabilitation medicine and industrial engineering (Che et al. 2009; Coluccini et al. 2007; Kuo et al. 2011; Murphy et al. 2011). The objectives of this study were to determine the Kinematics and kinetics characteristics of two common gardening tasks (sowing seeds and planting plants) and apply these gardening tasks for the improvement of upper limb functions of rehabilitation patients as a treatment. Each gardening task was classified into five gardening task motions respectively. Thirty-one male university students (mean age: 26.2 ± 2.0 years) were conducted this study in a sports biomechanics lab at Konkuk university, Seoul, South Korea. 3D motion analysis system (Motion master 100) was used to measure movement time, peak velocity, joint angles, and grasp types of each motion. Surface electromyography (Telemyo 2400T G2) was used to measure muscle activation of upper limb at gardening task motions. Bipolar surface electromyography electrodes were attached to five shoulder muscles and three arm muscles. Movement characteristics of gardening task motions were similar to movement characteristics of functional reaching-grasping with two or three acceleration and deceleration phases. Especially muscle activation of serratus anterior was higher than the other muscles. Moreover, twenty hemiparetic patients after stroke in rehabilitation hospital were participated in the 14-session therapeutic gardening program (TG) (six weeks, average 60 min per session) based on the results of the Kinematics and kinetics characteristics. Upper limb functions of the patients were evaluated by using upper extremity function assessment (Action Reach Arm Test, Wolf Motor Function Test). As the results, the patients could improve their upper limb functional abilities after the 14-session TG. Thus, this study suggested that gardening tasks would be a potential therapeutic gardening program as reaching and grasping training for rehabilitation patients.

Chu Y., Fleisig, G.S., Simpson, K.J., & Andrews, J.R., 2009, ‚Biomechanical comparison between elite female and male baseball pitchers‘, J Appl Biomech 25(1), 22-31.

Coluccini, M., Maini, E.S., Martelloni, C., Sgandurra, G., & Cioni, G., 2007, ‚Kinematic characterization of functional reach to grasp in normal and in motor disabled children‘, Gait & Posture 25(4), 493-501.

Kuo, F.C., Kao, W.P., Chen, H.I. & Hong, C.Z., 2011, ‚Squat-to-reach task in older and young adults: Kinematic and electromyographic analyses‘, Gait & Posture 33(1), 124-129.

Murphy, M.A., Willén, C., & Sunnerhagen, K.S., 2011, ‚Kinematic variables quantifying upper-extremity performance after stroke during reaching and drinking from a glass‘, Neurorehabilitation and Neural Repair 25(1), 71-80.

Investigating the effect of garden biodiversity on well-being

Authors: Christopher Young, Swiss Federal Institute for Forest, Snow and Landscape Research, Switzerland/ David Frey, Swiss Federal Institute for Forest, Snow and Landscape Research & ETH Zurich, Switzerland / Marco Moretti, Swiss Federal Institute for Forest, Snow and Landscape Research, Switzerland / Nicole Bauer, Swiss Federal Institute for Forest, Snow and Landscape Research, Switzerland (christopher.young@wsl.ch)

Keywords: Restoration, Allotment Gardens, Domestic Gardens, Urban, Species Diversity, Conservation

The greater positive effect of natural compared to built environments on human restoration and wellbeing has found empirical support for many years. Recently, social science research started to investigate the effect of biodiversity on human health and wellbeing, but provides mixed evidence so far. The research also remains vague regarding causal mechanisms. We discuss four possible causal mechanisms linking species richness and wellbeing for the garden context and urban green spaces more generally. For this interdisciplinary project we selected allotment and domestic gardens in Zurich in which plant richness was surveyed and gardeners were asked to fill in a questionnaire on perceived species richness and perceived restoration. The preliminary results show that for the allotment gardens (actual) species richness and restoration correlated weakly, while for the domestic gardens we found a significant correlation between perceived species richness and restoration.

References:

Carrus, G., Agrimi, M., Colangelo, G., Ferrini, F., Lafortezza, R., Portoghesi, L., Salbitano, F., Sanesi, G., Scopelliti, M. & Semenzato, P., 2015, ‚Go greener, feel better? The positive effects of biodiversity on the well-being of individuals visiting urban and peri-urban green areas‘, Landscape and Urban Planning 134, 221-228.

Dallimer, M., Armsworth, P.R., Davies, Z.G., Gaston, K.J., Irvine, K.N., Maltby, L.L., Rouquette, J.R., Skinner, A.M.J. & Warren, P.H., 2012, ‚Biodiversity and the Feel-Good Factor: Understanding Associations between Self-Reported Human Well-Being and Species Richness‘, BioScience 62(1), 47-55.

Fuller, R., Devine-Wright, P., Gaston, K.J., Irvine, K.N. & Warren, P.H., 2007, Psychological benefits of greenspace increase with biodiversity, Biology Letters 3(4), 390-394.

