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Justice issues in farmland protection policies on the urban fringe: a barrier to a more efficient integration of food systems in urban planning?

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Second International Conference on

AGRICULTURE IN AN URBANIZING SOCIETY

Reconnecting Agriculture and Food Chains to Societal Needs

14 - 17 SEPTEMBER 2015 | ROME | ITALY

Book of Abstracts

#AgUrb2015

Organization

Strategic Partner

PROGRAM FOR MONDAY, SEPTEMBER 14TH

09:00-10:30 Session 1: Opening: plenary session

LOCATION: Aula Magna (Great Hall 1)

09:00 *Mario Panizza*

Rector of Roma Tre University

SPEAKER: *Mario Panizza*

09:10 *Sonia Ricci*

Councillor for Agriculture Lazio Region

SPEAKER: *Sonia Ricci*

09:20 *Gianluca Brunori*

Welcome by the Chair of the Local organization committee

SPEAKER: *Gianluca Brunori*

09:30 *Andries Visser*

Keynote lecture by the Chair of the Scientific Programme Committee - Agriculture in an urbanizing society: what are the main issues?

SPEAKER: *Andries Visser*

09:50 *Ren Wang*

Keynote lecture by Assistant Director-General, Agriculture and Consumer Protection Department, FAO - Meeting urban food needs through inclusive and sustainable food systems

SPEAKER: *Ren Wang*

ABSTRACT. The fast pace of urbanization is posing unprecedented challenges worldwide. Some of the major issues include: (1) Natural resources (e.g. productive land, water, forests) are diminishing, which not only affects food production but also other vital parts of human life, including overall resilience to climate change; (2) Unbalanced rural and urban development exacerbates rural to urban migration enhancing the pressure on both urban and rural areas; (3) Dietary changes comes with urbanization in part because increasing income in urban context reflects on increasing request of high-protein and natural resource-intensive food, while the urban poor relies more on processed and less nutritious foods that are more convenient and affordable. Obesity and related non-communicable diseases are rising in many cities; (4) Food safety is strongly compromised by inadequate food production and supply chains in which food co-exists with non-food activities in urban and surrounding areas; (5) Urban poor population are highly vulnerable to fluctuations in the global food market as was witnessed in the 2007-8 price shock. They are also heavily affected by natural or human disasters. On the other hand, many opportunities emerge in developing inclusive and sustainable food systems to meet the food needs of the urbanized populations and the growing cities. These opportunities lie both in the implementation and further development of key policies and technologies, and in building upon the increased understanding of trends in global food systems and their overall impacts. Improving small scale farmers' and small and medium enterprise private sector access to urban markets through alternate or diversified distribution systems such as e-commerce can contribute to a more balanced rural and urban development. New climate-smart technologies (that allow more efficient use of energy and natural resources) afforded by, and adapted to, small scale producers may become key for ensuring equal opportunities to participate in the food systems. Urban

and peri-urban agriculture, involving technologies and novel business models such as hydroponics, vertical farming, vegetable gardens in residential subdivisions, and low cost/energy greenhouses, is increasingly gaining attention globally. These opportunities can create jobs for the marginalized population in both rural and urban areas. Despite the many evident issues affecting equal access to nutritious and safe food in many cities enabling an efficient, inclusive and sustainable food system is often not taken into consideration in urban development planning. In analyzing and addressing urban food security issues there is a need for taking a holistic, rather than sectoral and fragmented, and an inclusive rather than biased approach. Some of the recommendations we could offer to municipal authorities and decision makers to take advantage of these opportunities would include, inter alia, first to identify and measure "hot spots" in food insecurity, and "missing linkages" along the food value chain so as to develop evidence based and well informed intervention strategies and measures; to understand the prevailing food systems, formal and informal, servicing the society. Such a benchmarking process will enable municipal governments and local stakeholders to discern what is needed from what is urgent for investment and lay ground for effective policy making. This process cannot be conducted by only one sector. Inclusive governance is fundamental for success, and the research community can play a vital role in understanding urban food insecurity and the complexity of today's food systems, providing innovative ideas and well-tested findings and recommendations.

10:30-11:00 Coffee Break

11:00-12:30 Session 2: Plenary keynotes lectures (1)

LOCATION: Aula Magna (Great Hall 1)

11:00 *Richard Le Heron*

Reclaiming society-urban-agrifood relations: assembling insights from New Zealand's recent experience

SPEAKER: *Richard Le Heron*

ABSTRACT. Internationally researchers and scholars are attempting to reconceptualise ways of creating agriculture, food and provisioning relations that go beyond and replace existing arrangements. The paper draws on insights from New Zealand agrifood research, to raise questions designed to open up space to create new knowledge and initiatives implied by imaginative re-conceptualisation. New Zealand, an open economy widely exposed to globalising processes, and increasingly inserted into free trade agreements, is a site where the literature and empirical realities collide, revealing surprising knowledge and cognitive gaps and invisibilities, around values-means-ends possibilities over agriculture, food and provisioning. Here, to use the language of Michael Carolan, it is hard to tune into ideas of collective or social imaginaries, nurture new moral and political projects that have breakaway potential, and foster investment and institutional experimentation to trial alternatives. Nonetheless this is a setting of re-organising and re-territorialising complexity, in agency, investment and institutions. It is also a setting that allows the luxury of a broad overview and re-assessment of constraints and opportunities in new economy making. To direct critical and constructive questions in this milieu about who is involved, why, how, and for whom, relations of agriculture, food and provisioning might be re-connected, re-aligned or seen afresh, the conference's explicit theme, or be otherwise, the conference's implicit intellectual invitation, is to challenge and deviate from much intellectual orthodoxy and business as usual narratives and practices. I start with brief situated vignettes that sketch instances of assembling agency, values,

dynamics, organisation and territorialities. I then go on to argue that trying to think and act economy making as lines of difference, for refreshed and new purposes and principles, in and yet away from existing structural and discursive realities, requires assembling knowledge differently. This is seen as vital and integral to any new enactive endeavours. The paper concludes with a discussion about re-framings that might enable academic, policy and community research priorities to be re-thought, and new research commitments made.

11:45 *Sérgio Schneider*

Food Strategies: what next? Perspectives from emergent economies, Brazil

SPEAKER: *Sérgio Schneider*

ABSTRACT. This speech will address the challenges to set up new food strategies in order to give a step forward towards the recent achievements, especially those regards the scale-up of local and regional procurement policies as well as the role of consumers in shaping more sustainable food supply. An important aspect to be discussed refers to the role of the State in the regulation and governance of the food system and the role of organizations and social movements to demand more of organic foods and new sustainable consumption practices. What will be the next step, beyond the current initiatives and achievements that have been conquered? This topic will be discussed taking the Brazilian experience as background in strengthening food security strategy that obtained success in recent years by providing food from family farms for urban supply schools and disadvantaged populations.

12:30-14:00 Lunch

14:00-15:30 Session 3A: Parallel Working Group sessions (1)

14:00-15:30 Session 3B: WG1 - Connecting local and global food systems and reducing footprint in food provisioning and use

Local - global connections

CHAIR:
Gianluca Brunori

LOCATION: Aula 6

14:00 *Ken Meter*, *Gianluca Brunori*, *Wijnand Sukkel*, *Erik Matjis* and *Dominique Barjolle*

Connecting local and global food systems and reducing footprint in food provisioning and use

ABSTRACT. The growing influence of global food value chains has raised concerns about the sustainability of food systems. Food production and consumption have large impacts on various sustainability issues such as climate change, water use, soil quality, biodiversity, etc. To take just one example, in an urbanizing society more and more food needs to be transported to urban centres. At the same time, urban areas are producing larger amounts of organic and sewage waste that need to be processed and transported away from cities. Until now the cycle of organic material and its constituent compounds like phosphorus and nitrogen is far from closed. The current urban food cycle is causing accumulation, environmental pollution, and depletion of resources such as phosphorus. Growing out of such concerns, vibrant food movements have developed a radical critique of global food operations. These have influenced both consumers and policy makers, who then exert pressure on actors in the food chain to address this issue. One of the strategies to challenge Global Value Chains has been the relocalisation of food systems, opposing ‘short’ with ‘long’, ‘local’ to ‘global’, and ‘different’ to ‘standard’. It is claimed, in fact,

that local food systems reduce food miles, foster direct communication channels between consumers and producers, increase biological and cultural diversity, enlarge consumers freedom of choice, and re-balance the power of big players. In response, many larger food businesses have started to address the sustainability issue seriously, investing in technologies, measurement tools, certification schemes, social reporting, and so forth, to improve their sustainability performance, and to conquer 'minds and hearts' of consumers. At the same time, research has addressed the conceptual limits of relocalisation, raising the concern that localizing food markets may not yield greater efficiency in economic or energy terms. For example, is it more defensible to produce tomatoes in a nearby greenhouse heated with fossil fuels, or to import them from open fields in a warm climate? Is preserving and storing local products for off-season use more desirable than importing fresh products? Should "local" be defined in kilometers, or in terms of the social and commercial networks that are inherent to community-based food trade? The paper will provide a review of the papers presented in the working group 1

14:15 *Anne Nymand-Grarup*, *Katarzyna Gradziuk* and *Niels Heine Kristensen*
Connecting local and global food for sustainable solutions in public procurement
SPEAKER: *Katarzyna Gradziuk*

ABSTRACT. In the realm of a globalized food system, growing attention has been paid to re-localisation of food systems, which are claimed to be more sustainable. This is also reflected in changes that have occurred in public procurement of food in European countries. Also in Denmark the policy aiming at sustainable solutions in public procurement of food has been developed and implemented. National policies (2020 Action Plan for Organic Conversion) are suggesting all public institutions in Denmark to convert 60 per cent of their foods to organic, by the means of a state funded teaching program. New goals for sustainable public food procurement are debated as well, in which possibilities for including more local products in the public kitchens is focal point.

In this paper we discuss the process and complexities connected to development of policies enhancing sustainable public food procurement in the City of Copenhagen. The study is based on a qualitative analysis of interviews, literature review and a case study of the school food programme "EAT". Based on the conducted interviews with different stakeholder and analysis of the case study different challenges and possibilities for creating new sustainable solutions in the public procurement of food are discussed. The initial results of the study indicate that among various actors involved in public procurement of food, there is a growing awareness about the needs for new sustainable solutions. Special attention is paid to the possibility of including more local food products in the public diets. However, the complexities of the public food procurement set number of challenges in developing the new solutions. These may relate to the multi-level governance, communication between various stakeholders and their different needs as well as growing competition on a global food market.

Developing policies to enhance sustainable food procurement in public institutions is complex and a long lasting process. Due to the many stakeholders involved, it will demand a high level of collaboration between them. Moreover, having to include both organic and local ingredients in the procurement agreements will put additional constraint on all actors influencing the public procurement policies.

Acknowledgments: The data analysed in the article were gathered in connection to the

research project “Global and Local food chain Assessment: a MUltidimensional performance-based approach” (GLAMUR), financed from EU 7th Framework Programme.

14:30 *Gaetano Martino*, *Margherita Stefanini* and *Stefano Pascucci*
Resources uses objectives and the constitutional processes in SPGs

ABSTRACT. This study aims at contributing to the knowledge of Solidarity Purchasing Group organizational dimensions, a field that allows the group to carry out its activities and to achieve its outcomes, but that was only partially considered in literature (Forssell, Lankorski, 2015; Brunori et al., 2012). Beyond the food availability, health and environment outcomes associated to food are of increasing interest for the consumers. The distribution and consumption of food affects multiple dimensions of human life (Mintz and DuBois 2002), connects the production and distribution systems with the nutrition system (Sobal et al. 1998) and have impacts on the environment (Marlow et al. 2009; McMichael, 2007; Goodland, 1997; Cahrer, Coveney, 2004). Scientific advertise and public authorities encourage the adoption of sustainable agricultural practices to improve the environment capability of provisioning services to human communities (Pretty, 2008; de Groot et al., 2002; Perrings et al., 2010). SPGs organize food provision by seeking to achieve specific objectives along these dimensions. SPGs provide their members with food in a context of direct contact with the producers, sharing ethical and sustainable approaches to the production process and resource uses (Renting et al. 2003, Goodman 2003). In this context, the objective of this study is to investigate the constitutional organizational processes setting up a group. Our analytical strategy is to focus on SPG organizational constitutional processes (Grandori, 2010) and on the role of the food practices (Warde, 2005; Giddens, 1990) hold in these processes. The organizational constitutional processes establish the group and allow it to undertake the food provision and the achievements of further, food related objectives. The resources ranking with respect to the potential uses is central to constitution of the organziation. The empirical analysis was carried out at SPGs active in Umbria (Central Italy). To this purpose we elaborate on the concept of resources uses objetives as the instrument of the resources ranking withing the group. Having examined the main characteristics of the groups in Umbria, we investigated within a specific group the relationships between practice and evaluation of the objectives as a critical step of the constitutional process undertaken by the groups.

14:45 *Jana Wettstein*
Sustainable food supply chains: A social-ecological anlysis of the food supply in Viennese Schools
SPEAKER: *Jana Wettstein*

ABSTRACT. The study follows the debate on how communal feeding in public facilities, such as Viennese schools, can contribute to an ecologically sustainable society. In this study, the question is addressed through the theoretical framework of social metabolism. It examines public schools in Austria with the focus on Vienna. It shows the organizational and socio-economic dimension of midday meals in compulsory Austrian educational schools, as well as the biophysical dimension, using material flow analysis. Central is the question of whether and how it would be possible to make the food supply

chain sustainable by seeking locally and organically produced food. The results show that there is enough cultivable land in Vienna and Lower Austria to obtain, locally and organically, the bulk of the products needed for the Viennese school meals at public compulsory schools. It sets out examples like ecological and local cultivation of the raw materials, short or optimized transport routes, reduced meat consumption and reduced food waste that could lead to a more sustainable development of the socio-ecological system school. These examples can serve as an inspiration to practice sustainable public procurement policy and can provide, through new innovation niches, a valuable contribution to the promotion of a sustainable society.

15:00 *Laura Marchelli*, *Luca Ruini*, *Valeria Rapetti*, *Marta Bianchi*, *Eleonora Vannuzzi*, *Marta Antonelli*, *Sonia Massari*, *Ludovica Principato* and*Gabriele Picchi*

An education project to promote healthy and sustainable food consumption. Barilla's "Sì.Mediterraneo" Project

ABSTRACT. As part of its business strategy "Good for You, Good for the Planet", the Barilla Group has put forth since 2011 the educational project "Sì.Mediterraneo", with the twofold purpose of improving Barilla employees' well-being and increasing their awareness on the environmental impacts of their food consumptions. This paper will present and discuss some of the most interesting results of the research that has been carried out on the impacts of the experiment. The initiative began in 2011 in the two company cafeterias at the Barilla Group headquarters in Pedrignano (Parma), and in 2013 it became a global commitment of the Group. The scientific basis on which the project relies is the Double Pyramid model promoted by the Barilla Center for Food and Nutrition. The Double Pyramid shows that food products whose consumption should be limited have a high environmental impact, while food products whose consumption is recommended to be more frequent are also those associated with low environmental impact. Canteen menus were modified to be sustainable from an environmental perspective and balanced from a nutritional point of view. Carbon, Water and Ecological Footprint have been used to assess and communicate the environmental impact of the menus proposed. The canteen spaces were adorned with posters and other notices, to provide information on the nutritional value of the Mediterranean Model and the environmental impacts of different food choices.Results show that nutritional messages do have a significant influence on employees' eating choices. From environmental point of view, the activity led to significant reduction of greenhouse gases emissions, water use and land ecosystem use. In Pedrignano canteen alone, the project has allowed savings of 65kg of CO2-eq every day, as well as 40m3 of water and 1000m2 of Ecological Footprint per day.

15:15 *Emilia Schmitt*, *Dominique Barjolle* and *Johan Six*

Assessing the degree of localness of food value chains

ABSTRACT. In a context of increased consumers' demand for local food, the distinction between local and global still remains very fuzzy. A strong notion supporting the association of local food with lower ecological impacts is the food-mile concept. Other than this concept used in the LCA field, no metrics exist to quantify the level of "localness" of a product or food value chain. In this study, other criteria of distinction are uncovered from literature in multiple disciplines and five domains of distinction are defined: geographical distance, chain length, supply chain size, identity and governance.

These defined criteria are further assessed on two empirical case studies in the Swiss cheese sector. The goal is to compare a local cheese with a more global cheese in order to see if a difference in their degree of localness can be observed with the proposed criteria. The approach has the goal to be participatory in the sense that interviews also helped to identify the relevant criteria and seek to let actors reflect on local and global aspects of their position in the value chain. The assessment of the criteria is converted on a percentage scale in order to aggregate them and it shows that the local cheese obtains a score of 47% and the global one 73% (the most local being at 0%). The distances and chain length show very small differences and the distinction lies more in the qualitative three last criteria. The global cheese is however more global in all of the criteria, which are all relevant. This study shows that the studied value chains have a high level of hybridity, for example by promoting local attributes and values while being embedded in international markets at the beginning and end of the chain. The framework proposed has the advantage to show that a product that could be considered local actually contains some global elements and vice-versa. Further empirical evidence on other commodities would however be necessary to generalise it as a tool to assess the degree of localness of food value chains.

14:00-15:30 Session 3C: WG4 - New business models for multiple value creation

Supply chain development & case studies

CHAIRS:
Roel During and *Herman Schoorlemmer*

LOCATION: Aula 18

14:00 *Herman Schoorlemmer* and *Roel During*

New business models for multiple value creation

ABSTRACT. In recent years, numerous initiatives, businesses and movements have arised, working on multiple sustainability goals and explicitly creating social value for society. Increasingly social entrepreneurs emerge in the void that is created by the withdrawal of governmental institutions on for example social care or management of parks and nature. In new ways small companies and communities organize concerted activities and generate values and these ways are being researched in the EFESEIIS project.. Business communities of social entrepreneurs we see as the informal cooperative structures, surrounded by the enabling institutions designated here as business ecosystems. The above mentioned EFESEIIS project aims to increase our understanding of the enablingness of the environment. Within social enterprising not only the economic value is of significance, but also values such as living environment, social cohesion, spirituality, authenticity and commitment. Traditional economic models for business development give insufficient information for support and improvement of these new initiatives, because they focus primarily on the individual performance of a business, that may take place in different networks. Moreover, economic views on social enterprising presuppose a trade off between the social impact and taking a profit, as if it were a zero sum game. In this new trend however, networks have become sharing communities that include both enterprises and active community members. In these networks, social entrepreneurs try to combine a high social impact with good profits. A traditional linear business approach from producer to consumer takes insufficient account of the dynamic development of this strategy because of the integration of the business in this kind of communities. This integration results in on-going multiple-connectivity, exchange of information and services, knowledge creation, debate and self-organisation. This puts a lot of theoretical and practical constraints on using business models, by advisors, policy

makers and researchers who want to advise these new practices, sometimes creating misunderstanding rather than a good action perspective. Goals of this working group is to discuss the new generation of business models that address multiple forms of value creation in this new generation of business ecosystems. Invited papers should elaborated on elements like: • Presentation of best practices and grass root initiatives. • Theoretical understanding and factors for success/failures. • What business models are better suited to address societal challenges? • How to articulate and valorise social values? • Approaches for co-creation and co-design of new products, services and exchanges. • Critical points/opportunities for scaling.

14:15 *Robert Newbery*, *Simon Platten* and *Rachel Kaleta*

Conceptualising an adaptive cycle methodology for entrepreneurial ecosystems: rural reinvention in the Tamar Valley

ABSTRACT. Isenberg's Entrepreneurial Ecosystem concept sets out a number of institutional factors necessary for entrepreneurs to thrive. Set within a positivistic philosophy, and based on a neo-classical 'developed' model of the best economic environment, this represents a snapshot, ideal-type output of the project of modernism.

Bringing criticisms of general stage models to the concept, this paper challenges its current utility. This representation of an entrepreneurial ecosystem is static, linear and uni-dimensional. Within social ecological system theory the adaptive cycle concept provides a potential approach to liberate the entrepreneurial ecosystem concept from an end-point in a project of development to a fluid and dynamic process of enactment. Taking key principles of the adaptive cycle we theorise an entrepreneurial eco-system as a dynamic entity with a definite life-cycle.

The concept is illustrated using the historic example of grower's cooperatives operating in the Tamar valley, England. Here a previous entrepreneurial ecosystem has been born, thrived and died. The bones of the old have been used to reconstitute an adapted ecosystem. This contributes to the conference by exploring the complexity of rural entrepreneurship in an urbanising world – where an entrepreneurial ecosystem is less a developmental aim and more of a continuous reinvention.

14:30 *Xavier Recasens*, *Oscar Alfranca* and *Luis Maldonado*

Adaptation of urban farms to the citizens - The case of Alella wine region within Barcelona Metropolitan Region (Catalonia, Spain).

ABSTRACT. Agriculture plays an important role in the maintenance of non–urbanized areas close to cities. Its importance lies in that its activity is not only producing agricultural commodities; it also produces non commodities services. These other services are very useful to keep the values of these urban fringe areas (landscape, biodiversity, leisure, heritage, soil fertility...). For this reason, it is necessary to preserve and promote the agriculture activities and keep the farmers in these areas. The proximity to the city should not be an obstacle (urban and human pressures and high land prices) to carry out agricultural activities but it should be an incentive for farmers to adapt to the citizens' needs and provide products and services that urban society demands. Many authors, such as Vandermeulen, et al., (2006), Zasada, (2011), Marraccini et al., (2013),

refer to the diversification of farms as a way to preserve farming. This diversification not only refers to agricultural activities such as farming or agribusiness processes, but also off-farm activities. This is especially interesting in peri-urban areas where demand of these activities is relatively close. The aim of this work is to analyze whether the wineries of a peri-urban wine region have diversified their activities, adapting their business model to the proximity of citizens by offering other services beyond the strict agricultural production. This paper also includes a brief description of these cellars and knows what kind of ecosystem services offered to citizens. We analyze wineries because they include all three key stages of agricultural entrepreneurship: production, agro-industry processing and sales and marketing. Semi-structured surveys have been conducted with wineries included in the Protected Designation of Origin (PDO) Alella. The survey form has been agreed by the group of models of entrepreneurship in urban agriculture within the framework of the European project COST Action TD Urban Agriculture Europe. The municipalities of PDO Alella have 644,891 inhabitants. The area occupied is 307.65 km2, giving a population density of 2,096.18 inhabitants/ km2. Alella Wine Region is very close to Barcelona less than 10 km. The main results show that despite being relatively young wineries, there is a great diversity of surfaces (from 1 ha to 55 ha), as well as the number of wine products (red, white, rosé, sparkling wine, sweet wines ...) are offered by the cellars. With respect to off-farm activities and ecosystem services, there is also a great diversity between the different wineries surveyed.

14:45 *Mozhgan Zachrison*, *Anna Maria Anna Maria Palsdottir* and *Sara Sara Kyrö Wissler*
Economic and social benefits of multifunctional agriculture in Sweden

ABSTRACT. The changes within agricultural field and agriculture's economic vulnerability worldwide need to be addressed within new contexts. In order to constitute new understandings of and to address new opportunities for agriculture's social and economic potential the term multifunctional agriculture has been used during the last years to inspire the development of agricultural sectors. Multifunctional agriculture usually includes activities such as green care, tourism, recreation, education, on-farm sales, and other green services. Multifunctional agriculture can facilitate sustainable rural development in different ways and have the potential to lead to activities that are not usually recognized by the market. However, in the Swedish context, there has not been sufficient research to determine in what ways the development of the concept of multifunctional agriculture can be beneficial for business owners and the society This paper's main purpose is to investigate current agricultural activities worldwide and examine a well-established company's multifunctional activities in southern Sweden in order to map out future directions for the development of agricultural conducts in Sweden. The paper is divided in three parts. The first part will give a literature overview of the implementation of multifunctional agriculture in international and Swedish context. The second part analyzes a case where the economic and social benefits of multifunctional practices are examined within a specific company. The third part will set out future directions of research and opportunities for practices of multifunctional agriculture in the Swedish context. An extensive literature study and semi structured interviews with the involved company's management team will provide the material needed for writing this paper.

15:00 *Tatiana Castellotti*, *Giuseppe Gaudio* and *Consuelo Parlato*
Rural development and new business models: Production Chain Integrated Plans

Calabria cases.

ABSTRACT. Marking a decisive break with the past, in recent years in Calabria some so-called “small scale” productions have experienced a significant improvement in their production results in wine, honey and fig sectors, and in the organisation of the entire supply chain. The aim of the paper is to explain the reasons behind this positive performance. Introduced for the first time in Italy in the programming of the PSR Calabria 2000-2006, there are three productions that have experience of the integrated supply chain design (“PCIP” Production Chain Integrated Plans). The aim was to apply the development of rural areas approach of the Community Initiative LEADER to PCIP in order to create governances models to be participated in also at sector level. It has developed a model for the establishment of partnerships in the supply chain that involves the participation of collective interests, both public and private, and not only the individual entrepreneurs in the food sector. It is a tool that transfers the concept of the common good to the sector level. The objective of the PCIP is to organise the integrated supply chain resources and the members participants of the industrial sector around a shared project that aims to remove constraints, and enhance and strengthen the individual branches in the production chain in an integrated and endogenous manner. The OECD has also recognised the innovative nature of this model in its appraisal of Italy in its 2009 Rural Policy Review. The use of PCIP has been proposed for subsequent programmes in other regions but with different characteristics that in part betray the original model. Therefore, this paper also aims to be a means for reflection on the strengths and weaknesses of this model and its possible future developments and applications.

14:00-15:30 Session 3D: WG7 - Regional branding and local agrifood systems: strategies, governance, and impacts

Territorial Collective Marks 1

CHAIR:
François Casabianca

LOCATION: Aula 3

14:00 *Sarah Stempfle*, *Anselma Lovens* and *Matelda Reho*

The branding process as opportunity to trigger integrated strategies for rural development: the experimentation of "Paesaggi italiani - ITEM" in northeast Italy

SPEAKER: *Sarah Stempfle*

ABSTRACT. This proposal intends to explore how a branding process can contribute to the building of both territorial identity and local development strategies, unlocking distinctive potentials and resources of rural areas. The focus will be put on the branding project “Paesaggi italiani - ITEM”, which concerns three Local Action Groups’ sites in northeast Italy, between the two regions of Veneto and Friuli Venezia Giulia. Included into the Local Development Programs, it aims to implement coordination, communication and marketing actions, in order to valorize typical products together with the cultural and natural heritage, encouraging sustainable forms of experiential tourism. The landscape is assumed as an identitarian element around which shared values and visions can be elaborated, as well as a strategic device for linking agricultural activities to the various forms of territorial capitals. The brand means to express the landscape’s multiplicity and complexity through a dynamic and inclusive graphic system, using visual communication’s tools to transmit values, images, narratives and local specificities. Although the project is promoted by a partnership of the interested LAGs – as initiative of inter-territorial cooperation – the involved University assumed a crucial

role in setting the branding on an interactive and community-based process, able to trigger social activation and aggregation at local level. Besides, the engagement of other institutional actors (both at local and regional level) would be essential for bridging the economic initiatives with the wider policy framework, as well as for enhancing territorial governance mechanisms. On the one hand, the brand means to foster and valorise socially innovative initiatives at enterprise or territorial level, creating new growth opportunities in a context of multifunctionality and diversification of rural economies. On the other hand, it should provide a common action-frame for economic, social and policy strategies, reshaping an integrated approach to rural development and catalysing the local capabilities of collaborative networking, visioning and governance. Indirect benefits should be related to the spread of new expertises, attitudes and relationships on the territory, generating multi-actors alliances. Starting form the experimentation on the three pilot areas, "Paesaggi italiani - ITEM" was conceived with the ambition to improve its method and to extend its application on the national level, in order to promote a fourth pole of italian tourism, which should be based on the rural landscape. On this purpose, a "Chart for the Rural Landscape's Tourism" has been elaborated, pointing out common values and possible scenarios.

14:15 *Angela Crescenzi* and *Raffaele Mannelli*
VETRINA TOSCANA from regional trade brand to regional umbrella brand
SPEAKER: *Angela Crescenzi*

ABSTRACT. The regional brand "Vetrina Toscana was made with the aim to characterize the offer of the structures of the small trade and catering through the enhancement of the local context. ". The enhancement of the activities of the commercial network involved the use of local quality products and activated relations with consortia of food and wine geographical designation (PDO and PGI)., It also involved the producers of organic products, manufacturers branded Regional Agriqualità. Communication campaigns to promote the network Vetrina Toscana has been possible thanks to an agreement among many public and private entities. They have contributed financially and they have provided their brands for various activities that have affected most areas of sub-regional Tuscany. Quantifying the effects of collective initiatives compared to the results obtained by the Vetrina Toscana brand has not been easy. On the other hand, this brand was born in the commercial sector and has struggledto gain credit as a means of cross-communication in other sectors, such as the agricultural, educational, cultural heritage, ones ,. However, this initiative has the merit of being a unique case of wide integration of branding in differentsectors and therefore deserves attention for its development towards a regional brand umbrella.

14:30 *Erin Nelson*, *Alison Blay-Palmer* and *Irena Knezevic*
Multi-scaled, layered agri-food branding

ABSTRACT. This paper compares and contrasts the creation of and context for brands in Canada and Mexico. We compare the use of 'brands' in Mexico and Canada through the lenses of local identities, regulation, transparency, and the role of local brands as part of 'good practice'. We also discuss brands as an important connector between rural and urban spaces.

In Mexico, the Mexican Network of Local Organic Markets uses participatory organic certification as a means of capturing regional identity and values. As a transparent, trust-based regulatory system, participatory certification provides multiple benefits to farmers and food consumers. These include: increased accessibility of the organic 'brand' to smallholder farmers and Mexican consumers; increased connectivity between producers and consumers and across urban and rural spaces; and a re-valuing of regional peasant identities and traditional food cultures.

'Foodland Ontario'™ is a long-standing identifier of food grown in Ontario, Canada. More recently, regional brands have emerged as another layer of self-identification within the Ontario food system. These newer brands are tied to tourism (e.g. culinary trails linked to art galleries), locality ('Buy Local' maps), or one food type (e.g. the 'Butter Tart trail', 'Wine Route') and seek to add value for the food producer/processor. While not participatory by definition, these designations are collaborative efforts of local governments and businesses of varied scales. Their explicit purpose is to boost regional economic development, but like the Mexican Network of Local Organic Markets they also serve to reconnect producers and consumers, revitalize regional identity, and build a more vibrant food culture.

In both countries, the approaches to regional designations are markedly different from the European geographical indications framework, in that they are less concerned with protectionism and regulation and more invested in a broad-spectrum agri-food promotion and community development. Both case studies illustrate the flourishing collaborative efforts to rebuild regionalized food systems in the Americas.

14:45 *Janina Wiesmann*, *Luisa Vogt*, *Marcus Mergenthaler* and *Wolf Lorleberg*

A comparison between different types of Regional Branding Initiatives

ABSTRACT. Various food scandals have sensitized the public and helped create concerns regarding the quality of food in recent years. A growing importance of alternative food supply chains occur, which shorten the relations between producers and consumers and emphasize secondary benefits in form of information regarding origin and quality. On the basis of expert interviews with several European examples of Regional Branding Initiatives (RBI) a typification can be built based upon the strategic goals of those RBIs and the involved stages of the food supply chain. The example of a joint marketing association is used to gain a deeper understanding of organizational structures or of marketing strategies, in order to form theses on success factors and bottlenecks.

14:00-15:30 Session 3E: WG13 - Care Farming/Social Farming in more resilient societes

Methods and tools

CHAIRS:
Marjolein Elings and *Helen Elsey*
LOCATION: Aula 5

14:00 *Sin-Ae Park*, *Ki-Cheol Son*, *Kwan-Suk Lee* and *Candice Shoemaker*

Research-based evidence of gardening as a physical activity for health

ABSTRACT. Physical, psychological, and social benefits of gardening have been reported. Gardening, especially, provides positive impacts on our physical health

condition. However, there is limited research-based data about the mechanisms of gardening for improving or maintaining physical health conditions. Thus, several studies were conducted to determine therapeutic mechanisms of gardening as a physical activity for health: exercise intensity of various gardening tasks were determined and the metabolic costs of gardening and common physical activities were compared; muscle activation by electromyographic analysis (EMG) for 15 indoor horticultural activities and five common gardening tasks were measured. The gardening tasks performed by older adults were low to moderate intensity physical activities. Gardening activities were of the same exercise intensity level as walking at a moderate intensity. Gardening can provide the same health benefits as non-gardening forms of physical activities in older adults. For 15 indoor horticultural activities, the upper trapezius, thenar eminence, and hypothenar eminence had higher muscle activity than the other muscles. Triceps—long head displayed very low EMG values compared with the other muscles. During the five common gardening task such as digging, raking, troweling, weeding, and hoeing, the upper limb muscles measured were active than the lower limb muscles and the flexor carpi ulnaris and brachioradialis of the upper limb muscles showed higher muscle activations than the other upper and lower limb muscles measured. Developing scientific and research-based understanding of the physical health benefits offered through the act of gardening further substantiates the role of care farming/social farming in contributing to healthy, resilient communities.

14:15 *Paula Diane Relf* and *Candice Shoemaker*

Community resilience through urban agriculture: the role of volunteers in horticultural therapy

ABSTRACT. This paper will review the role of volunteers historically and currently in the application of horticulture in therapeutic settings and discuss the impact on the development of the profession of horticultural therapy; and the impact that the actions of volunteering has on the volunteer and the community. Recommendations on how volunteers can contribute to care farming/social farming and how volunteers are currently used in social farming/urban agriculture in the United States will be given.

14:30 *Davide D'Angelo*, *Saverio Senni* and *Guido Ruivenkamp*

Social farming fostered by microcredit: the case of Italy

SPEAKER: *Davide D'Angelo*

ABSTRACT. Focusing on Italian context, this paper explores possible synergies between microcredit and social farming, aiming to outline under what conditions microcredit may represent a suitable tool to strengthen access to credit of social farming initiatives. The gap between actual needs of financings in farming and loans supplied is considerable, amounting to about 116 million euro a year: this has created between 2010 and 2012 a "credit crunch" total of over 300 million euro (Mipaaf, 2014: p. 7&45). In this frame difficulties in obtaining financing may hinder access to FEASR fund for 2014-2020, in particular for non-bankable borrowers among which are often those involved in Social farming. Social farming may be considered as modality of multifunctional agriculture (Di Iacovo, Ciofani, 2005; Hassink et al., 2012) and represents an innovative approach in Europe that joins healthcare and social services with agricultural production activities (Hassink et al., 2012). Persons affected by mental/physical disabilities or that are in difficult socio-economic situations can raise their overall wellness and recover a social

function through active involvement in food production. Individuals instead of remaining excluded may find a new active role in productive processes which represents an innovative way to link a sustainable agriculture with social well-being. Indeed, in Italy the most relevant actors who conduct social farming activities are Social Cooperatives, a specific kind of cooperatives that include members belonging to disadvantaged groups (Senni, 2010). Most of social cooperatives involved in farming activities are characterized by small size and generally they don't own the land that they utilize, aspects that don't facilitate their access to traditional credit circuit for they are not able to provide the requested guarantees. Microcredit consists in programmes that "extend small loans to very poor people for self-employment projects that generate income, allowing them to care for themselves and their families" (Grameen Bank). Microcredit includes a wide range of different activities; however, all have two principal features: a small amount of funds provided and the absence of an appropriate credit guarantees presented by the beneficiary. In relation to microcredit, "to give credit" returns to its original meaning, that is "to give faith" (Becchetti, 2008). Both social farming and microcredit have, in their respective fields, a common focus on social active inclusion. Microcredit provides small amounts and can be a preferential tool to guarantee appropriate financings to social farms, that require few resources to start, also regarding the access to 2014-2020 RDP measures.

14:45 *Roberta Moruzzo*, *Francesco Di Iacovo*, *Angela Galasso*, *Silvia Paolini* and *Paola Scarpellini*

Social franchising and social farming, for promoting the co-production of knowledge and values: the IBF case

ABSTRACT. Social franchising is a recent phenomenon that especially during the last five years has shown an important growth in Europe and across developing countries. Social franchising works in a variety of sectors, reflecting the range of activities in which social enterprises and social cooperatives are involved (Sven Bartilsson, 2012). As in the case of commercial franchising, also for the social franchising there are some key aspects such as: a business model proposed by a franchisor, the presence of one or more franchisees, a common brand, an interchange of knowledge between members. Nevertheless social franchising also combines the social objectives (sharing learning and methodologies for greater social impact) with the financial objectives (charging fees for intellectual property and services for greater economic sustainability) (Nick Temple, 2011). In this light, social enterprises are seen as organisations that could be the carriers for social innovations: in fact social franchising involves the application of business-format franchising to achieve social benefits of enterprises through standardization and replication (Ilan Alon, 2014). Although the recent development there is still little knowledge about social franchising within the ecosystem for social enterprises, even though the model of franchising has been shown to combine empowerment and small-scale enterprise with growth and systemic impact. This form of affiliation-based replication strategy might be correct for the enterprises involved in pathways of social farming. Through a franchising a social enterprise, working disadvantaged individuals and parts of society, can prevent mistakes and damaging consequences. The social franchising can improve the levels of control and associated performance management while assuring their quality (Di Iacovo et al., 2013). The paper aims to explain the meaning of social franchising and the link between social franchising and social innovation. Secondly, the paper tries to explain why the affiliation-based replication strategy may be correct for the development of social farming, focussing on the

objectives of this linkage, discussing what kinds of actors my be involved, and also considering possible weakness and threats. Then the paper presents a practical case of social franchising applied to social farming in Italy: the IBF case. This social franchising, developed at the beginning of 2015, allows people to work together and share social values and objectives. The paper analyses the role of this franchising in supporting the co-production of knowledge and values, in developing a common language and reinforcing good practices, and in creating new networks.

15:00 *Nicky Dirkx* and *Tom Van Wassenhove*

The social farmer as a shared value creator: creating new business models with the Impact Driven Business Modelling tool

ABSTRACT. Problem Since social farmers try to create both social and economic value, they are considered as social entrepreneurs. They often have a well thought-out vision, but the business model is rarely concrete enough, due to a lack of knowledge about economics and strategic management. Methodology We took 28 in-depth interviews with care farmers across Flanders, Belgium. Three of them participated in a course, coordinated by a multidisciplinary team, consisting of agricultural and orthopedagogical researchers, as well as experts in entrepreneurship and strategic management. A multidisciplinary team of students was involved as well. The cases were chosen based on the specific questions and needs of the interviewed farmers. In order to create a business model that guarantees the balance between social and economic value creation for each of the three cases, we employed the Impact Driven Business Modelling Tool, of which Tom Van Wassenhove is the co-author. This is a method which is specifically designed for social entrepreneurs to integrate both objectives, impelling them to think about goals, business concept, resources, stakeholders and partners, processes and policies and eventually the social impact they bring about. In mixed teams, students and researchers reflected on the items. Results were frequently submitted to the farmers who gave their feedback, whereby adjustments were made. Students and researchers visited four social farms in the Turin region to become inspired by successful Italian cases. Inspiring aspects gained from this experience were also integrated in the final business models. Results The social farmers were challenged by the mixed student-researcher team to reflect on every aspect of the IBDM- tool in an innovative way. They started to involve the neighborhood, cooperate with stakeholders, designed a logo for marketing reasons and devised activities for children. The final result was a nicely integrated business plan. The researchers could list up difficulties and possibilities of the IBDM. The data from the course were complementary to the data from the in-depth interviews. The students developed essential skills like collaboration, communication, reporting in a professional way, receiving and giving feedback and dealing with deadlines. They stood still by the emancipating and connecting power of social agriculture and became acquainted with the Italian discourse concerning social farming. Above all, because the teams were multidisciplinary, they were obliged to regard the cases from (each) other perspectives and cross sectors. Bracke, P., Van Wassenhove, T. (2015). Impactgedreven ondernemen. Aan de slag met sociale businessmodellen. Gent: Academia Press.

14:00-15:30 Session 3F: WG14 - Rural tourism (agri-tourism) and changing urban demands

Food, Wine and Tourism

CHAIRS:

Elisabete Figueiredo and *Antonio Raschi*

LOCATION: Aula 19

14:00 *Elisabete Figueiredo* and *Antonio Raschi*

Rural tourism (agri-tourism) and changing urban demands – presentation of the Working Group

ABSTRACT. The Working Group 14 – 'Rural Tourism (agri-tourism) and changing urban demands' – deals with several dimensions of the relationship between rural tourism and socioeconomic rural contexts and activities. Particularly relevant are the connections and interactions between rural tourism and local food and wine productions; the impacts of this type of tourism on the development of local communities, as well as the characterization of the offer and demand. Often praised as a tool for rural development, rural tourism has many forms and impacts on local communities which will be addressed within this Working Group, based on contributions and/or cases from Portugal, Brazil, Italy, Ireland, Nicaragua, Philippines and Iran.

14:15 *Maria João Carneiro*, *Celeste Eusébio*, *Elisabete Figueiredo* and *Diogo Soares Da Silva*

Consuming the rural idyll through food – analysis of the consumption of rural foodstuffs by urban populations in Portugal*

ABSTRACT. Food is a relevant part of the culture and identity of a territory, reflecting both material and immaterial aspects such as the biophysical conditions, local environment and natural resources, main agricultural productions, activities and traditions, as well as specific know-how and visions of the world local populations have developed during centuries. Rural agricultural food products and the ways in which they are transformed, prepared and presented are, therefore, part of the culture and tradition that are closely linked to territory characteristics. In this sense food is more than just food, as it is part of a territory's legacy and patrimony. Nowadays food is also considered a major part of what has been defined as the 'rural idyll', contributing to foster positive images and social representations on rural areas and acting as a pull factor regarding rural tourism destinations. Food is an important part of the tourists' experience of a destination and may contribute as well to foster both traditional local productions' development and the liaisons between tourism activities and local social and economic fabrics, particularly in peripheral and disadvantaged rural areas, as it is the case of a large part of the Portuguese rural territories. Based on a survey directed to a sample of Portuguese urban residents (N=1233), this paper aims to unveil their consumption patterns, motivations and influencing factors regarding rural food products. Empirical evidence demonstrates that a large part of the sample consumes rural foodstuffs. As main motivations for consumption we identified the better flavour of rural food products, the The willingness to support rural local producers and the fact that they are considered healthier and more reliable. Inversely, the lack of availability and/or accessibility, as well as their higher price, are the more relevant constraints identified. In order to better understand the factors influencing the consumption of rural food products, a logistic regression model was used. The attachment to rural areas, the positive image on rural areas (as idyllic or space of wellbeing), the frequency of visits to rural territories as well as the sociodemographic profile of respondents (namely their age, income level and marital status) are the main factors influencing the consumption of rural food products. At least two of these factors seem to be strongly connected with the consumption of rural areas as spaces of leisure and recreation in which food productions may represent an added value to the visitors and tourists' rural experiences.

14:30 *Angela Crescenzi* and *Raffaele Mannelli*

New tourist experiences in the productive areas of PDO / PGI of rural Tuscany

SPEAKER: *Raffaele Mannelli*

ABSTRACT. Methodology: Multifunctionality in agriculture has been pursued in a logic of integration of income for the farmer who was manifested in some areas in a large increase of farms that have also started an agri-tourism. This was not the only form in which the agricultural enterprise has expressed willingness to develop the multi-functionality. Were created educational farms, hunting, agri – camping sites and other forms of multi-funzioanlity yet. The paper considers still missing a form of multifunctionality that starting from the product transforms the production process in an experiential path suitable to be encoded as a tourist product.

Results and discussion: Companies engaged in the Tuscan agricultural productions in Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI) will be subject connote operating on products with a strong local identity. They operate in a framework of shared production rules and subject themselves to the controls that the community regulations provide. These companies are strongly oriented food production in production system and are credited like companies high quality. Can be considered, by virtue of their productions, intimately connected with the culture of the place (anima loci).

Conclusions These companies and their products contribute to creating the identity of the place that articulates also the artistic and cultural both historical and contemporary. The city population expresses a general desire to know the places of production especially those with a higher value. Emblematic is the case of a project to develop the new wineries designed by internationally renowned architects. In fact, these traditional places dedicated to the transformation of grapes into wine are becoming sought after tourist destinations both for their architectural value for the more general interest in food and wine. In this path of exploitation of remote rural areas, but not in the marginal agricultural production, the organization of tourism is fragile. This fragility along with an unclear definition of the tourism product affects so important marketing strategies and with them the ability to develop a new multi-functionality oriented to intercept a greater margin of added value incorporated in quality productions.

14:45 *Silvia Sivini* and *Consuelo Parlato*

Wine routes for regional tourism development in Italy. A research in Calabria and Friuli Venezia Giulia Regions.

ABSTRACT. Food tourism is considered one of the most dynamic and creative sector of tourism (UNWTO, 2012). In Italy, recent studies have also underline that it has significantly grown. The aim of this paper, based on the results of an empirical research, is to discuss the potential of wine routes as an instrument to support the development of food tourism in rural areas, with a particular focus on Calabria experiences. Wine routes are regulated by the national Law 268/1999 and they are intended as a tool that integrates economic local activities with the enhancement of local resources promoted by public and private local actors. In Italy, formally there are more than 170 wine (or food) routes but have been noted, by some scholar, that only few of them have been really

implemented in a way that produce a development on the territory. Our research have compared the experiences implemented in a northern region of Italy, Friuli Venezia Giulia, and in a southern region, Calabria. The paper will discuss the most important problems that have been highlighted focusing on the Calabrian experiences. In this Region there are formally 12 wine routes. The Regional Tourism Marketing Plan (2011) stated that "they are not well marketed". Our research shows that this is only one of the problem, even not the most important one. The paper try to identify, therefore, the most relevant activities that have to be implemented to develop wine routes in a way that produce a positive, social and economic, impact as the practices in Friuli Venezia Giulia seems to show.