Kaplan R., Kaplan, S. & Ryan, R.L., 1998, With people in mind : design and management of everyday nature, Washington, Island Press, DC.

Ulrich, R., 1984, ‚View through a Window May Influence Recovery from Surgery‘, Science 224(4647), 420-421.

B4 - FHNW Room 125

Public space - contested space?

Chair: Martin Sondermann

Contested spaces of Prague allotments: Right of access and/or justice?

Authors: Petr Gibas, Czech Academy of Sciences, Czech Republic / Arnošt Novák, Charles University Prague, Czech Republic (petr.gibas@soc.cas.cz)

Keywords: Allotment Garden Colonies, Urban Space, Social Justice, Urban Planning, Prague

In Prague, the capital of the Czech Republic, allotments started to appear before WWI and became deeply embedded within the urban fabric due to food shortages throughout the 20th century. During the socialist period (1948-1989), garden colonies became popular because they offered the possibility to grow hard-to-get fruit and vegetables. At the same time, gardening represented a tolerated form of recreation, while gardens and colonies functioned as one of the few retreats from the public sphere infused with ideology and disillusion. After the fall of socialism, garden colonies have been subjected to extreme pressures because they were perceived as an unwanted heritage of socialism (Gibas et al. 2013; Pauknerová & Gibas 2011). At the same time, they were criticised on aesthetical grounds and threatened because they covered areas suitable for new development. As a result, most allotments in the wider city centre but also others succumbed to the calls for their displacement. In our paper, we trace the fate of two allotment colonies – one in the wider city centre and one in the outskirts – and show what happened to the urban space after they were banished. In both cases, the cleared area became part of a newly built housing development scheme including green park spaces. The disbandment of the two colonies was officially represented as an act of equalizing the power over the particular urban spaces by means of ensuring equal right of access (which was previously granted only to the gardeners). However, because the spaces were turned into housing to be marketed and sold, we argue that the discourse of the right to space employed in fact functioned as a masquerade for the neoliberal politics of urban development producing further inequality (Smith 2007). While it might seem that the key motive is to ensure even access to urban space for all, the discursively promoted equality of such spaces is based on the underlying neoliberal logic of value. In order to unmask such a working of (discursively propagated and masked) power and its effects, it is necessary to promote and employ an understanding of urban space in connection with justice based on a different concept of value than the neoliberal one (Follemann & Viehoff 2015; Purcell & Tyman 2015). Such an understanding is what we aim to develop.

Follmann, A. & Viehoff, V., 2015, ‚A green garden on red clay: creating a new urban common as a form of political gardening in Cologne, Germany‘, Local Environment 20(10), 1148-1174.

Gibas, P. et al., 2013, Zahrádkové osady: Stíny minulosti nebo záblesky budoucnosti? [Allotment Gardens: Shadows of the Past or Glimps of the Future?], Charles University, Prague.

Pauknerová, K. & Gibas, P, 2011, ‚The struggle over nature and relaxation in (sub)urban space: The case of garden colonies in Kbely, Prague 19‘, Lidé města 13(2), 221-233.

Purcell, M. & Tyman, S.K., 2015, ‚Cultivating food as a right to the city‘, Local Environment 20(10), 1132-1147.

Smith, A., 2007, Articulating neo-liberalism: Diverse economies and everyday life in postsocialist cities, in H. Leitner, J. Peck & E. Sheppard, Contesting neoliberalism: Urban frontiers, pp. 204-222, Guilford Press, New York.

Municipal involvement in urban gardening and agriculture: Against contestation?

Author: Marion Ernwein, University of Fribourg, Switzerland (marion.ernwein@unifr.ch)

Keywords: Urban Agriculture, Urban Gardening, Contestation, Neoliberalism

Building upon ethnographic research conducted in the town of Vernier (Canton of Geneva, Switzerland), this paper critically engages with municipal involvement in the development of urban gardening and agriculture programs. Framed as a "new" model suitable to meet a growing citizen demand for gardening spaces and to progressively replace space-consuming allotment gardens, community gardening emerged in the canton of Geneva in the early 2000s (République et Canton de Genève 2011). Because of their predominantly municipal character, local community gardens are – perhaps more than elsewhere – highly regulated, with restrictions placed upon lawns, trees and garden-sheds. As such, those programs seem far away from the emancipatory, contestatory experiences of community gardens reported in other settings (Schmelzkopf 1995; Smith & Kurtz 2003). The paper shows that the municipal character of urban gardening programs does however by no mean automatically undermine their contestatory potential. The latter may just not be found where expected: For the green space department in Vernier, adopting urban agriculture practices – growing native apple-tree orchards, breeding poultry and producing ancient vegetables for the annual market addressed to local community gardeners – is a strategy to address the economic pressures of the capitalistic horticultural economic system by diversifying the production and sustaining traditional skills. Paradoxically, certain facets of this urban agriculture program – namely the community gardens – are mobilized as forms of interim maintenance of green spaces, therefore introducing processes of outsourcing and devolution of public responsibilities onto citizens. With this paper, I address the paradoxes of urban gardening and agriculture (McClintock 2014) by demonstrating that they can be simultaneously municipal, contestatory and neoliberal. In this perspective, I mobilize recent work on neoliberal cities (Brenner & Theodore 2002) and neoliberal nature (Bakker 2005, 2010; Büscher et al. 2014; Castree 2008) to argue that urban agriculture programs in Geneva are simultaneously struggling against the neoliberalization of nature and partaking in the neoliberalization of cities.