14:00-15:30 Session 3G: WG15 - Local arrangements for agricultural ecosystem services: connecting urban populations to their peri-urban landscapes through the ecosystem services of agriculture

Ecosystem Services of Agriculture

CHAIR:
Judith Westerink

LOCATION: Aula 20

14:00 *Darryl Low Choy*

Managing Ecosystem Services in the Peri-urban Landscape: An Emergent Paradox

SPEAKER: *Darryl Low Choy*

ABSTRACT. Recent research of rapidly growing Australian metropolitan regions has highlighted the complex but critical nexus between regional landscapes, nearby metropolitan centres and their urban and peri-urban communities. It has shown that these regional landscapes are the custodians of a range of traditional community values such as biodiversity, outdoor recreation, rural production and natural resources, as well as emerging values such as ecosystem services.

The research has also shown that these rapidly changing peri-urban areas are undergoing significant changes in population demographics, largely through the influx of former urban dwellers and the displacement of the former rural population. The incoming peri-urban residents, with limited capacity and capability for landscape management, are attracted to their new locations by the ecosystem services they provide but paradoxically, by virtue of their occupation, they are placing those same ecosystem services at risk.

The paper explores holistic approaches for planning and managing these peri-urban areas that are capable of responding to the unique sets of challenges posed by these peri-urbanisation processes. The anthropocentric philosophical base of ecosystem services provides a conceptual alignment with the spirit and purpose of planning which seeks to improve the quality of life and liveability of communities. The paper discusses the rise of values-led planning approaches that embrace science informed planning within a 'joined-up' planning context, capable of addressing the protection of ecosystem services.

14:15 *Massimo Rovai*, *Laura Fastelli* and *Francesco Monacci*

Strategies for enhancement of ecosystem services of the periurban areas

ABSTRACT. The paper presents the analytical path and results from a case study

conducted during a territorial analysis laboratory on Lucca, a complex suburban area. This work was structured on the belief that sustainable territorial development can be supported by a rethinking of the interaction between urban and rural areas. Indeed, following the consolidation of the idea of the city as a basic and functional space, the urban/rural relationship has gradually loosened causing the abandonment and deterioration of the few remaining agricultural areas within the city and its immediate suburbs. Into the survey conducted, we analyzed the demand for rural services (social gardens, educational farms, agri-kindergartens, etc.) with the goal of identifying the rules to suggest in the new planning tools to provide an adequate response to the identified collective needs. The aim is to combine insediative urban functions and rural functions more specifics, in a balanced and synergistic, pursuing a strategy of improving the quality of living aimed at regenerating both morphologically and functionally the existing buildings, but also to rethink the open spaces in the suburbs (agricultural areas, public spaces, unbuilt urban spaces, ect.). The open spaces in fact need to be interpreted and treated as a key resource to ensure an adequate level of ecosystem services important to the well-being of citizens. In the present work were worked out the outcomes of the survey on the perception of the quality of the periurban areas with the aim to define possible strategies to use to plan and to design these areas. The use made of the collected data has provided further evidence of the urgent need to act, both in urban peripheries both in the areas characterized by widespread urbanization, with solutions able to guarantee a better balance with the surround agricultural and natural spaces. In fact, to ensure the resilience of the city and the territory, the maintenance and management of the urban and periurban open spaces is fundamental thanks to their ability to ensure a horizon of life in balance between needs and natural resource endowment of the territory. In conclusion, proper planning of open spaces and periurban agricultural areas has a fundamental role to provide functions increasingly requests from citizens. Therefore, the public decision-maker should favor those practices they allowing citizens to regain awareness on the importance of the relationship with the countryside, of agriculture and food self-produced and local.

14:30 *Nilson Antonio Modesto Arraes*

Agroecological agriculture and water quality: Sustainable Guarapiranga Project

SPEAKER: *Nilson Antonio Modesto Arraes*

ABSTRACT. The Metropolitan Region of São Paulo (MRSP) is the largest and most populous urban area in Brazil and one of the five largest in the world. It covers 39 municipalities, concentrating almost 20 million inhabitants. The MRSP is located in the headwaters of the river Tietê, a low water availability region, which requires import 32.3 m^3 / s of adjacent watersheds. Among the springs that supply the MRSP, the Guarapiranga is the second most important, supplying the southwest region with 4 million people. The watershed covers partially the municipalities of Cotia, Embu, Juquitiba, São Lourenço da Serra and São Paulo, and entire municipalities of Embu and Itapecerica da Serra, having 64 000 ha (42% anthropogenic uses, 37% remaining Atlantic Forest, 17% urban uses and 4% water uses). Urban sprawl on the Guarapiranga watershed has a strong effect on the availability and water quality. The Sustainable Guarapiranga Project is driven by the State Departments of Agriculture and Food Supply and the Environment and is for the use of agroecology as a sustainable development tool for the seven municipalities of the Guarapiranga watershed. The project strategy is to promote the social reproduction of agroecological farmers, both to discourage urban sprawl, and to ensure land use that preserve or improve water quality. By promoting

social reproduction of farmers, the government "pays" for water quality. The arrangement involves technical and commercial support and creation of marketing channels infra-structure. The paper aims to describe the process of inter-municipal coordination, highlighting the Project Clean Agriculture of the São Paulo municipality, partnerships with other institutions (universities, NGOs), the agroecology promotion activities and achievements yet. The information sources consist of public documents on Sustainable Guarapiranga and Clean Agriculture Projects and interviews with public officials involved in the projects, as well as professionals from institutions that acted in partnerships.

14:45 *Manel Cunill Llenas*

Method to evaluate the environmental services of metropolitan agricultural areas and their land protection. The examples of Espai d'Interès Natural (EIN) Gallecs.

SPEAKER: *Manel Cunill Llenas*

ABSTRACT. This paper has developed a methodology for assessing the environmental service of provisioning food. It has been applied on once geographic areas: Espai d'Interès Natural (EIN) Gallecs. The result of this evaluation was compared to the four categories of protection established by the Open Space System of the Barcelona Metropolitan Territorial Plan (PTMB). SIGPAC (Geographic Information System of Agriculture Areas) was used as the main database. Then, several processes of spatial analysis, specifically spatial intersections between different layers. From these data different thematic maps were obtained for the three areas

14:00-15:30 Session 3H: WG17 - Civic agriculture for an urbanizing society: production models, consumption practices and forms of governance

Experiences of civic agriculture

CHAIR:
Maria Fonte

LOCATION: Aula 16

14:00 *Balint Balazs*

Food Self-Provisioning in Hungary

SPEAKER: *Balint Balazs*

ABSTRACT. Food self-provisioning (FSP), a non-market source of local foods is often regarded as an important component of civic food systems and (Renting 2012). Recently FSP in post-socialist societies has been depicted as a socially inclusive practice compliant with principles of sustainability, unrelated to market transactions. Discourses on the political as well as the advocacy level about the benefits and potentials of food relocalisation have been proliferating, while the economic significance of FSP has often been downplayed in the academic literature without presenting quantitative or qualitative evidence about the scope of and motivation for FSP activities. Based on a representative survey this paper analyses the spatial and social extent of FSP practices in Hungary, a CEE country still in her post-socialist cultural transformation phase. It also explores the motivations for FSP as experienced by producer-consumers.

14:15 *Tatiana Castellotti* and *Giuseppe Gaudio*

Civic agriculture in Calabria region
SPEAKER: *Tatiana Castellotti*

ABSTRACT. The paper aims to present some experiences of civic agriculture in Calabria. The experiences concerning different aspects: processes of re-territorialization, critical consumption, social inclusion, the reuse of land confiscated from the mafia. The identification of territorial identity is critical to initiate processes of re-territorialization. These processes require the reconstruction of relations between the local community and territory. The resident / consumer / producer must become inhabitant and that recognize the territory as their own building and enhance sociability. But through what process can be realized this reappropriation of territory and identity? Through what process consumers can once again become inhabitants? Paths creating civil economy locally can become acts territorializing: relations of reciprocity behind the creation of paths civil economy recreate local communities (Bruni, Zamagni, 2004). The social system of industrial society is based on the separation not only conceptual but also practice between production and consumption. This separation is also reflected on the individual in the distinction between man and man-worker-consumer. Industrial society requires a process of liberation from the personality. Based on the assumptions of the civil economy, function and the person can not be divided, then the production of a commodity can not be separated from the involvement of the consumer. The paper discusses different experiences both in the territories concerned that for history: for example, the experiences of local development of the cooperative Goel of Reggio Calabria and the cooperative "Il Segno" of Cosenza, the experience of "GAS Utopie sorridenti" through which producers and consumers programmed with sowing and the consumer gives a pre-financing for the future harvest. The experiences of cooperatives "Arca di Noè" and the "Valle del Bonamico" on social inclusion and the "Valle del Marro" on the reuse of land confiscated from the mafia can be considered as other examples of civic agriculture. The paper illustrates the path of formation of these experiences, the strengths and weaknesses assessed both on the basis of the objectives set by individual organizations on the basis of the principles of the civil economy. He wants to be a moment of reflection for the proposition of public policies.

14:30 *Flavio Sacco Dos Anjos*, *Nádia Velleda Caldas* and *Silvia Sivini*
The social construction process of food quality: The participatory guarantee systems. A focus on the Brazilian experience

ABSTRACT. The emergence of alternative agro-food networks and the social construction processes of food quality have become the subject of investigations in several countries (Renting et al, 2003; Follet, 2009; Sacco dos Anjos & Caldas 2014). Organic farming have received important support from the development of AFN. Nevertheless scholar have highlighted that a conventionalization process of organic farming (Fonte 2008) is going on and the certification process by third party, is often underline, appears not functional for farmers that sell directly to consumers and/or operates inside the AFN. This paper will focus on the alternative that can be adopted by organic producers to certificate their product starting from the Brazilian experience. In this country was approved a very advanced legislation, which states that two completely opposite certification systems can be adopted by farmers: the conventional certification by a third party (TPC) and the participatory guarantee systems (PGS). The latter are "based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange" (IFOAM, 2015). The most important experience of

PGS in Brazil is related to Ecovida Network of Agroecology, located in the southern states (Rio Grande do Sul, Santa Catarina and Paraná). This case has been recognized as a reference for other countries. The differences between TPC and PGS are quite clear. While the TPC is based on the expert knowledge and a vertical control process, in PGS the emphasis is on horizontality, reciprocity, information sharing and knowledge building (Caldas, 2013; Martin Brasas, 2013; Caldas & Sacco dos Anjos, 2014). The quality of food products are guaranteed by this different approach that is useful for the dynamics of family farming. The TPC, on the contrary, appears functional to another model of farming mainly exported oriented. The issue of PGS was incorporated in the agenda of important organic farming international organizations, as IFOAM. The paper will discuss the opportunity and the difficulties that farmers have to face in implementing PGS system. In Brazil, for example there is a lack in the government support in front of a big pressure adopted by the private certification companies. In Mexico, one of the challenges faced by producers, according to Tovar et al (2009), is the formal recognition, social conflicts and dependence on donated resources. Nevertheless, the PGS can be considered helpful for organizing farmers, offering guarantees of food quality and support local market (Fonseca et al, 2008).

14:45 *Elena Christy* and *Karen Landman*

Designing 'Resilient Citylands' through Community Participation

ABSTRACT. Berg, Ignatieva, Granvik, and Hedfors' (2013) concept of Resilient Citylands (RCL) suggests that human settlements can be more resilient through a reintegration of urban and rural areas, and increased interactions of green-blue and built infrastructure by 1) increasing access to recreation; 2) preserving biodiversity; 3) creating aesthetically appealing and efficient human habitats; 4) strengthening cultural identity 5) maintaining and developing ecosystem services; and 6) relocalizing primary production and ecotechnology. To operationalize the RCL concept for designers, a working framework was developed using key literature, key informant interviews, and a site visit. The working framework was then evaluated by applying it to a participatory design project in the Protected Countryside in the Region of Waterloo, Ontario. KW (Kitchener – Waterloo) Habilitation, a non-profit organization, delivers services and support to people with developmental disability throughout the Region of Waterloo. In 2014, KW Habilitation formalized their Our Farm program, which seeks to engage KW Habilitation in day-to-day vegetable production while growing vegetables for KW Habilitation's residential program. Due to the program's success, KW Habilitation would like to expand their food production area and create a place of recreation, social inclusion, and food production for their participants and the larger community. The site's peri-urban location, with close proximity to the City of Waterloo, offered opportunities to explore urban and rural linkages through design elements and programming. In addition, the site provides valuable ecosystem services and opportunities for biodiversity enhancement, as it is located in the environmentally sensitive landscape of the Laurel Creek Headwaters – a groundwater recharge area – and is adjacent to provincially-significant woods.To evaluate the framework, participatory design (PD) sessions, grounded in the RCL framework, were held to engage stakeholders of KW Habilitation's Our Farm program in the design process. Through this process, we identified strengths and weakness of the RCL framework, and explored opportunities and barriers for introducing this framework in using PD. Preliminary results suggest that the framework is helpful to inform design decisions in a PD setting. Further application is required to explore means of increasing

community buy-in.

15:00 *Angela Galasso*, *Silvia Paolini*, *Francesca Durastanti* and *Carlo Hausmann*
Civic agriculture in Italy: lessons from the field

ABSTRACT. The experiences of civic agriculture are within the sphere of the commons (Di Iacovo et al, 2014), are solutions in response to the crisis, able to build and strengthen working hypothesis that indicate new operating models that combine economy with people wellbeing (Durastanti et al, 2011). The paper analyzes civic agriculture practices widespread in Italy, involved in the project Civic Agriculture Award, a national competition - scouting / research of the various manifestations of civic agriculture in Italy, organized by AiCARE (Italian Agency for the Responsible and Ethic Countryside and Agriculture), which originates from the need of knowledge and deepening of the theme. The paper also analyzes the original method of work "Award": motivation, promotion, financing, method and tools of detection and evaluation of practices, impacts, disclosure. Award's participant practices (220 in three editions), analyzed through the information contained in the application form, represent a cross-section from which emerged: business sectors (social farming, education, community gardens, short food chain), legal forms, dimension, methods of cultivation, agricultural activities and related activities, distinctive characteristics of civic agriculture and values, degree of integration of farms with local communities, strengths and weaknesses. In general they showed that in Italy there is a lot of innovation in agriculture, organized in innovative business models that create both economic and social value. These are experiences with a strong bond between farming and citizens, experiencing original and concrete paths, able to return to the food value that goes beyond just the price for the pursuit of common goals and collective interest, and whose protagonists are the people who live and inhabit the territories. The civic agriculture in Italy has mostly developed in the total absence of the policy. Civic Agriculture Award, whose first edition was in 2008, was certainly an original experience; in many cases these practices are now the object of experimentation, research and begin to have visibility and collect an increasing interest, both by the policy and by the society. The speed with which the practices will develop to become critical mass, however, depend on the ability of the policy to read the deep innovation paths of which practices are carriers and to write new rules of the game, able to support the initiatives capable of generating environmental, economic and social sustainability.

14:00-15:30 Session 3I: WG23 - Conceptualising and Assessing City Region Food Systems

Conceptualising and Assessing City Region Food Systems

CHAIR:
Makiko Taguchi

LOCATION: Aula 14

14:00 *Marc Wegerif*
Navigating the Maize to the City
SPEAKER: *Marc Wegerif*

ABSTRACT. The rapid urbanization of the world, with all its challenges and opportunities, is almost all taking place in the urban centres of the developing world. Tanzania’s largest city, Dar es Salaam, is a prime example. It has well over 4 million inhabitants, many in poverty, and is the 9th fastest growing urban centre in the world.

This paper draws on new primary research to show the patterns of provisioning that bring the key staple food of maize, largely from the rural hinterland, to eaters in the fast growing city of Dar es Salaam. It illustrates the patterns of provisioning through which a diverse range of actors are linking rural with urban and eater with producer. These actors include farmers, traders, transporters, processors and retailers. Of particular interest is how a wide range of small scale and interdependent actors get maize to urban eaters at a city feeding scale without large vertically, or horizontally, integrated corporate structures. It explores what enables this pattern of provisioning and some of its socio-economic and environmental outcomes as well as its constraints and bottlenecks. The extent to which the needs, in particular the right to food, of the smaller farmers and the poorer urban eaters are met form the benchmarks guiding this assessment. The paper adds to our understanding of 'City region food systems' by showing what this looks like through the lens of the key staple food of maize. In this case we see what mechanisms primary actors in the food system are creating in a developing country context where there is no urban food strategy and limited meaningful state or corporate coordination of the main modes of food supply. Through this example of a 'City region food system' assessment, ideas are provided for how it can be done and what to look out for. It is argued that understanding and valuing what people do themselves and through what arrangements is an essential, but often overlooked, starting point for any possible intervention. Importantly it has been found that small farmers are able to supply the food needs of the city and do so in ways that respond well to the particular circumstances of the poorer urban eaters. There is a lot that is working in the existing food systems that can be built on and should not be undermined.

14:15 *Rob Roggema* and *Marketa Braine-Supkova*

About Content and Process: A Proposi-tion for Food Planning in the City-Region

ABSTRACT. The starting point of a city region food system design is the availability and the quality of arable land. Today, many planning tools for city-regions already exist, but are either not used or do not perform as intended. This is caused by the complexity of the food system issue not fitting in simplified tools. The question of a sustainable food system goes beyond simple allocation of land for food produce, but involves also a major shift in terms of type of agriculture and the food produce diversification. The challenge is to strike the right balance between the complexity of the tool and the complexity of the problem.

Planning is organized in sectors, creating a competitive environment in which food stands in competition to other planning goals. Hence, food appears to be "just yet another item on the wishing list" for planners that are forced to weight decisions and choose between the biggest benefits for a limited space. While there is no lack of new (technocratic-sectorial) tools, there is definitely a lack of approaches enabling integrated, dialogue oriented decision-making tools.

A process oriented city region food planning tool should facilitate and enhance a multi-stakeholder and cross-disciplinary dialogue, and integrate uncertainty as a part of a design process in a dynamic world. A food system-specific methodological framework should integrate or combine different, already existing tools in process oriented planning. Such a framework would not follow linear steps from analysis to implementation, but rather work cyclically or iteratively, jumping back and forth between the steps. Additional inspiration in designing a tool comes from other sectors, such as multi-

stakeholder consultations, data mining from crowdsourcing, 30-30 exercise, backtracking, prototyping, or foresight. The essential element seems to be the capacity to enable creativity.

The contours of the presented City-Region Food Planning Tool discuss at least the following requirements: • Reduce the complexity of food systems to a useful, yet applicable process. • Identify what needs to be measured, how much that will cost • Will the tool in the end provide policy makers with tangible information? • Who should be involved? How can individual interests be balanced? Commit stakeholders to the process for the long-term. • Consider the appropriate spatial and temporal scale • Include relevant elements of the food value chain (from production, processing, distribution, and consumption to waste management) • Quantify the multi-benefits of food system and ease the decision making process.

14:30 *Francesca Frassoldati*

Urbanization and farming in the Pearl River Delta (China): a tentative assessment of correlations

SPEAKER: *Francesca Frassoldati*

ABSTRACT. The Pearl River Delta is described in international literature as a global manufacturing hub where the rate of urbanization exceeds 80% and population reached 56 million in 2010. However, each of the nine city-regions into which the PRD is administratively subdivided includes districts and counties where farmland is in some cases prevalent. Traditionally, regional agriculture has nurtured trade, but the reduction of farmland due to galloping urbanization is accepted as the inevitable site effect of development. General correlation has been evidenced since the early 1990s, but practical measures of the change of agriculture through times are rarely analysed in an urbanizing environment. The aim of this paper is to explore the potentially conflicting relationships between urbanization and agriculture in the Pearl River Delta region. Years between 1996 and 2010 are considered. Firstly, data concerning the accounted production of most common agricultural items are tested against people's consume. The model is a hypothetical prediction of how far the potential of regional production matches with regional consume. The production of vegetable, fruit, and aquatic products surpasses local needs, although in all cases the export potential decreased after 2005. With rice it is just the opposite: the PRD depends on rice import, and the situation is getting worse. The second part of the analysis considers the hypothesis of a link between farming choices and growing urban population. This second variable had been selected among many possibilities: an increase in urban population conversely reduces the number of people working full-time in agriculture, which may influence work organization as well as production. Moreover, more urban population generally justifies an expansion of urban land use that potentially reduces available land for farming. Linear regression for five tests shows that: rice production decreases as far as urban population grows. The production of vegetable reveals a rather strong positive correlation coefficient. Fruit has positive and regular correlation with urban population growth, which in part is due to the high demand for fruit in emerging economies. Fruit plantations require more time to become productive, and mid- or long-term investments that pay back higher returns than general farming. Swine livestock and aquaculture have the more regular positive correlation with urban growth. The challenging conclusion is that adjustments at the regional scale driven by expanding urbanization have guaranteed agricultural profitability. Had agriculture not adapted to become more land-, work- and profit-

intensive withdrawing self-sufficiency, regional farming would not have had any future.

14:45 *Andrea Galli*, *Matteo Belletti* and *Ernesto Marcheggiani*

Do smart drivers in the food chain improve the links between cities and the countryside?

SPEAKER: *Andrea Galli*

ABSTRACT. Rural regions in Europe are characterized by scattered settlements and urban sprawl. This has led to an entangled mix between cities and countryside. The main issue, among others, of such a spatial and functional emerging pattern is a generalized decline in both environmental conditions and well-being. In spite of the relentless blurring of the differences between urban and rural functions over time, citizens still consider the countryside as the place from which primary goods and eco-services are provided. At the same time, farmers are eager to boost their relationships with cities, which are seen as a promising growing food market. Bearing in mind as cultural and social needs also play a pivotal role in the relational game between city dwellers and farmers, we seek to shed light on the role of smart drivers who lead the future of the so called rural-urban partnership. On the one hand, the vitality of rural regions close to cities has been recently advocated by an OCSE study. In this context our work considers the peculiar typology of a rural-urban system, that of Central Italy. Focusing on specific study cases in the Marche Region, we have taken into account the relationships among Solidarity Purchasing Groups (SPG) and farmers, and the potentials of these two endeavors for sustainable and strengthened territorial economy and rural policy.

Keywords – food economy, cultural landscape, ruralurban partnership.

14:00-15:30 Session 3J: WG24 - Revaluing institutional food procurement

Enabling Environments and sustainable public food procurement: The role of Institutional procurement policies in creating more sustainable, just and nutritionally adequate food systems

CHAIR:
Sergio Schneider

LOCATION: Aula 4

14:00 *Luana Swensson*

Institutional procurement of food from smallholder farmers: Legal issues and lessons learned from the Brazilian and P4P experiences

SPEAKER: *Luana Swensson*

ABSTRACT. In the last few years – and especially after the 2008 global food price crisis – the use of government and as well as of other institutions regular demand for food has been seen as an potential instrument to support smallholder's production and their integration into formal market and as well as a driver of development. The theory behind it is that connecting large, predictable sources of demand for agricultural products (structured demand) to smallholder producers can reduce risk and encourage improved quality, leading to improved systems, increased income and reduced poverty. (The Gates Foundation, 2010) Within this context Institutional food Procurement Programmes (IPPs) are considered to have considerable potential to create, stimulate and support transformative development of the food supply systems. (FAO, 2014) The predictable source of demand for agricultural products can be provided by public buyers but as well

as by other actors such as development agencies. The most common example is public schools. Nevertheless IPPs can be developed based also on the demand of food reserve authorities, prisons, hospitals, etc. Despite its great potentials, the development and implementation of an efficient IPP which aims to link smallholder producers to institutional markets promoting development in food supply systems is not a simple issue. It requires a series of conditions that must be coordinated and matched together. Those conditions depend – but go far beyond – the governmental will and availability of demand. They are linked to (i) policy and institutions (ii) demand and (iii) supply side. It also requires an appropriate legal framework. For the successful development and implementation of IPP it must be supported and accompanied by an appropriate legal framework. Without the development and/or adaptation of different laws which not only allow but also facilitate the integration of smallholders into institutional market it is very likely that an IPP does not success in its aims of supporting smallholder production and access to markets and, especially, of acting as a driver of development. This paper aims to analyse three main legal issues linked to IPPs: (i) regulation of public procurement; (ii) development of a legal definition of smallholder or family farming producers at national level; and (iii) legal structure and regulation of smallholder producer organizations. It aims do it through the analysis of two key IPP experiences: (i) Brazil and its two IPPs - PAA and PNAE – and (ii) the WFP Purchase for Progress (P4P) initiative.

14:15 *Armando Fornazier* and *Walter Belik*

The connection between family farming and school feeding in a major Brazilian city

ABSTRACT. In Brazil, development of family farming is an specific public policy objective. Regarding commercialization, government procurement have been conducted, since 2003, to enable donations and formation of strategic stocks. In 2009, the National School Feeding Programme (PNAE - Programa Nacional de Alimentação Escolar) rendered it possible to expand acquisitions. The purpose of this paper is to assess how has the mayoralty of São Paulo fared in buying from family farmers to supply local schools. Methodology comprises bibliography and document revision as well as consultation with public officers charged with the conduction of the PNAE. Results show that, due to legal controversies, years had elapsed before the municipality began procuring; however, significant advancements were made in recent years even though the mandatory minimum acquisition requirement has not yet been attained. The mayoralty, currently, purchases directly from farming organizations, including those originating from land reform programs and family farmers from state of São Paulo. It constitutes a window of opportunity to steadfastly bond the links of product chains and to insert marginalized farmers in the food market. Nonetheless, challenges remain and the municipality has sought to communicate better with organizations in order to overcome them.

14:30 *Jéssica Martins Melo*, *Keiliane Menezes Araujo* and *Caroline Spanhol-Finocchio*

Linking school feeding with smallholder farmers: the case of Bonito, Mato Grosso Do Sul State, Brazil

ABSTRACT. The process of acquiring food for school feeding was one of the great progress made in recent times in Brazil. Currently, food purchases are made by states and municipalities. Decentralization of purchasing food for school meals is contained in the National School Feeding Programme (PNAE). The transfer of money to buy food is

made directly to states and municipalities, based on the school census conducted in the year prior to the service. The specific legislation show that at least 30% of the amount transferred to states and municipalities must be used to purchase food directly from smallholder farmers, which aims to strengthen and develop the local market. Public policies directed to rural areas aim to strengthen smallholder farmers in the country. Based on these, the objective of this study is to characterize the procurement procedures of school feeding in Bonito, Mato Grosso do Sul, Brazil. In addition, the objective is to identify the importance of PNAE for farmers. To support the discussions proposed in this study, a qualitative research will be performed. For this, we conducted bibliographic and field studies, based on interviews with those responsible for purchasing food for public schools in the municipality and farmers.

14:00-15:30 Session 3K: WG18 - Society Oriented Farming – working on the balance between market and societal demands

Society oriented farming I: farm level aspects and strategies

CHAIR:
Daniel De Jong
LOCATION: Aula 21

14:00 *Daniel de Jong* and *Andries Visser*

Society Oriented Farming: farm strategies involving society

ABSTRACT. Entrepreneurship in agriculture is changing: Not only do farmers have to be technically capable in their production processes but they also have to be aware of the global markets demands, the (local) societal demands and legislation and environmental changes in an increasingly urbanizing world. In order to achieve business sustainability farmers need to be aware of these external pressures and adapt and develop innovative production strategies so that all kind of stakeholders: consumer organizations, environmental groups, neighbors, regional and national governments, retail etc. are satisfied with the way these farmers produce.

14:15 *Silvia Paolini* and *Laura Pommella*

Participatory planning evidences in urban rural fringe: can farms have a new role in enhancing quality of life in the outskirts of Rome?

ABSTRACT. In this papers are discussed the findings of an experiment of participatory planning driven by AiCARE (Italian Agency for Responsible and Ethical Countryside and Agriculture) in the north western outskirt of Rome. The study was aimed by the idea that the farms still present in the area, exposed to an heavy pressure from the city expansion, can survive by selecting new farm business strategies, so to build a new role (economic and social) by replying to local community needs throughout civic agriculture strategies. Parallel aim of the study was to test the methodology of participatory planning as a way by which local community and farmers can begin a dialogue starting from local needs. The study context: north western suburbs of Rome (Hall XIV Rome Municipality), in the agro romano (Rome's periurban farmland) along the Boccea way, about 35 km far from City centre (that's 50 minutes by car or 1hour 45 minutes by public transport). In this area lives around 600 families (3.000 inhabitants), mainly in family houses with private gardens and buildings of recent construction; the area is characterized by a rural landscape with various farms. The urban portion of the area enlarged during '80

for abusiveness, developing without any planning and a lack of proximity services (shops, schools, pharmacy, public transport,...) and public places (square, parks, sport and recreations centers); everything is only reachable with private car and the main part of the inhabitants works far away. Main results achieved. The activation of the participatory process, and a parallel analysis of the starting dialogue level between local inhabitants and farmers (with a structured questionnaire), highlighted: - community needs: tangibles, intangibles, conscious and unconscious - community perception of the living place and perception/acknowledge about local farming - main food buying habits Even if the first and most important result has been a "community building effect" on the local community to cultivate with other actions, the study allowed to collect useful information for studying and proposing to local farmers new business strategies to test, all inspired at civic agriculture. Conclusion: by joining farmers and community weaknesses can be outlined win-win solutions, but between activation of the process and first social and economic results, really much time is spent because of participatory processes dynamics are long. We think that to be effective this kind of change in the paradigm needs high motivation by involved promoters or public support during participatory process

14:30 *Renard Olivier* and *Ouseini Ganda*

Marriage of convenience between farmer organizations and milk industry, for a more resilient local milk value chain in Niamey, Niger

ABSTRACT. Niamey, capital city of Niger, has a dynamic dairy processing sector due to traditional high milk consumption. It has three industrial units of dairy processing, and several other smaller units, using mostly imported milk powder. The development of a market for local milk requires both efforts in terms of collective action, due to the fragmentation of milk production and quality problems (debris, wetting), and investment in equipment, due to high perishability of the product. An IRAM project is currently supporting milk collection centers, allowing a reception and control of milk closer to producers, limiting transaction costs, ensuring quality control, and stabilizing supply downstream. Crossing point of production, collection centers are also service platform for farmers: formal or informal exchange of information, awareness of good hygiene practices, access to inputs, mainly via an exchange called "milk against livestock feed". The development of such collection centers seems to be a key action to contribute to the structuring of the whole sector. Despite benefiting to family farming and being adapted to the traditional pastoralist agricultural, it is also a key linkage to meet urban demand for milk, especially the industrial sector. It is indeed an interesting model for several reasons: technique (combined collection and services to farmers), social (collection centers managed by farmers, taking into account the role of women), institutional (possible delegation of management contracts, inter-structuring), economic (response to strong local demand, increased bargaining power). A major industry is currently engaged in the development of a product line "100% local" with the support of local development partners. This strategy allows both to sell more expensive products, but also to ensure a share of the value added upstream to farmers. Unlike the development of niche markets by mini dairies (trying to use local milk only but being often unprofitable), this partnership builds a local strategy with a strong technical and financial partner, whose main market is the powdered milk. So this is certainly a marriage of convenience, but it seems to be more sustainable and less risky than the betting of some mini dairies.

14:45 *Marie-Ève Gaboury-Bonhomme*

Society oriented agriculture: an emerging paradigm in Québec (Canada)?

SPEAKER: *Marie-Ève Gaboury-Bonhomme*

ABSTRACT. In Québec, a French speaking province of Canada, there are 30,675 farms. Since World War II, like in many other countries, government action in the agricultural sector has dealt mainly with economic objectives: produce more at the least cost. Presently, governments invest in agriculture to achieve these goals. Skogstad (2008), who analysed Canadian agricultural policies, calls it the paradigm of state assistance. This paradigm is still dominant in Canada and Québec today. Even so, since the beginning of the 1990s, more and more social groups want to influence agricultural development and new societal demands emerge. These demands have been expressed during some public consultations since 1990; the largest one, the Commission sur l'avenir de l'agriculture et de l'agroalimentaire du Québec (Commission on the future of Québec 's agriculture and agri-food), was organised by the Québec government in 2008. Besides representatives from agriculture and agri-food businesses and cooperatives, a lot of social groups expressed theirs points of view at this Commission: environmental groups, consumers associations, health sector, education, advisory and research institutions, municipal governments, etc. These group's views and demands concerning agriculture are part of the drivers behind society oriented farming. What are these views/demands to agriculture? What views emphasize economic, environmental, social or equity objectives? This paper will present the results of the qualitative analysis of 150 different points of view (memoirs presented at the Commission in 2008) about the future of Québec's agriculture. The theoretical framework of this analysis is based on the notion of sustainable agriculture, especially the recent Sustainability assessment of food and agriculture systems (SAFA) (FAO, 2013). The results of this analysis show that social groups' views correspond broadly to society oriented and sustainable agriculture. However, not all sustainability issues are integrated in government's and farmers' strategies at the same level. Some issues have been integrated for a while (e.g. water quality), others more recently (e.g. climate change), and some are not integrated at all or very little (e.g. agricultural land-scapes).

15:30-16:00 Coffee Break

16:00-17:30 Session 4A: Parallel Working Group sessions (2)

16:00-17:30 Session 4B: WG1 - Connecting local and global food systems and reducing footprint in food provisioning and use

Assessing food supply chains: case studies

CHAIR:
Wijnand Sukkel

LOCATION: Aula 6

16:00 *Neil Argent*

Heading down to the local: Craft beer and local economic development in rural Australasia

SPEAKER: *Neil Argent*

ABSTRACT. The Australasian micro-brewery sector has experienced healthy growth in production and consumption, and spectacular expansion spatially and numerically over the last five years. These trends fly in the face of the normal conventions and supposed 'iron laws' of economic geography, and contrast strongly with performance of the mainstream beer brewing sector. Arguably, the success of the Australasian craft beer sector is substantially dependent on two factors: 1) the production of a diverse range of 'real' beers; and 2) canny marketing strategies – including sophisticated place-marketing of micro-breweries and their beers – which have elevated boutique beer and its

consumption to the status of a positional good. Drawing on field research in rural New South Wales and Tasmania, Australia, this paper discusses the role of place and space in the locational, marketing and overall business strategies of local craft brewers, and investigates the contributions that these small businesses make to Despite this somewhat elitist image, a robust home-brewing culture exists in both Australia and New Zealand, with many former homebrewers acceding to the status of micro-brewery head brewer. In other words, a relatively small-scale brewing industry, heavily imbued with folk knowledge, a commitment to quality and innovation, and with its own distinctive economic and social geography, has emerged as a genuine competitor to the major brewers. Paying heed to these trends, this paper focuses on three key themes: the locational factors underpinning the incidence of craft brewers across Australia and New Zealand; the use of place-based imagery to market craft beer; and the potential contributions of craft breweries to the regional economies within they are located (i.e. their economic embeddedness).

16:15 *Matteo Fastigi*, *Elena Viganò* and *Roberto Esposti*

The irresistible rise of craft breweries in Italy: the case of agricultural craft breweries

ABSTRACT. This paper initially investigates the emergence of craft breweries in Italy over the period 1993-2014. The rise of the craft brewing sector can be interpreted as the consequence of a change in the beer market in Italy, with a combination of strongly growing demand and increasing attention of consumers to the quality of productions, their geographical origin with the consequent differentiation and segmentation of demand in this respect. According to such interpretation, grounded on quantitative (survival analysis models) and qualitative (survey sent to the Italian craft breweries population – 604 firms –, with a response rate of 53 percent) analysis, this phenomenon is generated and lead by market drivers with a limited, if any, role of localized factors (especially considering that, historically, Italy is a wine producer country, and not a beer producer one). The Italian craft breweries take advantage of being identified, from the consumers, as local and craft producers: even though the majority of their turnover is mainly achieved within the Region in which their production site is localized, raw materials (cereals) largely come from abroad. This “interpenetration of the global and the local” is an interesting sociological issue, but it shows a contradiction between the image that they project onto consumers and the origin of their raw materials. To increase national production of cereals for beer and because of, according to law, craft breweries cannot write the word “craft” on their labels, in 2010 Italy was the first country to introduce (with a Ministerial Decree) the figure of agricultural craft breweries, which have to produce the majority of their cereals (and to malt them, either by themselves or through their association into a consortium of agricultural craft breweries) in order to profit by this appellation (which can be written on their label). This law introduced a new form of multifunctionality in agriculture, given that an agricultural craft brewery must be a farm: the advantages, apart from the label, are to benefit from a less onerous taxation and to be able to ask for Regional RDPs (Rural Development Programmes) funds; the disadvantages are that the consortium, in the process of malting cereals, is not as technically experienced as the ones in historically beer-producer countries, plus the costs are higher (it is still cheaper to buy malted cereals from abroad). Despite that, by the end of 2014, agricultural craft breweries were ten percent of the total craft breweries.

16:30 *Francesca Galli*, *Julie Smith*, *Gianluca Brunori* and *David Barling*

Global, Regional and Local food chains: an assessment of sustainability performance of wheat-to-bread chains across Italy and the UK

ABSTRACT. There is a growing number of consumers concerned with the impacts of their consumption choices, including how choice affects their health, other people, and the environment. Local food supply chains are increasingly being considered by policy and decision makers in government, industry and civil society organizations for their potential to overcome the drawbacks of global and more industrialized chains (Forssell and Lankoski, 2014; Selfa and Qazi 2005). However, opposition between local and global food systems is being questioned and distinctions are not always clear and unambiguous (Hand and Martinez, 2010). How does sustainability performance vary in relation to local and global food supply chains? What characterizes difference?

Within the EU 7FP Glamur project, distinctions between local and global supply chains are articulated using four axes: geographical distance; governance and organization; resources, knowledge and technologies and territorial identity. From this assessment, global, regional and local wheat-to-bread supply chains were selected for case study research in Italy and the UK. Key attributes were identified and indicators were selected in order to collect data for measuring the performance of the supply chains along the global-local continuum, within five sustainability dimensions (economic, social, environmental, health and ethical).

This paper develops a comparative assessment of the wheat-to-bread supply chains. Using a participatory approach, the research process entails three methodological steps: first, we explore stakeholders' perspectives on sustainability of local and global bread supply chains and assess the contribution of supply chains of different lengths towards sustainability objectives. Then we identify the most relevant dimensions and the relations (correlation, trade-offs, dilemmas) between them. Finally we highlight cross-cutting issues between the sub-sets across Italy and the UK and emerging thematic questions and priorities for further in-depth investigation.

The analysis sheds light on sustainability performance as the supply chains in both countries innovate and adapt. Moreover the participatory assessment reveals conflicting perceptions of sustainability and how this is perceived along local and global supply chains. References Forssell, S., Lankoski, L. The sustainability promise of alternative food networks: an examination through "alternative" characteristics, Agriculture and Human Values, 2014. Article in Press. Hand, M. S., & Martinez, S. Just what does local mean. Choices, 2010, 25(1): 13-18. Selfa, T., Qazi, J. Place, taste, or face-to-face? Understanding producer–consumer networks in ''local'' food systems in Washington State. Agriculture and Human Values, 2005, 22(4):451–464.

16:45 *Cesare Ronchi*, *Emilio Ferrari*, *Filippo Sessa* and *Luca Fernando Ruini*

Promoting sustainable durum wheat production in Italy: the Barilla Sustainable Farming project

ABSTRACT. The aim of this study is to present a project that has been carried out by Barilla, one of the top Italian food groups and a lead player in the pasta market worldwide, in order to increase the sustainability of durum wheat cultivation over the past few years. As Life Cycle Assessment (LCA) studies demonstrate, durum wheat

cultivation is responsible for more than 80% of the ecological footprint, for the entirety of the water footprint, and it has the same carbon footprint impact of the home cooking phase (Barilla, 2010; British Standard Institute, 2011; World Resources Institute, 2010). The Barilla Sustainable Farming project was aimed to increase the use of sustainable cropping systems, to maintain safe and high quality agricultural products, to ensure environmental sustainability, while enhancing the social and economic condition of farmers. The Barilla Sustainable Farming model was applied on a total of 13 farms in 2011/2012 and 22 farms in 2012/2013, in the areas where durum wheat cultivation is more significant in Italy. The tools provided to farmers and technicians of the selected farms included the Barilla Handbook and granoduro.net®, a Decision Support System designed to assist farmers in taking operative decisions regarding cultivation. Results show that low input agronomic practices are environmentally friendly (- 36% GHG) and increase net income of farmers (up to 31%). A decision support system contributes in reducing carbon footprint (-10%), and costs for pesticides and fertilizers (- 10%).

17:00 *Mikelis Grivins*, *Talis Tisenkopfs*, *Zaklina Stojanovic* and *Bojan Ristic*
Comparative analysis of social performance of global and local berry supply chains

ABSTRACT. The relativeness and complexity that a researcher has to face when assessing the structural characteristics of food chain performance probably are most visible when it comes to assessment of social aspects. It is due to the traits that are usually considered as part of social science nature – a social perspective presupposes certain relativeness, it recognizes culture as a meaningful element of assessment and recognises that most of the possible social effects can be observed only indirectly. However, the gains from such assessment (no matter how complex) would be most fruitful – social aspects are strongly interrelated to performance in other dimensions characterising food chains (economic, ethical, environmental, health). These linkages might grant much more elaborated knowledge of food chain efficiency and performance outcomes. In this paper we analyse the social performance of global and local berry supply chain arrangements in Latvia and Serbia. We have chosen to compare the performance of five cases: global and local raspberry chains in Serbia and global, intermediary and local wild blueberry chains in Latvia. For in-depth analysis we have chosen two interlinked domains of interactions between food chain actors – labour relations and power relations. From analytical perspective the two categories represent different levels of abstraction, i.e., labour relations could be perceived as a part of larger category – power relations. The selection of analytical categories or food chain attributes of different scale holds an advantage to ascertain each attribute's performance separately as well as to observe how performance is conditioned by the other attributes. Thus the selection of different level categories allows grasping more accurately the analysed attributes ability to explain performance. The data used in this paper has been collected during the GLAMUR project.

16:00-17:30 Session 4C: WG4 - New business models for multiple value creation
Business modelling
CHAIRS:
Roel During and *Herman Schoorlemmer*
LOCATION: Aula 18

16:00 *Chiara Paffarini*, *Biancamaria Torquati*, *Bernd Pölling*, *Wolf Lorleberg* and *Roberta*

Illuminati

Bridging the gap – education and farming in specialized kindergarten farms

ABSTRACT. Food production is in many ways uncoupled from society, which leads to missing or inappropriate awareness, knowledge and understanding of the food sector and agricultural added-value chains in general and more specifically also of food production on farm level. The most important group to bridge this gap is the group of the youngest ones. The educational activities of schools by visiting farms enable children to learn specific information about agriculture and nutrition but the children may experience them as an unusual and exceptional event that has no connection with their daily life. Instead kindergarten farms seem to be a suitable tool to bring children closer to agriculture and adjacent food production and environment aspects. These activities are also interesting regarding new agricultural business models that can provide a new way to achieve economic diversification. In fact the use of farms as setting for social or educational services like the kindergarten farms represents a new farming initiative using to diversify and integrate farms' economic income. In the kindergarten farm, where young children go daily for childcare similar to regular nurseries, the agricultural or horticultural production is only of minor relevance, while education is the major ones. For a more detailed investigation of this type of agricultural business diversification, examples of already established kindergarten farms from Italy and Germany were selected for analysis. The main objective is to understand the main mechanisms and economics of this business model. The nine building blocks of "Business Model Canvas - BMC" focusing on customers, offer, infrastructure, and financial viability provide a suitable template to analyze and compare kindergarten farms with different spatial, public, infrastructure and management backgrounds. More specifically two kindergarten farms from Marche region in Italy and two German examples – one from Berlin and one from North Rhine-Westphalia – are considered here thoroughly. This investigation of these four cases is aiming to support the knowledge creation from a farm organization point of view as well as detecting challenges of this business strategy, which emerge by integrating daily childcare with farming.

16:15 *Bernd Pölling*, *Wolf Lorleberg*, *Francesco Orsini*, *Francesca Magrefi*, *Femke Hoekstra*, *Henk Renting* and *Mattia Accorsi*

Business models in urban agriculture - answering cost pressures in the food sector and addressing societal needs

ABSTRACT. Entrepreneurial models of farms located in and around agglomerations are different to those located in rural areas. They have to adjust to the urban opportunities and deal with urban disadvantages to maintain profitable on the long term. In general, urban agriculture is characterized by a stronger focus on high-value production, diversity and provision of a variety of ecosystem services. This background sets the starting point for an empiric analysis of urban agricultural case studies in Europe. The development and testing of the utilized questionnaire and the collection of entrepreneurial and project-oriented case studies was conducted as part of the EU COST-Action "Urban Agriculture Europe" and Erasmus+-project "Urban Green Education for Enterprising Agricultural Innovation" (Urban Green Train). Within the COST-Action the cases range strongly in terms of activities, forms and persons involved, while Urban Green Train is more precisely highlighting innovations in urban horticulture to result in a training offer for adult learners and also in a curriculum suitable to be integrated in formal university

formats.

The empiric case study analysis of urban agriculture enterprises and projects shows a wide range of successful business models. For deeper analysis of the individual business models, value propositions and success factors the strategic management template “Canvas Business Model” is used. The case by case analysis of the customers, offer, infrastructure, and financial viability based on the nine building blocks of Canvas Business Model contributes to the classification of business models. Individual enterprises and projects of Europe’s urban agriculture can be summarized into six major business models: cost efficiency, product leadership, diversification, "synergies", "share economy" and "experience". The model "synergies" integrates agricultural support and cross-subsidization by other economic or social sectors, while "share economy" is addressing participatory business approaches connecting commercial farming and urban society. The defined business model "experience" is dedicated to experiment with innovative technological, marketing and organizational concepts, where economic objectives often play only a secondary role, but can probably become more important over time. The conducted analysis describes important characteristics and success factors of the six key business models for distributing successful ideas in Europe. It indicates that urban agriculture offers in its different forms economic and social innovation as well as it is able to create a "laboratory effect" for the whole agricultural sector.