Bakker, K., 2005, ‚Neoliberalizing nature? Market environmentalism in water supply in England and Wales', Annals of the Association of American Geographers 95(3), 542-565.

Bakker, K., 2010, ‚The limits of "neoliberal natures": Debating green neoliberalism', Progress in Human Geography 34(6), 715-735.

Büscher, B., Dressler, W. & Fletcher, R., 2014, Nature Inc.: Environmental Conservation in the Neoliberal Age, University of Arizona Press, Arizona.

Brenner, N. & Theodore, N. (eds.), 2002, Spaces of neoliberalism: Urban restructuring in North America and Western Europe, Blackwell Publishing, Malden.

Castree, N., 2008, ‚Neoliberalising nature: the logics of deregulation and reregulation', Environment and planning A 40(1), 131-152.

République et Canton de Genève, 2011, Plan Directeur Cantonal 2030.

McClintock, N., 2014, ‚Radical, reformist, and garden-variety neoliberal: coming to terms with urban agriculture's contradictions', Local Environment 19(2), 147-171.

Schmelzkopf, K., 1995, ‚Urban community gardens as contested space', Geographical Review 85(3), 364-381.

Smith, C.M. & Kurtz, H.E., 2003, ‚Community gardens and politics of scale in New York City', Geographical Review 93(2), 193-212.

Temporal urban landscapes and urban gardening: re-inventing open space in Greece and Switzerland

Author: Sofia Nikolaidou, Panteion University of Social and Political Sciences, Greece (so_nikk@hotmail.com)

Keywords: Green Space Governance, Open/Public Space, Social Inclusion, Collaborative Planning, City Greening

New forms of urban gardening are gaining a momentum in cities transforming the conventional use and functions of open green and public space. They often take place through informal and temporal (re)use of vacant land „that is considered to have little market value“ (Schmelzkopf 1995: 364) consisting part of greening strategies or social policy. Increased adoption of such forms within urban areas underlies discussions of changing contemporary social and productive urban landscapes by raising important issues regarding new modes of land use management, green space governance and collaborative structures. This paper mainly focuses on the shifted meanings of the notion of open public space by referring to its openness to a diversity of uses and users that claim it and relates to the questions of access rights, power relations among actors, negotiations and the so called right to use and re-appropriate land (Hackenbroch 2013).

By using examples drawn from the Greek and Swiss case, this paper advances comparative research under a European perspective underlining differences and similarities in urban gardening practices, social and institutional contexts, collaborative governance patterns, motivations, levels of institutionalisation, openness and inclusiveness of space between Northern and Southern Europe. More specifically the research calls attention to the critical role of the temporary nature of these initiatives in relation to their multifunctional, spatial and socio-political aspects that affects new configurations of urban green areas and public space as well as related planning practices. Therefore it investigates: a) What are the driving factors in each context and what forms of space and governing structures do they generate? b) How do these growing spaces influence the usability and accessibility of open/public space? c) What are the potentials, constraints, future prospects and urban policy implications of such urban gardening projects for sustainable development incentives?

Self-organised urban green initiatives and their practices of commoning

Authors: Christina Schraml, University of Applied Arts Vienna, Austria (christina.schraml@hotmail.com) / Lucia Wieger, University of Vienna, Austria (luciawieger@gmx.net)

Keywords: Practices of Commoning, Self-organised, Right to the City, Green Urban Commons, Bottom-up Initiatives

In growing and densifying cities the need for open green spaces increases. Where they do not exist or where current ones are at risk because of private interests, more and more citizens reclaim or take the initiative to create urban green spaces on their own. Some actors are simply carving out a piece of green space for their own needs, while others are fuelled by political activism and the right to the city. In recent years, academic research on self-initiated green urban spaces has developed rapidly. The majority currently derives from North America and some European cities, however, with little academic exploration in the context of Vienna. Drawing on current theoretical debates on the right to the city and the importance of urban commons for the social justice and equity of our cities the paper discusses selected case studies from Vienna.

In addition to desk research and participatory observation, qualitative interviews with activists from the initiatives were conducted. The paper critically analyses a D.I.Y. park, a temporary parklet garden, an agricultural collective and a community garden with a particular focus on their strategies of “commoning”. It considers their potential and pitfalls to create alternative spaces beyond the neoliberal city.