16:30 *Francesca Giarè*, *Roberto Henke* and *Francesco Vanni*

New entrepreneurial skills in the peri-urban agriculture of Italy

ABSTRACT. Peri-urban agriculture can play a key role in reconnecting agriculture and food chains to societal needs, since peri-urban farms may be able to provide a broad range of products and services that enhance the ecological, social, and economic sustainability of metropolitan areas. For this reason, during the last decade peri-urban agriculture has been deeply investigated not only from an economic perspective, but also for its important impact on environmental and social dynamics, with an interesting stream of literature which has focused on the changes that farms undergo in the urbanization process. According to these works, farms can be simply “swallowed” by the metropolitan development (traditional farms), or adapt to the changes of the surrounding territory (adaptive farms), or, finally, react and assume new function meeting a more or less latent expressed by urban dwellers (reactive farms). Building on this literature, the paper looks at the multifunctional role of peri-urban agriculture in Italy through a comparative analysis of seven metropolitan areas. A selection and classification of market-oriented farms in the main Italian metropolitan areas was carried out in order to explore the structural features as well as the main market and diversification strategies of peri-urban farms, with a particular attention to the farms that have reacted positively to the process of urbanization by deeply modifying their production structure and territorial relationships. To anchor the theoretical framework into empirical experience, the paper compares the strategies of few selected farms, with the objective of highlighting the common “economic-driven” elements and the specific “contest-driven” features of the entrepreneurial behaviors. Different dynamics regarding the seven urban systems under study were observed in terms of farm structure, specialization and strategies, reflecting the specific features to the different peri-urban conditions. The paper shows that in the main Italian urbanized environments there is a significant share of adaptive and reactive farms that, potentially, may supply an increasing number and variety of social and economic services to the urban population. Given that the degree to which peri-urban

farms may be considered adaptive or reactive is strongly dependent on farmers' entrepreneurial skills, the paper analyses the commercial, social and institutional drivers of farmers' decision making about the process of income diversification in multifunctional activities. This would ensure a better understanding of how multifunctionality is expressed in peri-urban areas and, more in general, how farmers can address the new demand expressed by a multi-faceted and evolving society to the primary sector.

16:45 *Francesca Durastanti*, *Angela Galasso* and *Silvia Paolini*

Building bridges: AiCARE experience in promoting social innovation throughout agriculture

ABSTRACT. Looking back to the experience of the Italian no profit organization AiCARE, we try to evaluate the impact and detect some guidelines for promoting innovation combining both profit and social impact. AiCARE is an association born for studying and developing social and civic agriculture in Italy. The paper analyze the path undertaken by the association, results achieved, actions undertaken and their impact, its strengths and weaknesses. The main lessons learnt in these 3 + 6 years of activity are about what was needed by the developing innovative system (in this case the social farming/civic agriculture sector) and what AiCARE achieved to give, with a limited budget, by optimizing existing elements and competences throughout the development of mutual relation. What was missing in the existing economic system? Dialogue, services, cohesion, identification, awareness, applied research, animation, vision, scouting, contamination, trust. AiCARE strengths: the capacity of - Filling the lack of institutions and sector's organizations in identifying these innovative practices, their main problem being bureaucracy and rigidity while innovation needs flexibility. - Transferring and applying the results and thesis of University research; translating into academic speech practice. - Detecting and codifying innovative entrepreneurial skills, and generalizing into reproducible models the intuition of pioneers. - Networking good practices, so not to "reinvent the wheel" everybody but learning from experience already done. - Bottom up legitimization: social farming stakeholders recognize AiCARE role in facilitating processes and networking, and ask for a shared planning. - Strong motivation of volunteer members in promoting, throughout social farming, a new model of development and local welfare. AiCARE critical points: - Prevalence of volunteer work and difficulty in organizing actions, because of the volunteer work is made in members' spare time. - Lack of acknowledgment by the Central Government of the role of agency for social farming development in Italy. - Lack of national public resources dedicated to social farming development on the territory. - Lack of public recognition for the work of professional facilitators in the beginning of social farming local projects or programs. Conclusions We trust that the work of AiCARE is about enhancing the resilience of the society throughout multifunctional agriculture with social utility. For achieving this results AiCARE learned to build bridges between different economic sectors unaccustomed to dialogue. For supporting and widening this work, is now needed more than the volunteers' motivation, and this support can come from privates or from institutions (top down legitimization)

17:00 *Jan Willem van der Schans*, *Wolf Lorleberg* and *Bernd Pölling*

Urban agriculture - it is a business! - Business models in urban agriculture

ABSTRACT. Public opinion and decision makers in Europe reduce Urban Agriculture to community gardening activities. It is in fact more - prove numerous enterprises and projects all over Europe. While most urban agriculture protagonists focus on societal and ecological benefits of projects, their economic dimensions and professional farmers stand behind - or their role is even neglected: They are or can become the "hidden champions" of an urban green development strategy. The joint work of working group "Entrepreneurial models of Urban Agriculture" about 90 case studies, carried out within COST-action "Urban Agriculture Europe", found a great range of diversified and successful business models. Successfully applied, these strategies turn enterprises and projects economically competitive under conditions, where "agribusiness as usual" would not have a future chance.

For deeper analysis, identified business strategies were grouped in five types: differentiation, diversification, low cost, "the commons" and "experience". "The commons" stand for new approaches towards share economy, while the "experience" strategy aims on offering personal experiences to clients - rather than selling only products. Besides showing characteristics and success factors of business models based on some cases for distributing ideas within Europe, the innovative character or "laboratory effect" of urban agriculture related to the whole agricultural sector is described - a fact, that can serve as a strong argument for political support by local, regional and European decison makers.

17:15 *Nicky Dirkx* and *Tom Van Wassenhove*

The social farmer as a shared value creator: creating new business models with the Impact Driven Business Modelling tool

ABSTRACT. Problem Since social farmers try to create both social and economic value, they are considered as social entrepreneurs. They often have a well thought-out vision, but the business model is rarely concrete enough, due to a lack of knowledge about economics and strategic management. Methodology We took 28 in-depth interviews with care farmers across Flanders, Belgium. Three of them participated in a course, coordinated by a multidisciplinary team, consisting of agricultural and orthopedagogical researchers, as well as experts in entrepreneurship and strategic management. A multidisciplinary team of students was involved as well. The cases were chosen based on the specific questions and needs of the interviewed farmers. In order to create a business model that guarantees the balance between social and economic value creation for each of the three cases, we employed the Impact Driven Business Modelling Tool, of which Tom Van Wassenhove is the co-author. This is a method which is specifically designed for social entrepreneurs to integrate both objectives, impelling them to think about goals, business concept, resources, stakeholders and partners, processes and policies and eventually the social impact they bring about. In mixed teams, students and researchers reflected on the items. Results were frequently submitted to the farmers who gave their feedback, whereby adjustments were made. Students and researchers visited four social farms in the Turin region to become inspired by successful Italian cases. Inspiring aspects gained from this experience were also integrated in the final business models. Results The social farmers were challenged by the mixed student-researcher team to reflect on every aspect of the IBDM- tool in an innovative way. They started to involve the neighborhood, cooperate with stakeholders, designed a logo for marketing reasons and devised activities for children. The final result was a nicely integrated business plan. The

researchers could list up difficulties and possibilities of the IBDM. The data from the course were complementary to the data from the in-depth interviews. The students developed essential skills like collaboration, communication, reporting in a professional way, receiving and giving feedback and dealing with deadlines. They stood still by the emancipating and connecting power of social agriculture and became acquainted with the Italian discourse concerning social farming. Above all, because the teams were multidisciplinary, they were obliged to regard the cases from (each) other perspectives and cross sectors.

Bracke, P., Van Wassenhove, T. (2015). Impactgedreven ondernemen. Aan de slag met sociale businessmodellen. Gent: Academia Press.

16:00-17:30 Session 4D: WG7 - Regional branding and local agrifood systems: strategies, governance, and impacts

Territorial Collective Marks 2

CHAIR:
Emilie Vandecandelaere

LOCATION: Aula 3

16:00 *Junko Kimura* and *Edi Defrancesc*

Impact of Regional Collective Trademarks on Farms: Japanese Experiences

ABSTRACT. A Regional Collective Trademarks (RCTM) system has been recently introduced in Japan (2006). Any kinds of goods and services, including food products, which are produced in a given region, can apply for a RCTM. At present time 47 RCTM exist and around 470 products are already registered under these umbrella regional brands, 304 of which are agro-food or fishery products. After having briefly described the institutional framework of the Japanese RCTM system, the study aims to evaluate the economic and social impacts on RCTM on small-scale farms in rural areas, in particular, by focusing on the farming stage of production. The analysis is carried out through a case-study approach based on semi-structured interviews to the different actors operating in the analysed RCTM supply-chains and on the available secondary data on production and prices paid to the farmers. First, the effect of the newly introduced Regional Collective Trademarks system is estimated in terms of its impacts on farmers profitability and on supply-related risk; in particular the analysed RCTM food products are compared to similar products - in terms of type of products, previous consumers' recognition and appreciation, and so forth - not having adopted the umbrella brand linked to the region of production. Second, the impact of the RCTM on the local supply chains is analysed, both in terms of structure, governance and strategies of the supply chain and in terms of transfer of values through the latter. The role played by public policies is finally explored. The obtained results contribute to the better understanding under which conditions the introduction of this collective branding system will improve the firms' profitability and more generally the viability of rural areas in Japan.

16:15 *Angela Crescenzi* and *Raffaele Mannelli*

PAT (Traditional Food Products) which future?

SPEAKER: *Angela Crescenzi*

ABSTRACT. In the Tuscany, in addition these registered products, there is a list of 460

Traditional Food Products (PAT), a type of food census since the mid 90s. The Ministerial Decree of 8 September 1999 n. 350 defined the "traditional food products namely those whose methods of processing, preservation and aging time-honored" and established the rules for their identification including the minimum period of historicity that must be over 25 years. The description includes the following points: production area, production method, history and evaluation of the annual quantity produced. There is no product specification. A proposal may encourage the development of product associations that create their own private labels to develop these productions. The value of this food heritage is also historical, cultural and environmental sustainability, and should be in the Mediterranean diet the real framework for their protection.

16:30 *Mariagiulia Mariani*, *Claire Cerdan* and *Iuri Peri*

Behind local cheese: comparing Slow Food Presidia and Geographical Indications governance systems

ABSTRACT. In the context of the globalization of the food system, paradoxically narratives and defining labels aim to localize food. The unique quality of a product is considered to be determined by its geographical origin, with specific reference to the local biological resources, history and know-how. This uniqueness can be recognized by different governance systems and levels of formalism, in order to guarantee the transparency of the food chain, the fair trade of the foods and preserve their cultural biodiversity. Two examples of this trend to label a food according to its origin can be exemplified by the Geographical Indications (GIs) and by the Slow Food Presidia. Originating from two Southern European countries, i.e. France (GI) and Italy (Slow Food), these collective initiatives marketing origin-based products are increasingly developing and becoming economically and politically relevant also in the Global South. They have a specific type of governance and yet every project differently implies specific stakeholders (e.g. state, civil society organizations, trade associations), norms and negotiations. This paper analyses the experience of three artisanal cheeses: one GI (Chaouen goat cheese, Morocco), one Presidia whose producers could also belong to a GI (Bearn mountain cheese and Osseau-Iraty GI, France), one GI that is also a Presidium (Piacentinu Ennese cheese, Italy). We address how these GIs and the Slow Food Presidia have been constructed, with reference at different geographical and political contexts, aiming defining governance ideal types. We will look at how the supply chains are internally articulated (e.g. cluster / district / GIE / consorzio / Presidia producers associations) and interplay with external stakeholders such as extension services, public bodies, civil society organizations and consumers. The paper considers that GI and Slow Food Presidia differ for the degree of participation and collaboration among stakeholders, and hence in the way knowledge and practices of production are negotiated and shared. With an anthropological aim, this paper provides new insight to local communities developing origin-based food, addressing how GI and Slow Food Presidia are experienced by producers and assess the power relations behind the creation of these collective brands.

16:45 *Renard Olivier* and *Camara Kerfalla*

Regional branding in West Africa: conciliating public and private initiatives, local and international market development - The case of Ziama-Macenta Robusta Coffee in Guinea

ABSTRACT. Robusta Coffee is a major cash crop in Guinée Forestière for thousands of small scale farmers. Guinean coffee is not well-established on the international coffee market, due to its lower quality. Some producers in this area have broken the vicious circle of bad quality/ low prices to produce higher quality coffee, with specific characteristics linked to the origin. “Café Ziama-Macenta” Geographical Indication has been recognised in 2013 and is rewarding this effort. But the GI alone is not enough to guarantee success and the GI Association needs some support to promote its coffee and export to foreign markets. A project is currently supporting local cooperatives to support the GI dynamic, and obtain private certifications. Fair Trade certification is a priority to insure a minimum price (2000$/T), fair trade premium (+ 400$/ MT), as well as access to international ethical pre-funding. Organic certification would also guarantee an additional premium of 600$/T. Obtaining those two private certifications is key to ensure profitability and sustainable development of local cooperatives. The GI in itself is not recognised by the international coffee market: Ziama-Macenta coffee’s reputation is still mainly regional (Senegal, Algeria), or linked to colonial era, therefore not rewarded by the coffee market, which is not the case of specialty coffees (Blue Mountain, Colombian Coffees, as GI, but also Ethiopian Coffee or Kivu Coffee, without any official regional branding yet). But far from being superfluous, the GI recognition has initiated numerous positive impacts locally, after only few years of existence. The first impact can be described as a societal one: Guinean people being proud having one of their products recognised by international GI experts. The second direct impact is the strong support from local authorities: facilitation of export procedures, public funding (research and national projects), etc. The third and possibly most interesting one is the value chain dynamic that have been induced: collaboration is preferred to competition, the most mature cooperative helping the new one to be also certified; national and international traders are supporting the GI; the GI strategic plan is including local market development (roasting and selling GI coffee in Guinea), for local job creation. A last and important impact of the GI is also to pave the way to private certification: book of requirement, traceability, better practices promotion, internal control system are all crucial for both GI and private certifications.

16:00-17:30 Session 4E: WG9 - Land-use transformations

Agriculture, the city and the peri-urban fringe

CHAIR:
Neil Argent

LOCATION: Aula 22

16:00 *Aldo Bertazzoli*, *Rino Ghelfi* and *Sergio Rivaroli*

The impoverishment of agriculture in rural-urban fringe: an analysis through administrative data

ABSTRACT. Understanding the changes in agricultural land use is of notable relevance for policymakers. Their socio-economic and ecological impacts require indeed appropriate policies and planning to assure the quality of life of peoples that lives in these territories and the sustainability of their activities. Based on these considerations, there is a need of improving knowledge on trend in land-use at micro-level. The aim of this work is to verify the possibility of exploiting administrative data to analyse changes in agricultural land use. Available data are collected yearly by authorities to manage the System of Direct Payments provided by Common Agricultural Policy and contain information about the agricultural use of each cadastral parcel. We analysed data about

twelve municipalities, located in Emilia-Romagna Region, nearby the city of Bologna. The period under investigation is 2001-2012, with a bug in information availability for 2005. We adopted the cadastral map as minimum administrative unit to calculate the Shannon-Weiner index of heterogeneity (Shannon & Weiner, 1963; Horowitz, 1970) as a measure of the richness of agricultural activity (spreading and diversification of crops). Considering the 1,094 cadastral maps, the totally urbanised ones were 177, but the results highlight a generalised low level of heterogeneity in agricultural land use, which is coherent with the rural-urban nature of the considered area. In 2001 the average level of Shannon-Weiner index was .225, but in 2012 it fell to .207, due to the reduction of agricultural use (mirroring an increase in urban use) and a simplification of agricultural activities. The impoverishment of agriculture is mainly located in areas nearer to the city or to main roads, but it is occurring also in some more "agricultural" areas where farmers are still able to gain profits by specialising their activities, through the reduction of the number of crops. The geo-information provided by farmer in application of CAP shows some fails in acquisition procedure, but we suggest a wider use of these data, due to their cheap acquisition and yearly updating. The index proved to be effective in detecting areas where agricultural uses are in stronger competition with urban uses. The analysis could be improved considering the role of main roads in spreading of urban land uses.

16:15 *Hany Abo-El-Wafa* and *Stephan Pauleit*

The use of Urban Spatial Scenario Design Model (USSDM) in assessing the impact of urban growth on urban and Peri-urban agriculture: the case of Addis Ababa and the Surrounding towns

ABSTRACT. Urban population growth and expansion of settlement areas are among the major challenges that African cities are facing. Due to its strong population growth, the settlement area of Addis Ababa has been strongly expanding into the city's peripheral area and also into its surrounding towns moving beyond the city's boundary. Consequently, highly valuable agricultural land is lost. Urban and peri-urban agriculture has a major role for rapidly expanding city regions and more generally for sub-Saharan cities in increasing food security for the city inhabitants and also has direct economic benefits for the urban households involved in the agricultural production. Moreover, it can provide crucial ecosystem services such as stormwater retention. Therefore, increasing urban growth leads to the question of where and how much and which type of agriculture land could the city afford to lose. In this work, we applied a GIS-based spatial scenario model for modelling the urban/settlement expansion into the regional area of Addis Ababa and its surrounding towns. A set of spatial scenarios were designed based on different urban planning parameters and housing typologies to compare the high-density condominium based development with low-density plot based development proposed by the city administration and the local municipality. The scenarios were modelled to evaluate the impact of urban growth on the agricultural land. Here, the impact on agricultural land is measured not only in terms of area losses but also based on the estimated productivity for the major crops in the areas to be lost. The productivity of major crops is estimated based on ratings of crop suitability with respect to individual land qualities, climatic and environmental conditions. Understanding the future patterns of expansion in Addis Ababa and assessing the effects of these patterns on the urban and peri-urban agriculture offers opportunities for identifying, protecting and restoring key elements in urban and peri-urban agriculture allowing for sustainable planning of urban growth. The novelty of the approach lies in the first time use of a spatially explicit scenario model in the regional context of Addis Ababa beyond its administrative

boundaries. Thus, it also considers the peri-urban agricultural land which has a highly valuable role for the city in addition to the agriculture land within the city.

16:30 *Anne Gravsholt Busck*, *Christian Fertner*, *Lone Søderkvist Kristensen*, *Søren Beck Pilgaard Kristensen*, *Mike Kyndesen*, *Susanne Ogstrup*,*Jørgen Primdahl*, *Søren Præstholm*, *Ann-Sofie Richardt*, *Henrik Vejre*, *Jens Peter Vesterager* and *Lars Winther*
Longitudinal study of urbanisation processes in peri-urban areas of Greater Copenhagen - what happens to farming?
SPEAKER: *Søren Præstholm*

ABSTRACT. Urbanisation processes increasingly influence the use of land and properties in rural areas. In peri-urban areas population composition changes as the areas offer attractive possibilities of other gainful activities than agriculture (OGA), and residential and recreational alternatives to both urban areas and more remote locations. However, although land use changes follow changes in socio-economic composition, agriculture is often still the dominating land use. The dynamic processes leave peri-urban areas in a transition situation, as neither city nor countryside. This presentation investigates various forms of urbanization in peri-urban agricultural areas in the Greater Copenhagen region. The same 160-200 farm properties (in eight study areas) have been surveyed in 1984, 1994, 2004, and 2014, using face-to-face structured interviews. The following themes have been studied: characteristics of land use and property owners, use of buildings, other gainful activities (OGA), public access and other recreational use of land. Overall it is concluded that even though some agricultural areas have been turned into urban areas, the area devoted to agricultural land use has been largely the same during the period investigated. However, a large share of the cultivated land is concentrated on a few very large (typically >800 ha) full-time farms highly dependent on land tenure and also crop and livestock production has greatly changed. Simultaneous, clear signs of extensification of land use can be detected. Most agricultural produce is distributed through traditional wholesalers, but direct sale is also found - especially from smaller farms. Further, the economic activities have diversified, as an increasing proportion of the property owners engage in OGA, including the reuse of buildings, which have become redundant because of structural changes in agriculture. As a consequence, the structural components of the areas (land cover and landscape elements) thus appear more resistant to changes than transition of the socio-economic system (declining number of full-time farmers and increasing engagement in OGA) could indicate. Despite the fact that commercial farming in the study area in recent years seems to have stabilized and these farmers have been able to diversify their economy, farming in the peri-urban areas is constantly challenged by increasing influx of other activities and raising property prices because of the attractiveness of land. This raises questions of the desired future of the peri-urban area of Greater Copenhagen, and about the effectiveness of the existing planning systems and its ability to protect agriculture land, which has been a main objective since the 1970s.

16:45 *Irune Ruiz Martinez*, *Elisa Marraccini*, *Tiziana Sabbatini*, *Marta Debolini*, *Sylvie Lardon* and *Enrico Bonari*
Land use patterns and changes in periurban areas
SPEAKER: *Irune Ruiz Martinez*

ABSTRACT. Urban sprawl is mostly studied from an urban planning perspective and

less from an agronomical perspective, despite the fact that agricultural land is mostly affected by this sprawl. Agriculture shows interferences and mutual interactions (physical and functional) with urban areas resulting in specific areas that are still spatially undefined in terms of both land uses. Our study is based on a typology related to four combinations of patterns and functions of agricultural areas existing in urban regions. The patterns types were: “isolated fields”: they are permanent plots in a continuous urban area with leisure or self-production functions (e.g. hobby farming); “urban belt fields”: in direct contact with the edge of urban areas and their extension depends on the size and shape of such areas. They can have a production function directed at urban consumers; “periurban agricultural lands”: composed of farmlands located near to urban areas, however where the agricultural area represents more than 50% compared to the urban area. They have a clear professional production function and ensure most of the local produces marketed in urban areas. This type is subject to major constraints related to urban proximity; “rural agricultural lands”: agriculture is dominant but still near the main urban centres. In this type, there are fewer constraints related to urban areas and farming systems are mainly aimed at the production of commodities. We tested this typology in a Mediterranean urban region (Pisa, Italy) and compared the different composition and location of such types, depending on the type of urban growth and the existing farming systems in the short term (2003-2011). Hence we performed a multitemporal spatial analysis of the different patterns type in the urban fringe. The identification was produced from a semi-supervised classification of two SPOT images. The consequent quantification and mapping of these areas could lead to a more in-depth knowledge on these types (composition, configuration, and dynamics) in order to support specific sectoral or integrated planning of agricultural lands in urbanized areas.

17:00 *Paul McFarland*

Adapting Peri-urban Planning to a Post-Productivist Landscape.

SPEAKER: *Paul McFarland*

ABSTRACT. Increasing global urbanisation and the approach of peak ‘everything ‘ and a multi-faceted society (localisation, internationalisation, consumer focused, personalised) is escalating challenges for land use planning. Modes of decision-making embedded in productivist traditions, relying on traditional ways of viewing land are unable to cope with the increasing complexity of the post-productivist era. The peri-urban is where competition for land between urban growth and preservation of rural resources and amenity is most visible. Peri-urban land is a highly contested, multi-functional geographical space. Focusing on peri-urban land use this paper suggests a new framework to address increasingly complex land use problems.