References:

Harvey, D., 2008, ‚The Right to the City‘, New Left Review 53, 23-40.

Marcuse, P., 2009, ‚From critical urban theory to the right to the city‘, City 13(2-3), 185-196.

Purcell, M., 2002, ‚Excavating Lefebvre: The right to the city and its urban politics of the inhabitant‘, GeoJournal 58, 99-108.

C4 - FHNW Room 134

The role of urban gardening research - The role of urban gardening after disasters

Chair: Chiara Certomà

Community gardening – an approach towards trans-disciplinary research

Author: Dörte Martens, Eberswalde University for Sustainable Development, Germany (do-erte.martens@hnee.de)

Keywords: Community Garden, Urban Gardening, Trans-disciplinarity, Social Inclusion, Social Innovation

Community gardens have become very popular, not only in the practical field in urban surround-ings, but also in scientific considerations. Various research projects focus on the innovative form using gardening as a tool to enhance interaction and social inclusion. This contribution focuses on the gap between research and practical implications, which is at times rather large. How can research address the questions arousing from the gardens and how can research results go back into the field of the gardens? This question is discussed by various examples addressing the interaction between research and practical implementation.

References:

Bendt, P., Barthel, S. & Colding, J., 2013, ‚Civic greening and environmental learning in public-access community gardens in Berlin‘, Landscape and Urban Planning 109, 18-30.

Guitart, D., Pickering, C. & Byrne, J., 2012, ‚Past results and future directions in urban commu-nity gardens research‘, Urban Forestry & Urban Greening 11(4), 364-373.

Jaeger-Erben, M. & Matthies, E., 2014, ‚Urbanisierung und Nachhaltigkeit - Umweltpsychologi-sche Perspektiven auf Ansatzpunkte, Potentiale und Herausforderungen für eine nachhaltige Stadtentwicklung‘, Umweltpsychologie 18(2), 10-30.

Martens, D. & Frick, V., 2014, ‚Gemeinschaftsgärten: Motive zur Initiierung und Einfluss auf Er-holungserleben‘, Umweltpsychologie 18(2), 103-123.

Martens, D., Zacharias, M. & Hehl, F., 2014, Gemeinschaftsgärten? Ja, bitte - aber wie? in S. Halders, D. Martens, G. Münnich, A. Lassalle, T. Aenis & E. Schäfer (eds.), Wissen wuchern lassen - ein Handbuch zum Lernen in urbanen Gärten, AG Spak, Neu-Ulm.

Rosol, M., 2006, Gemeinschaftsgärten in Berlin. Eine qualitative Untersuchung zu Potenzialen und Risiken bürgerschaftlichen Engagements im Grünflächenbereich vor dem Hintergrund des Wandels von Staat und Planung, Mensch & Buch Verlag, Berlin.

Growing together - A network-analysis of research-networks on „Growing in and around Cities“

Authors: Zoe Heuschkel, University of Applied Sciences Osnabrueck, Germany / Darya Hirsch, Bonn-Rhein-Sieg University of Applied Sciences, Germany / Christian Meyer, Bonn-Rhein-Sieg University of Applied Sciences, Germany (h.heuschkel@hs-osnabrueck.de)

Keywords: Urban Agriculture Research, Co-Author-Networks, Social-Network-Analysis

Urban agriculture (UA) research, which has a strong applied nature at the moment, is in the process of self-definition and establishment. It is not yet fully determined which research disci-plines will be included and shape research directions. Existing working groups and networks (e.g. COST Action UA Europe or UrbanFood Plus) as well as research projects such as e.g. Sustainable Urban Culture Landscape in the Ruhr Metropolis (KuLaRuhr), Innovation analysis of Urban Agriculture (INNSULA) or Future Forum Urban Agriculture (Zukunftsforum urbane Landwirtschaft) already show diversity of disciplines like agriculture and urban planning but ac-tually including a wide range of social and natural sciences. Research on growing of food in and around cities also stands at a critical portal of social, technological and economic innovation and will therefore influence policymaking in various important fields like urban development, climate adaptation, food supply and social security. Therefore, it will be important to evaluate the actual state of development inside the evolving com-munity for a further development of a clear inter-disciplinary definition, training curricula and funding schemes and also identify centres of productivity and innovation. The definitions of the term urban agriculture as well as the analysis of its manifestations in the international contexts are still in a process of consolidation. In order to reduce inaccuracy and complexity due to language use and translation issues, we focus in this paper only on German speaking countries (D/A/CH) and analyse (co-authored) publications coming from institutions which are located in this selected region. We have established a biblio-graphic database in a reference manager program (Citavi) which includes 140 papers published in peer-reviewed journals or in anthologies in a time-frame of 10 years between 2006 and 2016. Relevant co-authored publications were selected in e.g. ISI Web of Science or ResearchGate by use of the English keywords: urban agriculture; peri-urbanagriculture; urban gardening and their German equivalents: urbane Landwirtschaft/ urbane Agrikultur; peri-urbane Landwirtschaft/ peri-urbane Agrikultur; urban gardening. We use social network analysis as a tool to visualize existing research networks and to show the construction of interdisciplinarity in the field of UA research. The R-package program was then used to analyse and graphically displayed co-author networks by studying collaborative patterns. We use these networks to answer a broad variety of questions about existing research clusters, their ties and the participating scientific disciplines in order to later define a term urban agriculture.