16:00-17:30 Session 4F: WG11 - Urban agriculture II. Grass-root initiatives and community gardens

Practitioners & policy programmes

CHAIR:
Talis Tisenkopfs

LOCATION: Aula 15

16:00 *Jana Spilková*

New urban gardening trends in Prague: community and/or ecosystems services at stake

SPEAKER: *Jana Spilková*

ABSTRACT. Recently, a new trend is emerging within the urban fabric of Prague – the founding of new "urban community gardens". The first ´new style´ urban gardens appeared in Prague in 2012 and others were created during the 2013 and 2014 growing seasons. Mothers with children, young people, and yuppies, motivated by freshness or health enjoy the opportunity to grow their own food in a limited allotment, pensioners and older generations want to relive the experience gained in the era when gardening used to be an everyday part of their lives. These urban gardens have important positive impacts on society and local community and are widely publicized.

This paper first asks the question "Do these urban gardens really stand for a new perspective, under different conditions and with different motivations, values and processes of functioning or are they only looking for new names for the old ways of gardening (allotment garden colonies) that once proved effective and popular?". Based on the in deep interviews with garden leaders it answers that the idea behind the first community gardens was not only growing vegetables, but also creating a community where people could meet in the garden, take part together in activities they like.

Obviously, many people in the city of Prague still seek a place to grow their own food or to relax through meaningful physical activity, such as gardening. However, as the results of a questionnaire survey with consequent structured interviews show, the new urban gardeners strive to do it differently. They are not enclosing themselves in particular plots and cabins, but on the contrary, they want to meet, communicate, cooperate and share. The second research question of this paper thus asks "How is this difference made? How do these gardens scale-up and what are critical factors for their success and failure?"

Urban gardening in its nascent community form fulfils many important functions in addition to simply growing or self-provisioning. It is also important to find out if the current emerging community gardens in Prague also have the potential to truly contribute to sustainable urban development and resilience. Thus, third research question of this paper aims to answer the question "Do the new community gardens contribute to strategic spatial planning by offering the ecosystem services?" These services, defined as benefits people can derive from ecosystems, were studied in a field research searching for provisioning, regulating, cultural and supporting ecosystem services.

16:15 *Isabel Rodrigo* and *Rita Gonçalves*

Is the recent economic crisis an opportunity to implement more sustainable cities in Portugal?

ABSTRACT. Urban agriculture (UA) has a long tradition in many countries of the global North, even thought it actually encompasses a wide range of countries situations, illustrated by the different combinations of degree in importance, formal engagement and policy-making on UA. These situations are quite well illustrated, at the European scale, with the Portuguese case where the concepts of urban and peri-urban agriculture are a quite recent novelty and still absent from land use planning policies. This case contrasts sharply with other European cities with public initiatives promoting and connecting households and community gardening with safe food provision, education, recreation, resource recycling and conservation, combining UA with several other land uses and using it as a policy instrument to foster better social and environmental sustainable cities

and sustainable urban development. In Portugal, in the absence of specific regulations, “non-regulated” urban and peri-urban gardens, located on public or private empty plots of vacant land mostly near to self-produced neighbourhoods on occupied land and social housing neighbourhoods, cultivated mainly by low-income families, first- or second-generation urban dwellers and Portuguese-speaking Africa immigrants, have emerged along with the expansion of the main cities (Lisbon and Oporto), since the 1950s onwards. However, a quite recent public UA movement supporting the implementation of formal/regulated urban gardens has been expanding, since 2008 onwards. These public UA initiatives, promoted mainly by city and/or parish councils and, in some cases, also schools, enterprises and civil society associations, have mostly food security purposes in times of economic crisis. As such, UA is viewed as a potential solution to mitigate the latter. The paper starts with a brief contextualization of the main drivers for the Portuguese comparative delay concerning formal UA, followed by a brief glance at the broad scenario showing the referred recent public UA movement. Then, we discuss the findings from the empirical data collected, from face-to-face surveys conducted during 2014, in three urban gardens promoted by the City Council of Lisbon, the city capital of Portugal. Finally, we conclude that the recent public UA movement along with the great diversity of socioeconomic gardeners’ profile and gardening motivations, accompanied by public campaigns contributing to change leading urban dwellers views on urban gardens, might be an important tool to be used in future urban land uses and planning policies.

16:30 *Bent Egberg Mikkelsen*

Gardening during the life course – a Scandinavian approach.

SPEAKER: *Bent Egberg Mikkelsen*

ABSTRACT. Urban agriculture and gardening policies are increasing in popularity in metropolitan areas as a mean develop smarter and more sustainable cites. For citizens gardening represent a way to reconnect with nature and gain more control over the local food system – way to increase food sovereignty and food citizenship. But efficient gardening in local communities is dependent on the resources, commitment and mobilization from a range of different stakeholders. This paper takes a learning approach in a lifelong perspective as a point of departures. It uses uses a case study approach and studies the development of the Copenhagen Kongens Enghave community gardening action. It uses a the PLU stakeholder model approach to analyze the role that power, legitimacy and urgency plays in the development in the bridging of different local gardening initiatives for children, adults and the elderly into the image of a coherent local gardening initiative. It analyses barriers and actions possibilities for how social practices, knowledge, skills and competencies can be passed on across generations and between social groups in the local community. It looks at both format formal and informal types of learning among kids in kindergarten, pupils in schools, citizens in community groups and the elderly in senior actions groups and how the stakeholders in these settings can work together for mutual benefit and increased social cohesion. It will discuss the development of the Kongens Enghave gardening case in relation to similar initiatives in the Øresund region and discuss how different research methodologies can be applied to measure and understand impact of community gardening. It will finally look at what policy recommendations can be put forward in order to take advantage of beneficial effects of local community gardens that bridging different social and age groups

16:45 *Laura Calvet-Mir* and *Hug March*

There's not such a thing as "an" urban garden: motivations and politics of gardening in Barcelona.

ABSTRACT. In the light of socio-environmental challenges caused by climate changes and the socio-economic impacts of the economic crisis, a variety of new initiatives have been launched, aiming at rethinking models of production and consumption at the urban scale. This research focused on the social and public initiatives that concentrate on the creation of urban gardens in the city of Barcelona with the aim of characterize and describe them, assess the motivations for gardening in the different initiatives, and bring out the tensions between initiatives. We conducted fieldwork from March to June 2014 through a combination of qualitative methods, including the collection of background information, semi-structured interviews, field diary, and participant observation (e.g. participation to garden events and assemblies). We characterized and described the different urban gardens initiatives emerging out of innovative institutional and non-institutional local proposals: 1) Network of municipal gardens; 2) Network of communitarian gardens and 3) Empty Urban Plots Plan. Motivations for gardening differ between the three, from motivations targeted at production and hobby to clearly politicized ones. We also showed some tensions between urban garden initiatives mainly related to the political ideal of city that gardeners would like to achieve and the different views around the relation with institutions such as the local government. Finally, we assess their potentialities and limits to contribute to the achievement of more inclusive and sustainable cities.

16:00-17:30 Session 4G: WG13 - Care Farming/Social Farming in more resilient societes

Evaluation

CHAIRS:
Francesco Di Iacovo and *Marina Garcia Llorente*

LOCATION: Aula 5

16:00 *Helen Elsey*, *Nyantara Wickramasekera*, *Cathy Brennan*, *Marjolein Elings*, *Zoe Richardson*, *Marina Garcia Llorente*, *Rachel Bragg*, *Janet Cade*, *Anthea Hucklesbury* and *Jenny Murray*

The impact of care farms on quality of life among different population groups: a mixed methods systematic review

ABSTRACT. Background The care farming approach has been used in an attempt to provide health and social support to a range of people including offenders, young people with conduct problems, those with mental ill-health and the elderly. The number of care farms has been growing in Europe, and in the UK alone there are approximately 230 care farms. Care farming has been defined as the use of commercial farms and agricultural landscapes as a base for promoting mental and physical health through normal farming activity. However there is little evidence on effectiveness (in relation to context and client groups) that can guide decision making about resource allocation. Thus, there is a need for a systematic review to capture both published and grey literature, and to synthesise the evidence in a way that can garner current knowledge on what aspects of care farming may work, when, and for whom.

Objective The primary objective is to systematically review the available evidence of the effects of care farms on quality of life, health and social well-being on service users.

Methods Twenty-one health, education, environmental, criminal justice and social science databases were searched in October 2014 to identify possibly relevant studies from a variety of disciplines. To further limit publication bias and improve the generalisability of results, we searched databases of grey literature and websites likely to contain unpublished reports on care farms. Randomised controlled trials, quasi-randomised controlled trials, cohort studies, case control studies, controlled before and after studies, interrupted time series and qualitative studies that met the care faming definition were included. We excluded single activity interventions (i.e. gardening) and nature based interventions that were not conducted at a farm. Literature reviews, commentaries, surveys and editorials were also excluded. We will be developing a framework of theoretical concepts enabling us to explore the mechanisms by which care farms might work. We will map the findings from the empirical qualitative and quantitative studies to this framework revealing the available evidence supporting the various proposed mechanisms for each population group studied.

Results The data collection and analysis is currently ongoing. The results of the review will be available to present at the conference.

Discussion This review will summarise key information on the effectiveness of care farms in improving health and well-being for a wide range of clients to support policy maker, commissioner and practitioner decision making. It will also highlight area for further research.

16:15 *Sin-Ae Park*, *Seong-Sil Kim* and *Ki-Cheol Son*

A school gardening program for improving peer relations of elementary school students

ABSTRACT. Childhood is a critical period for the development of sociality, and much of this development occurs when the child's social environment expands from just their immediate family and neighbors to their school. Thus, the objective of this study was to determine the effects of school gardening program for improving peer relations of elementary school students. A total of 246 fifth and sixth grade students from four elementary schools in Wonju city, South Korea were participated in this study. The experimental and control groups consisted of 123 students each. The school gardening program included the activities such as sowing seeds, planting plants, maintaining garden, and harvesting produce and designed to improve peer status, peer relations, and sociality. The gardening program was embedded in the school curriculum and the each session was average 90 minutes per week for 10 weeks from April through June 2012. As the results, the school gardening program significantly improved in persistence of friendship ($P = 0.04$) and adaptability between friends ($P = 0.03$), which were subcategories of peer relationships, in the experimental group. Moreover, there were significant improvements in sociality ($P < 0.001$) and its various subcategories, especially in law-abiding ($P < 0.001$) and collaboration ($P < 0.001$). Finally, this results showed that the peer status was significantly a greater increase after the school gardening program, but there was no significant change in the control group. In conclusion, the school gardening program for elementary school students had a positive influence on peer relationships, sociality, and peer status. Implementing a school garden program will effectively contribute to the improvement of social relationships among elementary school students.

16:30 *Sin-Ae Park*, *Byung-Sik Joo* and *Ki-Cheol Son*

A horticultural therapy program using hydroponics for improving work adjustment skills in students with mental retardation

ABSTRACT. The objective of this study was to determine the effects of horticultural therapy program using hydroponics on work adjustment skills of students with mental retardation. Fourteen 1st and 2nd grade students with intellectual disabilities were participated in this study from a special education class in a high school, Inchon city, South Korea. Based on the critical role transitional model and special education curriculum for agriculture, especially hydroponics, a 22-session horticultural therapy program using hydroponics procedure for Lettuce (Lactuca sativa L. 'Asia Heuk Romaine') was designed. The students with intellectual disabilities participated in the horticultural therapy program for 4-month from September to December of 2011 (twice a week, average 60 minutes per session) and a farm for hydroponics in Inchon city, South Korea was offered for this program. Before and after the horticultural therapy program, the McCarron assessment neuromuscular development, emotional behavioral checklist, interpersonal negotiation strategies, and KEPAD picture vocational interest test were performed by the teachers and horticultural therapists. As the results, the students significantly improved motor performance ($p = 0.002$), emotional behavioral strategies ($p = 0.00$), and interpersonal negotiation strategies ($p = 0.05$). However, there was no significant difference between before and after the HT program for vocational interest was observed. In conclusion, the HT program using hydroponics based on the critical role transitional model and special education curriculum for hydroponics would be applicable for the students with intellectual disabilities for improving work adjustment skills by increasing the motor performance, emotional behavioral strategies, and interpersonal negotiation strategies. Additionally, horticultural therapy programs using hydroponics with various kinds of vegetables are required to develop and to apply in practical settings for improving work adjustment skills.

16:45 *Stefania Ferrante*, *Elisabetta Bratta*, *Marvita Goffredo*, *Giorgia Vernola*, *Grazia Tiziana Vitale*, *Giovanni Messina*, *Mario Giordano* and *Maria Grazia Foschino*

"Stagio…cando con NetworkContacts. Stare bene insieme nelle diverse stagioni della vita" – Can be recilience a key issue for care/social farming validation?

SPEAKER: *Stefania Ferrante*

ABSTRACT. Chronic and oncological disease, during childhood, causes a serious emotional distress condition that could be crucial for the psychological development of children, teenagers and their domestic system, with a forced interruption of the daily activities and with the removal from their social background . Today a new cultural perspective overcomes the division between health and disease, considering them as two extremities of a continuum . In this perspective disease and health can metaphorically represent life seasons: as a cold winter gives birth to a fertile spring, in the same way pain and limits caused by illness give birth to strength and maturity. In scientific literature these features are called resilience. Resilience is the ability of people to overcome stressful events and to keep on rising their own resources. Individual factors (temperament, self-esteem, self efficacy, inner locus of control and coping ability) and social factors (presence of important caregivers, availability of social support networks and the attendance to a positive social structure) are some of the elements of resilience process . World health organization (WHO) identifies the environment as a factor that

affects individual health, together with structural and functional factors. Natural environment can represent an important protection factor that promotes the psycho-physical health, fostering resilience development. In particular Social Agriculture includes a wide number of interventions for promoting health, with the final aim of keeping and arising mental abilities and social relations and supporting the growth . In this theoretical framework the project "Stagio…cando con NetworkContacts. Stare bene insieme nelle diverse stagioni della vita", proposed by the Apulian Associacion "Beppe Valerio Onlus" for Prevention and Therapy for Kidney Disesase in Childhood, with the scientific collaboration of the Psychological Service and the Nephrology and Dialysis Ward of the Children's Hospital Giovanni XXIII of Bari, sponsored by the company "Network Contacts" of Molfetta (Ba), has been achieved in 2014. The goal was trying to offer assistance, suitable for children's psycho-social needs, that promote protective factors and resilience. The project involved ill children (nephritic patients, epileptic patients, hemophilic patients, oncological patients) and their families in outdoor trips to farms and natural parks. The project was really appreciated by participants. The activities carried out during the trips and the like rating scale, about the experiences, will be displayed in this study. Activities as exploration, sharing and learning about nature can contribute to create a representation of the disease through positive elements.

17:00 *Anna-María Pálsdóttir*, *Sara Kyrö Wissler* and *Mozhgan Zachrison*

Quality assurance of agricultural businesses running nature-based rehabilitation

ABSTRACT. In 2014, primary health-care authorities in the region Scania, Sweden performed the first official procurement in Sweden for nature-based rehabilitation for individuals with stress-related mental disorders. Today, ten agricultural businesses participate in two years implication of the concept NBR. The procurement was based on a three years study on Nature-based rehabilitation (NBR) in peri-urban areas and was a co-operation between the Swedish University of Agricultural Sciences, primary health-care authorities for improved rehabilitation, the Social Insurance Agency, the Public Employment Services, the Farmers Union and ten agricultural businesses. The study was conducted as a controlled prospect study including evaluation on health, function in everyday life and return to work. Further, a special attention was given to the environmental qualities of the outdoor environment and activities performed therein. The qualities were studied with both qualitative and quantitative methods and the (unpublished) results were included in the first official procurement for NBR. Since the implementation of NBR, monitored by SLU, an on-going quality assurance evaluation is conducted and a body of quality assurance inspection will be developed for agricultural businesses working with nature-based rehabilitation.

16:00-17:30 Session 4H: WG14 - Rural tourism (agri-tourism) and changing urban demands

Rural Tourism and Local Development

CHAIR:
Elisabete Figueiredo

LOCATION: Aula 19

16:00 *Lúcia Pato* and *Elisabete Figueiredo*

The difficult path of agri-tourism in Portugal

SPEAKER: *Elisabete Figueiredo*

ABSTRACT. The last decades have seen a significant increase in the number of farm families diversifying their farm production (McGehee et al., 2007). Literature reveals that many of the reasons for such diversification relies on issues such as the decline in terms of farmers' income (Sharpley & Vass, 2006), the preservation of cultural heritage, the maximisation of the productivity of the farm through their recreational use and even the improvement of the economic situation of rural communities (Tew & Barbieri, 2012). A bit everywhere, agri-tourism has been offered up as one such form of diversification. In Portugal, for instance, agri-tourism has its roots in the 1980s and their philosophy continues to be similar nowadays. The activity is defined by national authorities as a hosting service in lodging units located on farms which allow guests to obtain knowledge of the farm's activity or participate in the work developed there. Although the importance of agri-tourism in terms of the farm's diversification and rural development of the country, Portuguese statistical data reveals that the number of agri-tourism units, with few exceptions, is lower than the other forms of rural tourism (TP, 2012). Moreover, a research conducted in the Douro region – a World Heritage Site known for its potentialities in terms of agriculture, namely in terms of wine production, shows that on the one hand few owners of agri-tourism have agriculture as their main professional activity and on the other hand do not have a lot of farm activities in the touristic unit. Without a doubt, this scenario limits the potential of the touristic activity in terms of rural development. The aim of this study, therefore, is to explore the characteristics and motivations of the owners of agri-tourism units; present a brief characterisation of those units and identify areas that require further research. The collection of data with regard to socio-demographic characteristics of the owners of agri-tourism units, their motivations to reconvert the farm and the characterisation of the unit was carried out through a questionnaire-based survey in the Douro region. The reflective exercise done along this study is not to be understood as a sort of an absolute negative perspective of the agri-tourism activity in Portugal, but only as a call of attentions for the need to rethinking and developing the activity toward rural development.

16:15 *Francesco Contò*, *Mariantonietta Fiore*, *Alessandra Conte* and *Sara Djelveh*

'Consuming Landscape': an investigation of eco-economic development strategies in rural areas

SPEAKER: *Sara Djelveh*

ABSTRACT. The choice of an economic development trajectory is specifically urgent for rural economies currently dealing with the challenges of a continuous process of peripherality, agricultural decline, and consumer volatile demand especially in those places where the rural domain is no longer exclusively tied to food production but to the consumption of landscape to meet wider urban consumer demands. Key elements are the valorization of local assets, a shift from subsidy driven development to more variable development through investments, the exploitation and valorization of unused resources. So the aesthetic–consumptive functions of places become as important as the utility and productive functions. These developments create opportunities for multifunctional agriculture in order to produce new products and services linked to local and regional assets and identities. The aim of this article is to investigate which sorts of strategies and pathways for eco-economic development can be witnessed in rural area underlining the role of rural tourism for a sustainable development. The paper critically describes and analyses place-based strategies that have been developed in different rural areas, which embody multifunctional agriculture and the construction of identities or images around

new rural goods and services. The analytical framework of the ‘rural web’ has been used to understand the dynamic interplay between different domains of rural development in the analysis of rural development cases. In this model, rural development is the unfolding of a rural ‘web’ in the territorial context. The model empirically describes rural resources, actors, activities, linkages, transactions, networks and positive externalities. Theoretically, the model captures the interrelations between six conceptual domains: endogeneity, novelty, production, social capital, market governance, new institutional arrangements and sustainability. In this model, sustainability is territorially based. As such, rural development is viewed as a dynamic web of linkages that reshapes the rural whilst enlarging its competitiveness and enhancing the quality of life. This article give insight to develop a model by conceptualizing eco-economic strategies as pathways – which emerge through the different mobilizations of the rural web – and their influence, especially of rural tourism, on rural change. The article concludes by identifying some consistent parameters for understanding the dynamic complexity of rural development and by showing a shift from an agricultural-based development to a more integrative rural development

16:30 *Francesco Fratto*, *Carlo Hausmann* and *Angela Galasso*

"Fincas agroturisticas de Nicaragua", a people's project for a responsible and worthy tourism

ABSTRACT. “Fincas agroturisticas de Nicaragua” is a “Proyecto del pueblo" based on a public-private partnership involving the Nicaraguan Institute of Tourism (INTUR) and the main farmers' organisations: Feniagro, FENACOOP and Renitural, representing more than 700 farmers' cooperatives spread on the national territory. The underlying purposes are the improvement of productivity, competitiveness, complementarity, environment protection and gender equality consistently with the goals of the PNDH (Plan Nacional de Desarollo Humano). The objective of the project is to contribute to the setting up of a competitive and sustainable “agritourism supply” to improve and integrate the tourist market of Nicaragua. The beneficiaries are 120 small and medium rural enterprises including traditional producers, farmers' cooperatives, artisans associations, indigenous communities, youth and women organisations with both direct and indirect benefits for more than 40 thousands people living in the rural areas. A team of Italian experts in rural tourism contracted by INTUR, in collaboration with Italian Ministry of Agriculture, to assess the project. The Italian technicians have visited some farms with different stages of development in the departments of Matagalpa, Rivas, Chinandega and Carazo. The aim of the visit was to draft a preliminary list of training and information initiatives such as the institutional and social strengthening for a fair tourism development, the improvement of the productive agritourism infrastructure, the capacity building for the development of agritourism supply, sustainability of tourism and tourism promotion and marketing. A final assessment showed a strong identity and authenticity in the way fincas are managed, with the perception of an orientation towards quality and sustainability (economic, environmental and social). The job is based on the principles of sharing, joint participation, and shared responsibility. But “identity and spontaneity”, may not be enough. The risk is to confuse spontaneity with improvisation: spontaneity yes, not improvisation. Therefore, the factors above mentioned need to be accompanied by knowledge and skills for the development of high quality standards, to differentiate and diversify. Basic requirements have been identified in terms of hygiene and food safety, characterisation of hosting facilities, high level in food quality. The possible connotations – characterisation of tourism in Nicaragua: responsible, environment / biodiversity,

adventure, ethnic.

16:00-17:30 Session 4I: WG15 - Local arrangements for agricultural ecosystem services: connecting urban populations to their peri-urban landscapes through the ecosystem services of agriculture

Local arrangements

CHAIR:
Darryl Low Choy
LOCATION: Aula 20

16:00 *Judith Westerink*

Collaborative governance of a peri-urban enclave: how a farm became nature and citizen oriented

SPEAKER: *Judith Westerink*

ABSTRACT. Farms in peri-urban areas usually cannot ignore the influence of the city, which may include high land prices, urbanisation pressure, and recreational activities. This contribution is about a farmer who turned the threat of the city into an opportunity, by collaborating with a wide range of stakeholders, and by developing a strategy aimed at delivering ecosystem services. This way, he made his farm too important to be converted into residential area or urban park. He is the last full-time dairy farmer in the Biesland Polder, a remnant of the open moist grassland landscape once common in large parts of the Western Netherlands. By now, the Biesland Polder is surrounded by residential areas, urban parks and greenhouse areas. Together with nature volunteers, a citizen group, scientists, and civil servants at the local, regional and national level, the farmer made a plan to transform his farm, both in the sense of landscape layout and farm management practices. The transformed landscape, combined with the new farming practices, were aimed at delivering a wide range of ecosystem services: more biodiversity in the fields as well as the landscape elements, a better water quality in the ditches, more room for storm water storage, and a more attractive landscape for recreation. The ideas for landscape and farm management transformation were derived from 'Farming for Nature', a view on farms as social-ecological systems, in which soil, vegetation, animals, farm management and landscape are interconnected. In addition to experimenting with this new view on farming, the collaborating actors chose to develop tailor-made governance arrangements. A local payment scheme was set up, to pay the farmer for the ecosystem services delivered, which differed substantially from the national agri-environmental scheme. The payment scheme includes public funding only and is still operational. During the phases preceding implementation (2002-2008), collaboration was intense and took place at various levels, sites and moments. For instance, there was a steering group of board members from the various governmental institutions; a project group with civil servants, the farmer, a citizen group board member and a researcher; and a monitoring and evaluation network. However, roles as well as level of involvement changed after implementation started (2008). There was less government involvement after that time, while citizen involvement remained intensive. Research funding stopped after five years. The farmer has however developed new collaborations, in order to remain relevant to the city.

16:15 *José Luis Cruz*, *Marina García-Llorente*, *Carmen Haro* and *Alejandro Benito*

Towards an agroecological transition in periurban agrarian systems in Madrid (Spain)

ABSTRACT. Agroecosystems are the source of most essential ecosystem services demanded by both urban and rural populations (food from farming, genetic materials, climate regulation, water regulation, pollination, control of erosion rates, cultural heritage, aesthetic experiences, etc.). However, human transformation of land cover during the last five decades has promoted farming intensification in the more productive areas and the abandon of rural areas. The conversion of multi-functional landscapes into more simple, productive and mono-functional ones, threatens the agroecosystems preservation and many ecosystem services (not included in conventional markets), but also the social and economic viability of rural populations (lack of employment opportunities, ageing population, loss of local knowledge and non-formal institutions). This is a key challenge affecting Madrid, one of the largest cities of Spain with an urban and rural gap. Under this context, a transition from industrialized towards an agroecological model is starting to be consider as an innovative strategy. The aim of this research is to promote and support the agroecological transition of Madrid through the creation of a permanent food network with a collaborative work with local communities in rural, periurban and urban areas (reconnecting environments). We are running the pilot experience in Perales de Tajuña, an agrarian periurban municipality of Madrid. We are using a participatory action research approach: identifying the agroecological potential of the area, doing a participatory diagnosis of the local interests, needs and problems and a later participatory research and action. We have run several participatory workshops to reflect the project collectively (more than 30 participants). The project is also sustaining the creation of a land banking inventory. Additionally, an agrarian plot of 3000 m2 is available for a training purpose in phases: from training and education on small orchards to early experiences in marketing agricultural products. The first results shed light on: the wide range of stakeholders interested on agriculture, the main forerunners guiding the initiatives, and the priority lines to take action. Those were related with: designing a training program, making use of advisory services, preserving traditional varieties, maintaining essential ecosystem services (ie. hydrological regulation, freshwater availability, soil conservation and habitat for species), and promoting marketing through short distribution channels. We hope to contribute to the design of a new model (applicable to other municipalities) in which collective learning, community management and environmental concerns feed agricultural practices to reconnect urban and rural landscapes unraveling the multiple ecosystem services provided by farming practices.

16:30 *Hein Korevaar* and *Greet Blom-Zandstra*

Critical success factors for local cooperation in delivering farmer-managed public goods in rural areas in the Netherlands

SPEAKER: *Hein Korevaar*

ABSTRACT. The shift towards an integrated multifunctional use of rural areas is becoming a widely supported pathway for Europe's countryside. Some agricultural practices have already proven to be successful in providing public goods. We studied the development of regional cooperation in three different Dutch regions in which integrated rural development started in the 1990s and where a significant change occurred in land use from a dominance of agricultural production towards an integration of primary production with other functions. Initiatives for launching collectives of farmers and for cooperation between farmers and other actors in these regions were intended to support and improve social care, education and nature and landscape conservation or to increase the prospects of the region in a broader sense. These local initiatives fit in recent policies

of the Dutch government. After having facilitated the initiatives in first years, since about five years the national government handed over its responsibility for rural development more and more to regional and local authorities as well as the private sector. This resulted in more self-governance for citizens and enterprises. We analysed the critical success factors for the production and maintenance of farmer-managed public goods and for cooperation through regional collectives and how these factors manifest themselves in the three regions. We concluded that producing, implementing and governing the concept of public goods, were successful in these regions when done by farmers in close cooperation with local governing bodies and other actors. Four key factors appeared to be most important: 1) establishing a system of rewards as a specific new element in building a good 'market structure'; 2) a mix of governance forms and an alternation between these forms; 3) visionary leadership with networks in both public and private sector; 4) time for new ideas to ripen and for commitment among actors to grow. An increased attention for environmental, ecological and spatial quality, growing interest among farmers to broaden their farming activities and a national government that steps back, offer new opportunities for local cooperation and establishment of regional collectives.

16:00-17:30 Session 4J: WG17 - Civic agriculture for an urbanizing society: production models, consumption practices and forms of governance

Policy and governance

CHAIR:
Maria Fonte

LOCATION: Aula 16

16:00 *Stephan Pabst* and *Marianne Penker*

Participative Action Research to disseminate Community Supported Agriculture (CSA) in Austria.

ABSTRACT. To deal with the challenges of food production-consumption within the dominant food regime, civic and social movements developed alternative and civic food networks in the last 40 years. Some of those civic food networks (CFN) stay within their niche, some become mainstream. Some maintain their transformative potential, others adopt to the dominant system. The question is, how can the actors of those movements gain more influence without loosing sovereignty? One rather young civic food network is the Community Supported Agriculture (CSA) movement, which is quite small still in Austria, but non-the less it's growing and vibrant. We, the researcher and a collective of activists, farmers and active consumers, conducted a participatory action research project within half a year, to gain more insights in the potentials and challenges of the growing CSA movement in Austria and to strengthen the efforts of activists to broaden the movement. The challenge was to gain knowledge about the goals, motivations and strategies of activists, consumer-members and farmers of 16 Austrian CSA initiatives and to facilitate a process of broad discussion and strategic planning based on this shared knowledge. Therefore participative and emancipatory methods were applied such as appreciative inquiry, open space conference and group workshops. The knowledge gap was filled with a questionnaire, answered by 177 CSA members and phone interviews with 16 CSA farmers. The participating acteurs of the CSA-movement layed the foundation for institutionalizing the existing Austrian CSA-network, following the model of the german network „Solidarische Landwirtschaft". The participative action research approach (PAR) offered an apropriate framework to define the tasks and goals of such a network. Three central fields of work of an institutionalized CSA-network have been identified: Support of the foundation of new CSA-initiatives, public relational work and

awareness raising activities and also the coordination of experience sharing and networking of CSA initiatives. The emancipatory character of the workshops made it possible, that the workinggroups continued their tasks autonomously. A well founded PAR, where the methods are developed in cooperation with the acteurs, seems to be suitable to strengthen civic food networks, such as CSA.

16:15 *Daniela Pacifico* and *Cristiano Desconsi*

The implementation of public policy for family farming in Brazil: the role of mediators in the reconnection between farmer, food and community

SPEAKER: *Daniela Pacifico*

ABSTRACT. Consider the role of the state in public policy analysis has been retained as the central axis of a set of approaches that are interested in explaining effects, impacts and outcomes (MULLER, 2005). Such consideration guard explanatory importance in studies of the state, in particular, as regards the formulation of public policies. Moreover, such approaches have little considered the participation of civil society organizations in formulating and implementing these policies. Study them from the sociology of public action has been a way of considering them product co-produced by the state and society (LASCOUMES; LE GALÈS, 2012). In Brazil, after the return to democracy, we see a growing participation of organized civil society in the implementation processes of public policies for family farming. Such transformation requires an analysis on the social changes from that practice. Thus, this study aims to examine the role of public policy implementers in reconnecting farmers, food and communities. This analytical exercise (in progress) is inspired by the experience of the Centre for Alternative Agriculture North of Minas Gerais (CAA/NM), located in the Brazilian semiarid region. This civil society organization (Ong) consists of plural family farmers and collaborators, and accumulated over the first decade of XXI century know-how in implementing combat drought policy. This experience took place in conjunction with the Brazilian network semiarid, and included actions such as seed banks, water tank for human consumption (cistern) and for the production, extraction and processing of regional fruits and agroecological production technologies. From 2010, with the institutionalization of the technical assistance program, the CAA/NM started to the public policy implementer. The challenge becomes therefore articulate the organization performance axes, its know-how and the issues of struggle for territory to the objectives of policy. The effort has focused on territorial issues central to farmers. The water technologies, agroecological production processes and short marketing channels has connected farmers to cultural networks, food and solidarity. The exercise of translation of public policies has corroborated with the desired territorial ideals, enables visualization of traditional communities, and fortifies the fight for territory and reconnecting them around the site of agrifood agroecological system.

16:30 *Kirsten Vanderplanken*, *Elke Rogge*, *Ilse Loots*, *Lies Messely* and *Frederic Vandermoere*

An analysis of governance processes in territorial agri-food networks

ABSTRACT. The past decade, awareness has been growing that the way we think and behave with regard to food is untenable in the long run. New networks that aim to build new linkages between food system actors are emerging in answer to the challenges the contemporary food system is facing. In addition, these new organizational forms are also a response to consumer concerns about food safety and nutrition, which leads to an increasing demand of locally embedded quality products. As a result, the new governance

forms are accompanied by a new geography of food. It is our aim to gain insights into these new processes of governance and how they are related to the geographic organisation of food networks. This paper draws upon qualitative case study research of territorial food networks. We selected two cases that represent a new mode of governance, that involve a diverse set of actors and institutions, and that are geographically delineated. More specifically we investigate (1) which roles are crucial for these new modes of governance and (2) how this new governance form relates to the geographic organisation of the food network. A descriptive analysis of the local food networks reviews their social, organizational and geographic characteristics. This would allow to identify the main social actors and institutions that are involved and which governance roles they take, formal and informal rules that regulate the food network, and the geographic embedding of the food network. Next, we take a more systemic approach to our cases that involves three steps. First, in-depth interviews with key-actors are to give insights into the organization of these new modes of governance. We will analyse processes such as role division, inclusion and exclusion, and the interdependencies between the different role-occupants. Second, we will look at the relation between these processes and the geographic characteristics of the food network. Finally, both cases will be compared and their parallels and/or differences will be studied. We expect that the results of this study will contribute to research on civic agriculture, governance processes and food geographies.

16:45 *Silvia Innocenti*, *Elena Favilli* and *Adanella Rossi*

Towards a network around civic agriculture in the Province of Pisa.

ABSTRACT. This paper aims at exploring the pathway towards the creation of a network around the principles of civic agriculture in the Province of Pisa (Tuscany, Italy). The research is part of the process towards a local Food Plan, aimed at coordinating public policies, civil society and private enterprise initiatives, to foster the access to a healthy and sustainable diet. During the last decades, the experiences of civic agriculture in the territory have played an important role, highlighting the centrality of agriculture in the animation of rural areas and in the rural-urban relationship, and the multi-dimensionality of food, point of intersection amongst several vital areas for local communities (sustainability, health, culture, ethics, economy etc.). The awareness of this role in the definition of local policies about food and sustainability led to consider the structuring of a network among the involved farmers as an essential component in the construction of an integrated food strategy. The support to this network building process, within the pathway towards the Food Plan, was organised through several stages. First, a monitoring of civic agriculture in the province of Pisa was carried out, in order to create a data-base of the farms and related fields of activity. Afterwards, a second round of interviews was hold to deepen visions and principles of civic farmers, as well as their perception of the role played within the local community. After the second monitoring, a focus group specifically aimed at identifying barriers and opportunities for the creation of a specific network was realized. The research has confirmed the presence, in the territory, of an expressed willingness to create a network of farms engaged on issues of sustainable food and sustainable local development. However, some critical points emerged with respect to the farmers' willingness to participate in the designed activities within the Food Plan process, to their perception of the usefulness of the Plan itself and even to the acknowledgment of the identity of 'civic farmer'. Through a comparative analysis of the characteristics and actions of the farms, the analysis focuses on the process of development of a shared view of the identity of civic farmer, on how much a shared

system of values corresponds to this identity, and on how and to what extent this is translated into operational terms. This 'boundary work' represents a crucial step to reinforce the relationships amongst the farmers and lay the foundations of a common action.

16:00-17:30 Session 4K: WG19 - Food Security: Meanings, Practices and Policies

Meanings of Food Security (special session presenting results of EU project TRANSMANGO)

CHAIRS:
Ana Moragues Faus and *Roberta Sonnino*

LOCATION: Aula 11

16:00 *Tessa Avermaete*, *Stefano Grando*, *Ana Moragues-Faus*, *Gianluca Brunori*, *Natalia Brzezina*, *Luca Colombo*, *Terry Marsden*, *Maryam Rahmanian*, *Roberta Sonnino* and *Erik Mathijs*

Discourse on food and nutrition security: media analyses in Flanders, Italy and UK

ABSTRACT. The public perception of Food and Nutrition Security (FNS) in Europe is shaped by insights and believes on the drivers and vulnerabilities of the food system performance and its resilience. A narratives takes specific vulnerabilities and hazards in the food system as point of departure for shaping potential solutions. Narratives are also present in the social media, influencing public perception and solutions, and leading to various frames that encompass these views on reality. Recently, there is a growing body of work on FNS framings that aim to gain an in-depth understanding of narrative formation and its policy implications. This research contributes in countering the regressive fragmentation and aggregation currently framing conventional FNS approaches. We take the FAO (2002) definition as point of departure: "Food security [is] a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life". Along with time, the focus has been enlarged from a narrow system/production-centered approach to a more encompassing people/access-centered approach, and the focus of analysis, also for measurement purposes, there has been as shift from 'food security' to 'food insecurity'. The scientific and politic debate on the definitions addresses these two aspects, scale and dimensions of food security. Scale thereby refers to the level of analyses. In this context, one can observe a shift in interest from the international and national level towards FNS at the level of communities and even at the household level. In terms of dimensions, the current official definition highlights four aspects of FNS: availability, access, utilization and stability (FAO, 2013). Focusing on FNS frames in a European context anno 2015, we formulated the following research questions . What are the dominating FNS frames? To what extent do these frames effectively differ from one another ? What organizations use these frames to set their goals and formulate solutions for current problems in the food system ? The research is based on media analyses in Flanders, Italy and UK which allows region specific as well as cross regional comparison of frames. Furthermore, it allows examining whether the media discourse is in line with the regional or national political agenda and, the opportunities taken by stakeholders in the food system to build alliances based on FNS frames.

16:15 *Stefano Grando*, *Gianluca Brunori* and *Luca Colombo*

Quality, Technology, Sovereignty. Discourses on Food Security in Italy.

ABSTRACT. Food insecurity remains a concern in Italy, though not necessarily stated as such. Nutritional issues are still in the governance agenda mainly in relation to unbalanced diets and incorrect lifestyles. After the food price spikes in 2007/08, and even more dramatically in consequence of the economic crisis, the problem of food poverty and access to food have gained new evidence on the Italian media, too.

The present contribution originates from the EU-funded project Transmango (Assessment of the impact of drivers of change on Europe's food and nutrition security). It describes the results of an analysis conducted in the Italian media in the years 2007-2014 aiming at identifying discourses and frames shaping the debate on food and nutrition security (FNS). The concept of "frames" is increasingly being used to describe those "mental structures" through which people make sense on the external world. Frames, acting as cognitive processes, structure the way in which people perceive reality and communicate about it, while organizing their experiences adding meaning to physical or social phenomena, events and occurrences.

More than 300 media articles, scientific papers and policy documents have been analyzed through the identification of key-words and a more general textual analysis. The scrutiny led to the identification of eight discourses characterized by specific priorities, key themes, suggested solutions, rhetoric: - Ecological (Food chains environmental sustainability and food waste represent the main threats to FNS) - Free trade (Food industry inputs and food products should circulate freely - Quality: FNS can be achieved giving value to food. Value is linked to territories and traditions) - Social (Food insecurity results from socio-economic inequalities and social marginalization); - Solidarity (There are individuals and groups in need of food aid who must be helped); - Sovereignty (Local/regional communities have the right to hold control over their food systems); - Technology (People must have confidence in technology adoption in the food sector to improve efficiency and safety); - Wholesomeness (In developed countries FNS is a matter of food safety and lifestyles).

They are characterized by relations of complementarity, opposition or independency, that have also been investigated through the key-words analysis. The Quality and the Wholesomeness frames are the most frequently emerging from the texts, whereas the Free trade and the Technology are less utilized, despite being strongly influential on shaping (or accompanying) the actual development trends in the food system and the related policy measures.

16:30 *Talis Tisenkopfs*, *Mikelis Grivins*, *Ilona Kunda* and *Sandra Sumane*

Food security challenges and responses: A comparative analysis of Latvia and Lithuania

ABSTRACT. Food systems in Latvia and Lithuania are influenced by structural transformations of the last decades, EU integration experiences and technological modernisation of production with controversial effects on food and nutrition security (FNS). Availability and access to variety of food have increased, although food poverty for some groups remains high. In both countries self-provisioning and informal exchange of food historically plays important role in FNS, although contemporary consumption habits are massively shaped by supply in supermarkets and the capitalist workday requirements. Global trade, retail concentration and the power of marketing make cheap

and often low quality food widely accessible and spread of unhealthy food habits is a reflective mirror of this disputed abundance. Responsibility for food choices is put on the shoulders of consumers and experts, the supermarket and food industry offer being criticised but taken for granted. The food system in both countries is also driven by local forces (short chains, small food processing, localised production and consumption circuits, emerging forms of urban agriculture, etc.) however these emerging forms of alternative food supply cannot counterbalance the ambivalent influences of global forces on the outcomes of FNS. At a time when global drivers and profit motives dominate the food system and captivate consumer minds a question arises how different actors can break away from unhealthy dependencies in the food system and create space for more autonomy and resilience? What reasonable responses and pathways to sustainable FNS and respective governance arrangements can be created? This paper aims to explore emerging framings and pathways to improved FNS in Latvia and Lithuania especially focusing on the dimensions of food access and utilisation / healthy diets. We examine how food system vulnerabilities and weaknesses are discussed and interpreted in media texts, scientific literature and policy documents of both countries and how responses and actions for improved FNS are generated. The paper identifies three key areas of emerging pathways towards improved FNS and corresponding coalition building processes and governance initiatives: i) school food; ii) healthy diets; and iii) addressing food poverty. Based on the data from qualitative media analysis we discuss how these prospective pathways are shaped by specific interpretative frames and ideas such as ‘paternalism’, ‘individualism’, ‘globalisation’, ‘localisation’ and ‘civic activism’.

16:45 *Terry Marsden*, *Ana Moragues Faus* and *Roberta Sonnino*

Corporate food governance, financialisation and the reproduction of food security vulnerabilities

ABSTRACT. The paper will attempt to empirically and conceptually trace the changing nature of corporate food governance and financialisation in the UK and Europe, especially since the food, financial and fiscal crisis emerged from 2007-8. The emphasis will be on the exogenous and endogenous vulnerabilities that are currently being exposed. It will also question the degree to which new landscape pressures built around the new ecological and political vulnerabilities associated with centralised and privatised systems of supply chain control and the onset of ‘stranded assets’ will provide new spaces of possibility for more sustainable and distributed systems of food governance to take hold.

17:00 *Sabrina Arcuri*, *Francesca Galli*, *Fabio Bartolini* and *Gianluca Brunori*

The Role And Effectiveness Of Food Assistance In High Income Countries: A Critical Literature Review

ABSTRACT. During the last years, financial crisis has led to an increased demand for food assistance in high-income countries, also in those segments of population once considered food secure. In line with the definition of food security given by FAO (1996), there is much awareness that being insecure does not necessarily mean to be undernourished, but it means having a difficulty, sometimes during the year, to provide a meal that is sufficient, nutritious and culturally acceptable for an active and healthy life. In developed economies, food insecurity is firstly a matter of income inadequacy: this is more and more due to the rise in food prices and in the price of other essentials for living,

compared with the price level of the past decade, combined with higher unemployment and underemployment. Due to income reduction or increasing uncertainties in expected income availability, an overall contraction of food expenditures, as a flexible part in the household budget, is observed. Results are a reduced quantity of food demanded or changes in consumers' preferences for food quality or, in some extreme cases, an increasing demand for food assistance. Research in this field has shown a considerable variety of food aid models, with public or private promoters, different stakeholders involved, activities (food banks, pantries, soup kitchens,...) and modes of operation (cash transfers, vouchers, in-kind). In most countries, the spreading of the phenomenon makes room for some considerations on the effectiveness of this "safety net of the safety net", raising issues of social acceptability, governments' neglect of responsibilities and right to food. This paper aims at reviewing the current knowledge on the contribution of food assistance in addressing food insecurity in high-income countries. In particular, we were interested in understanding to what extent problems and their possible solutions are laid within the food system or are related to other subsystems, such as the national economy and welfare systems. We believe that understanding the functioning and the effectiveness of food assistance programs is central to the definition of the strategy of high-income countries to reduce food systems' vulnerability in front of future shocks. This work is part of the activities of the TRANSMANGO project (EU-FP7 project, http://www.transmango.eu/), aimed at identifying the nexus between vulnerability of people and vulnerability of the food system.

17:15 *Robert Mhamba*

Urban Agriculture in Tanzania and Sustainable Urban Food and Nutritional Security_2 pages paper

SPEAKER: *Robert Mhamba*

ABSTRACT. In the academic literature scholars have underlined that urban food systems are emerging as important (but still under-researched) units of analysis for sustainable food security in the 21st century. In this paper we develop a mixed method for understanding food and nutritional security (FNS) sustainability in urban areas in countries like Tanzania. With increasing urbanization, decreasing agricultural productivity in rural areas and persistent food poverty in Tanzania, we seek to understand what is the existing linkage between urban agriculture and Food and Nutritional Security (FNS) in urban areas, particular in the sub-Saharan Africa context . In particular we seek to shade light on what is the connection and disconnection between urban food production and consumption. In what way does the connection and disconnection impact on urban food and nutritional security?

We carryout our analysis using the systemic approach lens, through which, FNS is analyzed structurally and systemically. The approach, which is currently gaining growing attention in the academic literature, takes into account sustainability concerns as well as issues of production-based (productivist approach) and consumption-based (demand or access based approach).