Neighbourhood self-sufficiency in Tokyo: How much can hobby farms contribute?

Authors: Giles Bruno Sioen, The University of Tokyo, Belgium / Toru Terada, The University of Tokyo, Japan/ Makoto Yokohari, The University of Tokyo, Japan (gilessioen@s.k.u-tokyo.ac.jp)

Keywords: Urban Agriculture, Yield, Production, Self-sufficiency, Hobby Farming

Introducing urban agriculture (UA) into the urban fabric is said to increase the sustainability of cities by ensuring food security for its neighbouring residents (La Rosa et al. 2014). Moreover, an increasing interest of urban residents in urban agriculture and in “safe and fresh food” (Iijima & Edahiro 2013; Lovell 2010; Tahara et al. 2011) has evolved in recent years. Tokyo, whose residents have been keen to participate in agricultural activities, is no different. Local govern-ments in conjunction with farmers have even organized hobby farms within densely populated residential areas. However, production of these hobby-farming gardens has yet to be formally and systematically recorded. Thus, this study explores the hypothesis that Tokyo’s hobby farms have the potential to contribute to the vegetable self-sufficiency of its neighboring residents.

Household consumption statistics, annual yield per square meter and per type of hobby farms (Tahara 2011) are utilized. Firstly, a geographic information system (GIS) buffer analysis is conducted around each hobby farm based on walking distance. Household numbers were then estimated within these designated areas to determine the required vegetable production for self-sufficiency. Secondly, the yield indicator, an estimate of households per buffer, and a potential number of households that can be self-sufficient in vegetables from each garden is determined based on consumption statistics. Finally, the results of each buffer analysis are categorized by municipality creating three distinguishable categories for discussion. Results of this research show a larger number of allotment farms (380) than experience farms (75) and that despite the high population density in Tokyo, a considerable number of households within the buffers have access to vegetable supply of hobby farms.

References:

Iijima, K. & Junko, E., 2013, Allotment Gardens Sprout One after Another as Interest Grows in Urban Agriculture, viewed 17 January, from http://www.japanfs.org/en/news/archives/news_id034564.html

Lovell, S.T., 2010, ‚Multifunctional Urban Agriculture for Sustainable Land Use Planning in the United States‘, Sustainability 2(8), 2499-2522.

La Rosa, D., Barbarossa, L., Privitera, R. & Martinico, F., 2014, ‚Agriculture and the city: A method for sustainable planning of new forms of agriculture in urban contexts‘, Land Use Policy 41, 290-303.

Tahara, S., Shioyama, S., Kurita, H. & Terada, T., 2011, ‚A quantitative assessment of agricul-tural production from allotment gardens‘, Journal of The Japanese Institute of Landscape Archi-tecture 74(5), 685-688.

Enhancing community resilience: The role of urban community gardens in earthquake recovery-a Christchurch (NZ) case study

Authors: Naomi Shimpo, University of Tsukuba, Japan / Andreas Wesener, Lincoln University, New Zealand / Wendy McWilliam, Lincoln University, New Zealand (shimpo.naomi.gn@u.tsukuba.ac.jp)

Keywords: Urban Community Gardens, Earthquake Recovery, Community Resilience, Social Capital

Extreme environmental events, such as earthquakes, tsunami, and hurricanes cause severe psychological strains leading to physical disabilities (Keskinen-Rosenqvist et al. 2011). Com-munity gardens can bolster both individual and community resilience in disaster zones (Okvat & Zautra 2014). Recent case studies show that following extreme storm events, community gar-dens can supply food (Sims-Muhammad 2012), enhance social empowerment in the context of inequality (Kato et al. 2014) and provide safe gathering spots and restorative practices to re-mind people of normality (Chan et al. 2015). However, the role played by community gardens in enhancing resilience following earthquakes is less well known. To fill this gap, we conducted a study of a community garden in Christchurch, New Zealand, located in the epicentre of the 2010/2011 Canterbury earthquakes. A questionnaire-based survey, participant observation and in-depth interviews determined whether, and how, the garden contributed to gardeners' recov-ery following the earthquakes.

The data, analysed according to a grounded theory approach, indicated the garden played a significant role. The use of the garden substantially increased following the earthquake and gardeners said it helped them restore their equilibrium amid the post-quake chaos. Gardeners reported that resuming their pre-earthquake gardening activities helped them gain back control of their lives. The garden also served as an important place to de-stress where people could share their experiences and gained community support.

Important garden features supporting these functions included a central meeting/lunch place promoting social interaction and bonding. The results indicate that community gardens can significantly contribute to spatial strategies seeking to improve community resilience in earthquake-vulnerable communities. Garden designs in these areas should include elements and activities that reduce stress, enhance feelings of control and normality, and provide social interaction.

D4 - FHNW Room 135

From theory to practice (II). Exploring innovative initiaitives from Europe and beyond

Chair: Runrid Fox-Kämper

A yard out of nothing: Building a common landscape experience and place-making in Kipos3 project, Thessaloniki

Authors: Eleftheria Gavriilidou, Kipos3 project & Aristotle University of Thessaloniki, Greece / Maria Ritou, Kipos3 project & Aristotle University of Thessaloniki, Greece (elegvr@gmail.com)

Keywords: Place-making in crisis, landscape design, urban resilience, bottom-up and top-down synergies

In the most forms of urban gardening worldwide, the community building and the establishment of alternative food networks are promoted either top-down as a social policy or bottom-up as a spontaneous “return to the land”, as a means for self-sufficiency, social networking and cultural exchange. In the case of the city of Thessaloniki the second biggest urban agglomeration in Greece, both forms of urban gardening have appeared the last years, in parallel with the effects of economic crisis in the city’s evolution.

This paper elaborates the story of an urban community garden in the centre of Thessaloniki which was developed from scratch in 2015 by a team of postgraduate landscape architecture students of the Aristotle University. “Kipos3” (mean. “Garden in the cube” in Greek) is a proposal for a module of a “social courtyard” applicable in every residual site of the Greek city core. In this concept, this first garden created, narrates more than the impact of urban agriculture in urban crisis. It reflects the new field of synergies among local authorities and citizens on the formation of the urban environment starting from the public vacant spaces and using food as a common incentive. It proposes the top-down and bottom-up cooperation in order to spread and strengthen the idea of urban gardening with an active, community based approach, as a cultural practice also. After a comparative review of the form of urban gardening initiatives in Greece, and learning from similar best practices abroad, this paper presents the first results of the field study in Kipos3 garden. It discusses finally the experience of a new-born concept and its implementation in a concrete environment as well as the first quantitative and qualitative results in a timeline of one year operation, the building of “top & bottom synergies”, the social empowerment of a neighbourhood community and finally a resilience story from Thessaloniki.

A garden for everybody

Authors: Irene Grabherr, Urban Renewal Office Vienna for the 9th, 17th & 18th district, Austria
Angela Salchegger, Urban Renewal Office Vienna for the 9th, 17th & 18th district, Austria
(irene.grabherr@gbstern.at)

Keywords: Commons, Neighbourhood Management, Open Community Garden, Communication, Space of Encounter, Low-threshold, Public Space, Urban Renewal

Community gardens in Vienna are typically organized by associations, whose members take care of their plots. This often leads to an appropriation of the space by a small and rather homogeneous group of people. “A garden for everybody” is a hands-on example of gardening in public space following a new approach: Based on the idea of urban commons (Harvey 2012) and The Right to the City (Lefebvre, 2009) our project aims to create and establish a more common way of gardening in public space for Vienna. It will be implemented as a small scale pilot project first and can become a best-practice example for other neighbourhoods in Vienna and elsewhere.

The garden should be cultivated by the whole community instead of assigning single plots to individuals. Free access for every inhabitant of the neighbourhood is provided, thus a space of encounter occurs during the gardening time. The public space remains completely open for the public. By visiting existing open community gardens outside Vienna (Linz, Graz, Berlin) we analysed how they function. Through those case studies we developed a package of essentials required for it. In 2016 the implementation of the “garden for everybody” will start. The chosen site is part of a neighbourhood (Nordbergstraße) currently in a state of change due to a big reconstruction project nearby.

In this context an open community garden takes the role of a communication tool and a space of encounter, thus becoming a connecting urban element. The idea of a top-down way of providing basic infrastructure should enable a more open and diverse community than in self-organized projects. An ongoing support (gardening-days, workshops etc.) can enable the thriving of the garden and the community. Currently we are about to set up the spatial conditions, legal requirements and building up of the local network.

Starting in May by the time of the conference the garden will be running for several months. We would like to report about the project and exchange some experiences.

Urban Agriculture in Pune and Mumbai, India

Authors: Sophia Hildebrandt, University of Leipzig, Germany/ Ulrike Weiland, University of Leipzig, Germany (uweiland@uni-leipzig.de)

Keywords: Actors, Challenges, Global South, India, Urban Agriculture, Motivations

Since urban agriculture has the potential to direct urban development into a favourable direction, more knowledge about it is crucial. The forecast that India – besides China - will contribute most to future urban growth, led to the decision of investigating more in urban agriculture in the large Indian metropolises Pune and Mumbai. This study examined characteristics of the sites, the involved actors as well as motivations and problems in urban agriculture through an explorative questionnaire and field visits.

The study reveals that, besides individuals who grow plants for themselves on balconies, terraces, window sills or gardens, new forms of urban agriculture are coming up. These are, on the one hand, community gardens which cultivate a variety of plants. On the other hand, there are people who are committed to green hills to improve the condition of the environment. Restrictions and problems of urban agriculture include negative environmental influences, social issues like trouble with neighbours or family members as well as personal resources including lack of knowledge.

Urban community gardening activities are increasing lately, with similarities in the motivation to urban gardening activities in the Global North. Still, a deep interest in organic waste management and in environmental upgrading of the city indicates a different emphasis. Because of the explorative character of the study, further investigation is required, for example, the differences between Pune and Mumbai agriculturalists.

References:

Clayton, S., 2007, ‚Domesticated nature: Motivations for gardening and perceptions of environmental impact‘, Journal of Environmental Psychology 27(3), 215-224.

Okvat, H. A. & Zautra, A. J., 2011, ‚Community Gardening: A Parsimonious Path to Individual, Community, and Environmental Resilience‘, American Journal of Community Psychology 47(3-4), 374-387.

Smit, J., Nasr, J., & Ratta, A., 2001, Urban agriculture: food, jobs and sustainable cities, UNDP, New York.

Stewart, R., Korth, M., Langer, L., Rafferty, S., Da Silva, N. & van Rooyen, C., 2013, ‚What are the impacts of urban agriculture programs on food security in low and middle-income countries?‘ Environmental Evidence 2(1), 1-13.

Kitchen Gardens

A photographic project by Francesco Sinni

The history of kitchen gardens in C.E.P. (Centro di Edilizia Popolare) neighborhood of Pisa was born in 1995.

C.E.P. residents wanted to create a green area to allow socialization among different generations and cultures. In this way Pisa became more and more conscientious about slow food and organic farming issues.

„The Kitchen Gardens“ photographic exhibition shows a sequence of protraits about farmers in C.E.P. neighborhood of Pisa. Each farmer was photographed in his own garden. In this way they reveal own sensitivity and personality inside their green microcosm.

Land plays an essential role. In fact it is not only necessary to produce fruits but, at the same time, land is place where each farmer (old, young, foreign, capable and beginner) teaches to others own culture baggage.

All farmers are aware of the power of land provided that they devote love to it.

In the garden we hear often this expression „Land is low“.

In order to obtain fruits by the land is neccesary to bow in front of it as well as all of us bow in front of something bigger than us.

Francesco Sinni: I graduated at the school of photography“Ettore Rolli“ in Romein 2004. ln 2006 I graduated in Economics at the University „Ia Sapienza“ in Rome. My master degree thesis was a photographic thesis concerning the historical and socio-economic developments in the territory of Terracina (LT). Thereafter I carried out several photo shoots working in theatres and movie sets in Rome. ln 2006 I taught photography and cinema at high school. ln the same year I was the director of photography in the short film „September“ winning the audience award in the film festival “lazio: terre, gente e miti“ in Rome. ln 2007 I was the still photographer in the film „Pa-ra-da“ directed by Marco Pontecorvo. The shooting took place in the cities of Bucharest and Paris. ln 2009 I produced two photo reportages:“lmpruneta 51“ about squatters living in Rome (Magliana district) and „Sikh“ describing the Indian community of Punjab in San Vito (LT). ln 2010 I went to Mexico in order to portray the Acapulco taxi drivers. ln 2012 I carried out a photo shoot concerning the social and shared gardens in Pisa (CEP district). The photographic portraits were exhibited in a photo exhibition entitled,‘Kitchen Gardens‘, and published in the book “locus“ by Felici publisher. ln the same period I shot a documentary on social gardeners working in the CEP district in Pisa. This documentary was screened at the Arsenale Cinema in the month of March 2013 during the event“Pisa in Fiore‘. ln May 2014 I shot a documentary interview to the director Jonathan Nossiter during the preview release of his last movie ,,Natural Resistance“ in the city of Pisa and San Gimignano. Currently I am involved in a photography project at the Gorgona jail (LI).

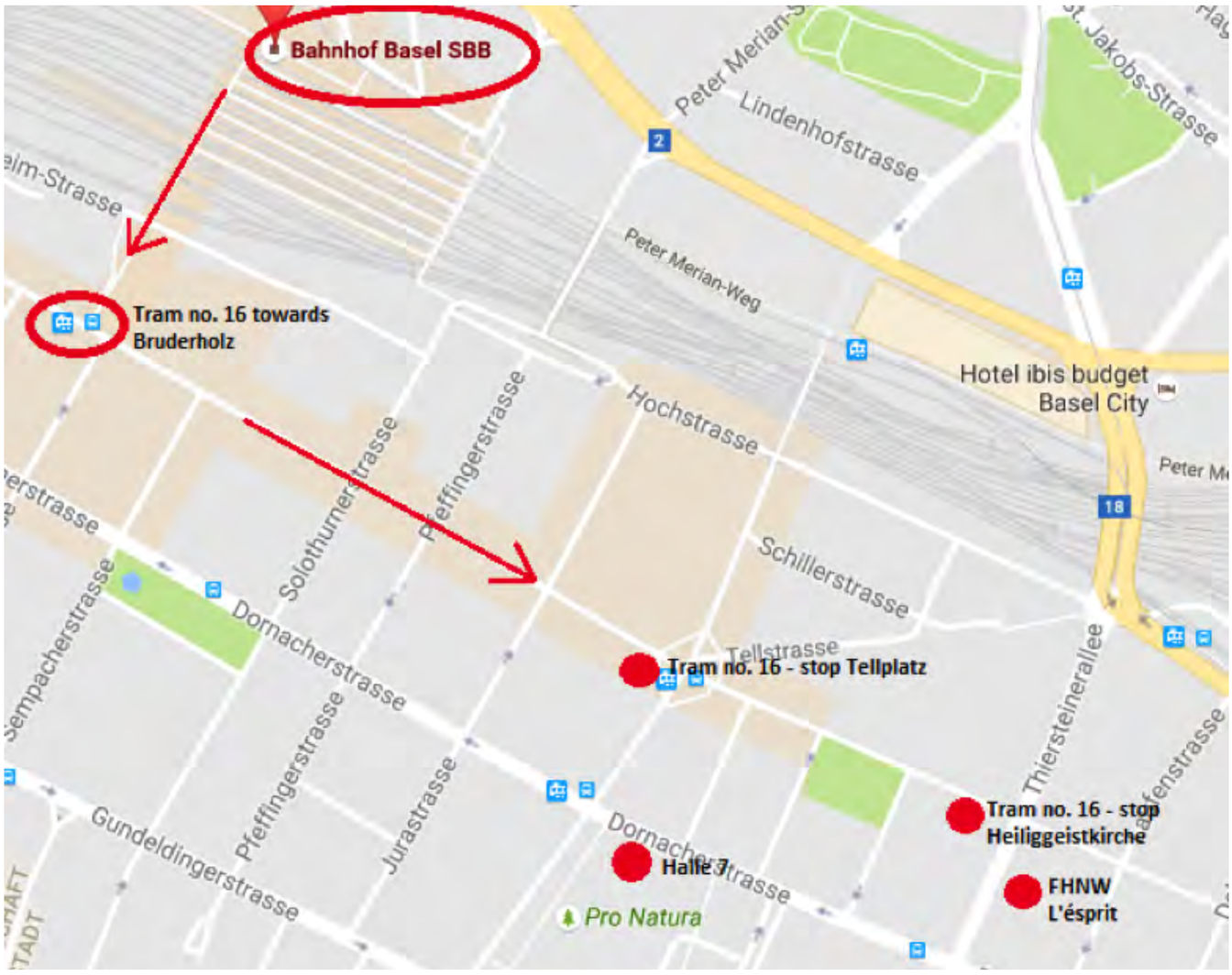
Locations

Conference Venue: The plenary sessions will be held at Halle 7.

The sessions (Session 1 - 4 & Poster Session) will take place at the School of Social Work, University of Applied Sciences (FHNW).

Halle 7
http://www.halle-sieben.ch/
Gundeldingerfeld
Dornacherstrasse 192
CH-4053 Basel

School of Social Work
University of Applied Sciences (FHNW)
Thiersteinerallee 57
CH-4053 Basel



Locations

The conference dinner will take place at baselcitystudios in the Dreispitz Area Basel.

Baselcitystudios

http://www.baselcitystudios.com/home/

Frankfurtstrasse 36, CH-4142 Münchenstein

How to get from the conference venue (FHNW) to the conference dinner

By tram from the School of Social Work: At the main entrance turn right into Thiersteinerallee. Cross the 1st junction (Thiersteinerallee/Güterstrasse). At the 2nd junction you find the tram station ‚Münchensteinerstrasse'. Take tram no. 10 (towards Dornach) or no. 11 (towards Aesch). Get off at „Dreispitz" (2 stops). Turn right into Leimgrubenweg (50m) and then turn left into Frankfurt-Strasse. Follow about 300m until you reach baselcitystudios.

By bus from the School of Social Work: At the main entrance turn left into Thiersteinerallee. Cross the first junction (Thiersteinerallee/Dornacherstrasse). At the 2nd junction you find the bus stop ‚Zwinglihaus'. Take bus no. 36 (towards Kleinhüningen). Get off at ‚Dreispitz' (3 stops). At the junction turn into Leimgrubenweg (50m) and then turn left into Frankfurt-Strasse. Follow about 300m until you reach baselcitystudios.