16:00-17:30 Session 4L: WG23 - Conceptualising and Assessing City Region Food Systems

Conceptualising and Assessing City Region Food Systems

CHAIR:
Henk Renting

LOCATION: Aula 14

16:00 *Mauro Bertagnin*, *Alice Covatta* and *Mohamed Yassin*

City growth, food decrease and changing places for sale and trade

SPEAKER: *Mohamed Yassin*

ABSTRACT. The relation between metropolis and food is essential to our ordinary life. The different ways through which nourishment reaches our table is a fundamental issue to be investigated even more if we consider that in the next forty years, 75 per cent of the world population will live in boundless urban agglomeration. Cities growth represents also a crucial factor for rethinking food as an element and a tool for urban design, basically because cities consume three quarters of the planet's resources. If the metropolis is the place of the density and of commercial exchange in defined places, where food is sold and exchanged (shops, supermarkets, superstores) elsewhere, like in the rural area of many African countries, food is produced and traded near the place of production, generally along the closer road. This is an original anticipation of the new trend of "food at zero kilometer" that actually take place in the Western world. But a growing problem in contemporary cities is that of supply of the food that has to be imported in the metropolis from ever greater distances with large impacts on sustainability. There is now also a growing debate about the need to produce the food needed to sustain the inhabitants of the contemporary metropolis using flat roofs of skyscrapers, small green areas empty and abandoned buildings for instance through hydroponics. The paper aims to provide an analysis of the current food supply situation through the investigation of some peculiar markets and also new trials concerning food supply in some contemporary metropolis, linking the issue of food to the solution of various environmental emergencies affecting the major metropolitan areas of the planet. Markets selected and analyzed are taken form extremely different situations on one hand major urban agglomeration based on capitalistic system on the other hand rural conditions, but all of them are related to informal spatial configuration. The connotative informality is the main trait of those realities where food becomes more than an object of consumption and it transforms urban areas, cultural identity and quality of citizen lives.

16:15 *Aurora Cavallo*, *Benedetta Di Donato*, *Andrea Ferraretto*, *Davide Marino* and *Veronica Padoan*

Agriculture and food as an infrastructure: a proposal for a Rome City Region Food Strategy

ABSTRACT. The paper focus on the concept of food and agriculture as an infrastructure – which is both spatial and relational -, within the context of the urban Mediterranean phenomenon, where, with all its political, cultural, economical, social and environmental differences, there is a common relationship with food and food production in an urban setting. The aim of this paper is to explore the agricultural context of Rome, focusing on its relationships with development in the metropolitan area and the whole region of Lazio, assessing City Region Food Systems. Rome has what we could call a compact structure compared to the dispersed urban model and this has encouraged the development of local agricultural systems, where both flows and landscapes involve the city. While production is organised into wedge-shaped areas, the places where exchanges occur are mainly within the municipal area of Rome, with the exception of farms involved in direct sales. The role played by the local food network in Rome is remarkable, particularly in case of farmers' market, SPG' and those linked to box

schemes experiences have seen significant success. The local food network behind agriculture in the city, within a number of integrated social agrarian cooperative, who represented an alternative food production system and landmark for many initiatives carried out by the civil society, associations, cooperatives, volunteer and school sectors, community supported agriculture (CSA) initiatives. Regarding the public food service, one of the most important project deserving to be presented is known as the Quality Revolution, concerned with school canteen service in Rome. The processes of transformation affecting the primary sector in urban and suburban environments reflect an agriculture that forms (and produces) new landscape and functions, typically reconnected to the historical value of agriculture in and around the Mediterranean cities. Food, because of its cultural and historical place in Mediterranean tradition, has a significant role in configuring the areas where exchanges takes place, which are, therefore, specific places for meeting and forming relationships within the public spaces of a city. The system identified by the paper configures the set of all the different forms of agriculture and food as a device of resilience for the city, made up of places where flows, relationships and processes become increasingly more sustainable, and where both physical and intangible spaces act as an infrastructure in their exchange with the city.

16:30 *Marian Simon Rojo*, *Franco Llobera*, *Nerea Moran* and *Abel Esteban*

MadridAgroecologico, Food movement shaping a new political arena

ABSTRACT. What happens when governments fail in their roles as enablers of sustainable food systems? In Madrid, the firm political will necessary for the promotion of Sustainable food systems is completely absent from the Regional Government of Madrid and from most of the municipalities in its metropolitan area. Therefore, during the last fifteen years, the generation of alternatives linked to food sovereignty has emanated from grass-root movements. For a long time, these new farmers, gardeners and committed consumers had very low expectations of an impact in public policies. Time has come to take a qualitative step forward and to generate a political impact.

In January 2015 a consistent number of farmers, consumers, cooperatives, trainers, researchers and ecologists started a process in which the collaborative planning strategies and the management tools developed by these social movements has been applied to: a) influence on the political agenda, with the incoming local and regional elections; b) improve the activity of social movements, costumers, producers, educators in the agroecological transition and in the progress towards food sovereignty

The process is called Madridagroecologico, a bottom-up and participative process trying to foster agroecology and sustainable food systems in the urban region. The foundations have been laid to scale up ongoing initiatives of local food networks that link producers and consumers.

Some of the factors that enabled this process possible shall be highlighted: * Lack of legitimacy of traditional political institutions. The growing interest of the citizenship for the re-establishment of sovereignty resulted into participation in the construction of political alternatives. * Under the umbrella of the 15M movements, new formulas emerged (economy de-monetisation, solidarity networks...). Crisis also brought a vivid social reactivation, while food was set in the agenda of social movements. * Since 2000 there have been a bundle of innovative successful projects of new farmers and consumers committed to agroecology and food sovereignty. They were and still are a reference with

a high symbolic impact, albeit their very small dimension. * The severe economic downturn resulted in high unemployment rates, especially for the young (youth unemployment rate lies for years above 50%). Urban unemployed engaged in agriculture in peri-urban areas through direct circuit with high trust distribution systems and Participatory Guarantee Systems. * Changes in the food system are not coming from conventional or professional farmers, but from emerging alliances between a new generation of small informal gardeners and farmers and groups of urban consumers.

16:00-17:30 Session 4M: WG24 - Revaluing institutional food procurement

Enabling Environments and sustainable public food procurement: The role of actors and public institutions practicing institutional food procurement

CHAIR:
Luana Swensson

LOCATION: Aula 4

16:00 *Tatiana Aparecida Balem*, *Sergio Schneider*, *Marco Antônio V. Fialho* and *Isabel C. L. Da Silva*

The role of Rural Extension in the viability of public procurement for school meals

ABSTRACT. Brazilian's Programa Nacional de Alimentação Escolar (PNAE), in 2009, changed his politic bases. It's setting in an important institutional purchasing policy and development of Family Agriculture (FA). The object this paper is discusses the importance of public rural extension service for the viability of the institutional market of School Feeding. The research was conducted in nine municipalities in southern Brazil. Even with a supportive policy environment are still found obstacles to carrying out the institutional purchase, the principal problem are social and productive organization of family farmers. The study showed that farmers need support and technical assistance to relocalizing and reorder the logic of production. But the public rural extension has not been able to do that.

16:15 *Kirsi Korhonen* and *Toivo Muilu*

Developing local food cooperation and public procurement in Oulu South region, Finland

ABSTRACT. In Finland, governmental program contribute to the development of local food markets and production. However, the restrictions concerning the use of local food often relate to procurement legislation, lack of information concerning the supply, and the small volumes to be offered – to mention a few reasons.

This study looks at the possibilities of increasing the use of local food in institutional kitchens through developing operations model of regional network in the food chain in the RuokaNET project. The model can be used to promote the networking of local food producers and companies and their cooperation with the foodservices. The model will be formed via a case study which was carried out in the Federation of Education in Jokilaaksot (JEDU) in Oulu South region in Northern Ostrobothnia, Finland. The target group includes JEDU's kitchens and the canteens' customers.

At the first stage, surveys and interviews for the kitchens were implemented to find out the situation concerning the use of locally produced food, demand, and needs. Questionnaires were also provided to students and staff in order to ascertain the

consumer's perspectives and opinions. The kitchens (N=10) announced to have a great interest in product development in cooperation with producers as well as making excursions to farms and food processors in order to improve their knowledge of local production. Appreciation of local food was apparent among customers, while 70 percent of the respondents (N=509) saw the use of locally produced food in the food services as either important or very important.

At the second stage, the study surveyed the interest of local food producers and companies to be involved in developing the model and cooperation with institutional kitchens. In spring 2015, the project organized workshops for producers and food services focusing on product presentation and a guided discussion.

Finally, the results are assembled to build a regional network model which contains the suggestions for the measures and the organization via which the corresponding regional operation can also be implemented elsewhere.

The project began in October 2014 and it will conclude in December 2015. The implementer of the project is the Natural Resources Institute Finland and it is financed by the Finnish Ministry of Agriculture and Forestry. The present paper introduces the preliminary results of the surveys and boundary conditions of the developing of the model.

16:30 *Márcio Caniello*, *Soahd Rached*, *Nina Caniello* and *Wendell Lima*
Institutional procurement of smallholder farming products in the Rural Territory of Seridó in Paraíba (Brazil)

ABSTRACT. In the scope of The National Sustainable Development Strategy based on the fight against hunger and poverty, where smallholder farming constitutes a key sector, the government of former President Lula da Silva (2003-2010) implemented several innovative public policies, such as the National Program for Sustainable Development of Rural Territories (PRONAT), aiming to strengthen smallholder farming through participatory deliberative forums. Besides, it innovated old public policies such as the National School Feeding Programme (PNAE), requiring that at least 30% of the amount transferred by the Union to municipalities and states to purchase food for school meals be used to purchase products from smallholder farmers. This work aims to analyse the performance of institutional procurement of smallholder farming products in the Rural Territory of Seridó in the state of Paraiba between 2010 and 2014, by confronting environmental, cultural, institutional, organizational and political constraints with the productive and organizational potential of smallholder farming.

16:45 *Bent Egberg Mikkelsen*
Organic food on the public plate in Denmark – top down or bottom?
SPEAKER: *Bent Egberg Mikkelsen*

ABSTRACT. Organic food and farming strategies has enjoyed increasing political support in Denmark for the past decades. One of the important pillars has included a priority to converting a large a proportion of the public sector foodservice as possible. In the Organic Action Plan 2020 the Danish government has committed itself to ambitious

goals as regards to the organic share of the public food supply chain. However affecting the supply chain of public food is a complicated process since it affects a myriad of stakeholders, technologies and organizational procedures. Organic sourcing is dependent on knowledge, skill and competencies of public food workers as well as on the attitudes and preferences of the end users in a broad range of different public food outlets such as school, kindergarten, nursing homes hospitals, canteens and prisons. This paper looks at the implementation of the Danish Public Organic Procurement Policy (POPP) over the past decade. It presents new data of the implementation rate based on new procurement data from the foodservice suppliers and the penetration of organic foods in different sectors of foodservice and discloses secular trend on that development based on statistical bureau data. It uses a technology perspective to analyses how the role of attitudes and education among staff influence the implementation. It analyses the role of the supply side and the procurement interface in the promotion of organic food. It uses a policy implantation approach and concludes that organic procurement policies cannot rely entirely on high level policies. Organic public procurement id dependent on the engagement and involvement of shop floor level workers as well as the active commitment from suppliers, procurement officials and middle level administrative management. It concludes by listing recommendations for POPP implementation.

16:00-17:30 Session 4N: WG18 - Society Oriented Farming – working on the balance between market and societal demands

Society oriented farming: societal demands, environmental and policy aspects

CHAIR:
Jana Poláková

LOCATION: Aula 21

16:00 *Jana Polakova*

From Good Agricultural and Environmental Condition to a shared responsibility learning platform

SPEAKER: *Jana Polakova*

ABSTRACT. This paper covers a learning pathway from Good Agricul-tural Practice regarding water protection against agri-cultural pollution to common standards of Good Agricul-tural and Environmental Condition (GAEC) in the Czech Republic as a functional region. A shared responsibility platform emerges as a relatively neutral ‘outsider’ field for evaluation of transferability of benefits to civil socie-ty organisation as regards water and soil protection in tandem with farmers’ profitability. Particular attention is paid to negotiating the pathway itself which isn’t developing a new model, yet applying the tried well-known ones.

16:15 *Stefano Grando* and *Luca Colombo*

Good food and beyond: Food Supply Chains Outcomes and Societal Demands in the Italian Debate

ABSTRACT. Food supply chains represent complex social constructions whose performances can be evaluated according to multiple criteria perspectives. If they are firstly meant to provide food in an effective way (whatever this may mean), they have a much wider range of impacts on people, society and environment, which are socially

defined, discussed and evaluated in the media debate.

The paper presents the results of a survey conducted on the Italian media within the EU funded "Glamur" project aimed at identifying the more frequently debated food supply chain attributes, with a specific attention given to the local-global divide, i.e. to the attributes enabling the distinction between local and global food chains. These attributes represent "areas of interest" around which the debate develops.

The survey was conducted through three main steps. First, relevant sources were selected in order to ensure a wide representation of positions across various debate spheres (public, policy, scientific, market). Then, single articles, papers, documents and press releases have been identified in each of the selected sources through a process based on the application of key-words. The analysis led to the identification of a set of 20 food chains "attributes" which resulted to be the most debated on the Italian media.

The analysis has been concluded by interviews with experts and stakeholders, again covering different points of views and expertise covering market, civil society and scientific constituencies. The set of interviews integrated the literature analysis and ranked the attributes identified.

The attributes can be grouped according to their most pertinent dimensions. • Environmental: GHG emissions, Biodiversity, Pollution, Organic, Landscape preservation • Economic: Affordability Producers' income, National interests • Social: Food Activism, Traditional farming, Labour rights, Food security, • Human health: Healthy food, Healthy diets, Food safety, Obesity • Ethical: Information, Territory, Food waste, Animal welfare

Some main comments on the outcomes can be summarized as follows: • Great emphasis has been given (in particular on mass media) to the link between food, territory and tradition. GHG emissions are also extensively debated. • The experts gave ranked the highest two health-related attributes ("healthy food" and "food safety"), whereas "obesity", largely present in the media, was ranked as the least relevant. • Information, in its various meanings (traceability, transparency, nutritional labeling), receives a predominant consideration across sources.

16:30 *Nilson Antonio Modesto Arraes*

Brazilian Community-Supported Agriculture initiatives: a preliminary review

SPEAKER: *Nilson Antonio Modesto Arraes*

ABSTRACT. The formation of large retail chains and the concentration of fruit & vegetable market in big supermarket groups put the consumer far from producer. Allen (2004) considers sustainable agriculture and community food security as the most prominent alternative food movements and responsible for the reconnect consumption to production. This reconnection has been made through the formation of local food systems, with short marketing channels, organic production and reuse of local waste as opposed to global food systems involving large companies and production scales. The Community-Supported Agriculture (CSA) is one of many local food systems. For 30 years the CSA has been disseminated in the United States and Europe. Saltmarsh et al (2011) define it as “a production initiative of any food, fiber or energy where the community share the risks and rewards of production, whether through business,

investment, share of the cost or to provide work." Some authors (Tegtmeier & Duffy, 2005; Woods et al, 2009; Grande, 2009; Galt, 2011; Schilicht et al, 2011; Saltmarsh et al, 2011; Blanke, 2011; Dezsény, 2013) have analyzed the regional or national dissemination of CSA initiatives in the United States and European countries. The purpose of this article is to characterize the CSA initiatives in Brazil. For the identification of initiatives were interviewed CSA Brazil (NGO has helped the creation of new projects) and the participants of the Second Meeting Education and Agriculture, which took place between February 27 and March 1, 2015. In Brazil, initiatives are recent and the first CSA initiative happened in 2011, in Botucatu (São Paulo). By early 2015, there are nine implemented or under construction initiatives. From the identification of initiatives, its entrepreneurs were interviewed and initiatives were characterized by year of birth, location (city, urban or peri-urban), entrepreneur & management (producer, producer partnership community, NGOs, association, cooperative), members (number). Production: area (total, production), system (organic, without pesticides, certificate), products (annual diversity), producers (number). Business: approach (pre-production or post-production), distribution points (quantity and average distance of the members), box (diversity and monthly deliveries). Profile of entrepreneurs: age (years), training (degree), commercial experience (s / n) and agricultural (s / n), income share (%).

16:45 *Francesca Galli* and *Adanella Rossi*

The challenges emerging from the new modes of governance around food

ABSTRACT. Health and sustainability concerns related to food production and consumption have come to the fore in the public opinion and in the scientific and political agendas. They involve a multiplicity of actors, fields of action and responsibilities and need the definition of new models of interaction and decision making in order to be tackled. As a potential response, a "new food governance" is increasingly locally experimented, in which actors, other than public bodies and powerful corporations, have voice and innovative, context-based solutions, are fine-tuned to meet the new societal demands. These new forms of food governance develop along three types of relationships: i) civil society and the chain of food provision (i.e. shorter food supply chains); ii) the public sector and the chain of food provision (i.e. public procurement); iii) policy makers, especially at local level, and civil society (i.e. urban food strategies). In this context, civil society in particular plays an active role in promoting innovation. This rise of community action is newly reassessed through the lens of grassroots innovation initiatives. The 7thFP Foodlinks project has focused on exploring new modalities of science-policy-civil society interaction in the domain of sustainable food production and consumption. Looking at the experience across 12 European countries, the project has deepened the specific innovative pathways undertaken along each of the three governance axes. To that end, the model of Community of Practice has been adopted. The present article aims at pointing out the challenges emerging from the three mentioned domains, focusing on the role of civil society members and organizations and on the related demands. What changes do the new societal demands require to producers and production systems? What role and contribution is required to public policies? What kind of institutional innovation could be useful to meet the new claims? Based on case study analyses, developed collectively by researchers, policy makers and civil society actors gathered within the three thematic Communities of Practice organised, we discuss and systemize implications and instances emerging within specific contexts. Results show how food is an integrative concept, which requires an innovative, reflexive approach at operational as well as policy level.

The different expressions of the new modes of governance analyzed provide a wide range of insights, helpful to the research and to the policy system.

PROGRAM FOR TUESDAY, SEPTEMBER 15TH

09:00-10:30 Session 5A: Parallel Working Group sessions (3)
09:00-10:30 Session 5B: WG1 - Connecting local and global food systems and reducing footprint in food provisioning and use

Synthesis and conclusions

CHAIRS:
Dominique Barjolle and *Gianluca Brunori*

LOCATION: Aula 6

09:00-10:30 Session 5C: WG2 - Short food supply chains (regional products; farmers' markets; collective farmers' marketing initiatives; alternative food networks; CSA)

Short Food Supply Chains and Social Implications

CHAIRS:
Chul-Kyoo Kim and *Stephan Pabst*

LOCATION: Aula 21

09:00 *Concetta Nazzaro*, *Giuseppe Marotta* and *Marco Nerino*

Short supply chain and shared value models in agriculture

ABSTRACT. Theoretical background – The post-modern citizen-consumer appreciates lifestyles characterized by less waste, environmental sustainability and preference of brand products with a greater attention to ethical and value dynamics. These aspects are promoted by the new model of multifunctional and multivalue farm through the valorization of the short supply chain. In the new models of value creation, the short supply chain becomes a competitive instrument for multifunctional and diversified farms, as a response to the asymmetric contractual power, allowing the farm to regain margins of value added, and the consumer to save on the purchase of healthy and safe goods and exercise a function of direct control on the quality of the products. Both producer and citizen-consumer share the value created for behavioral strategies. The direct relationship creates a "welfare effect" due to the use of localized positive externalities, that makes the citizen-consumer available to recognize a premium price (willingness to pay) to the basket of goods and services offered by the farm and the territory, compared to competing products distributed through traditional channels. The short supply chain generates different value chains and plays a social responsibility function not only for the producer and the citizen-consumer but also for the whole local context, generating new forms of value sharing.

Objectives – In this paper the short supply chain is analyzed as a responsible and competitive strategy for multifunctional and multivalue farms, preferred channel of approach of the citizen-consumer to the farm and territory, able to create value and contribute to the improvement of farm and territory reputation. The aim of this work is to analyse the value created and shared through strategies of short supply chain, empirically verifying its consistency and impact on both producer and consumer-citizen.

Methodology – The objective of the analysis will be empirically validated through a direct survey that will concern a sample of both multifunctional farms, which have taken paths of socially responsible short supply chain, and consumers who usually resort to this channel, verifying, in specific local contexts, the impact of this commercialization strategy on value creation and sharing.

Expected results – The results should allow to understand how value is created and shared, and identify the strategic variables of success implemented by this innovative

model of direct governance of transactions between producer and citizen-consumer, and indicate useful policy implications.

09:15 *Elisabeth Steigberger*

Sustainable food systems: Community Supported Agriculture- a social-ecological analysis

SPEAKER: *Elisabeth Steigberger*

ABSTRACT. The paper refers to the debates on sus-tainability transitions regarding our present food system in general and agriculture in particularly. The concepts of social metabolism and colonization of nature serve as theoretical and analytical frame-work. The paper is concerned with small-scaled farms, local food systems and Community Supported Agriculture (CSA) within Austria. The paper asks whether and in what way small-scaled Austrian farms that apply the concept of CSA changed their socio-economic and ecological performance. We discuss whether and how these changes allow for a more sustainable way of farming, ecologically, so-cially and economically. Results show that the farms became more resilient economically and socially while little has changed ecologically. It becomes obvious that CSA allows small-scaled farms to con-tinue or start organic farming in a way that is com-patible with the farmers´ and consumers´ need and expectations while general market dynamics be-come less important. These examples discussed might serve as inspiration for innovative ways of small-scaled farming, contributing to sustainability transitions.

09:30 *Congzhi He*, *Huijiao Xu* and *Jingzhong Ye*

The mis-interconnection: when peasant farming encounters modernized consumption culture

ABSTRACT. The ‘nested-market’ practice which aims to promote the direct connection between rural peasant producers and urban consumers in mainland China, is an alternative approach to respond to the deterioration of the livelihoods of the rural peasants and the food safety problems of the urban consumers. However, various problems and obstacles also emerged at the same time during the direct encounter due to the enormous discontinuities between the two groups of people. Frequently, there are mis-interconnections, divergences, and even failures of the connection process, and it is usually difficult to build up mutual trust. This paper attempts to reflect the discontinuities between urban consumers and rural producers at the interface of ‘nested-market’; the interactions between consumers and producers, the reactions to problems, the interpretations and narrative about their own actions, as well as the mechanisms of such a mis-interconnection.

According to our study, we argue that the discontinuities at the interface of the connecting process are rooted in the discontinuities of the different modernization courses between rural and urban – the gap is widening and deepening. Therefore, in the contemporary food regime, the relationship between production and consumption reveals a more significant ‘dual’ structure. We are still facing the inevitable challenge of how to bridge the gap and convert discontinuities into continuities in building an alternative food system, which is a slow process of difficult adjustments and adaptations between producers and consumers.

09:00-10:30 Session 5D: WG7 - Regional branding and local agrifood systems: strategies, governance, and impacts

Coexistence and conflicts among regional branding initiatives

CHAIR:
Giovanni Belletti
LOCATION: Aula 3

09:00 *Patrizia Borsotto*, *Simona Cristiano* and *Milena Verrascina*

Territorial impact assessment on local products from a socio-economic-cultural point of view. The case of Madonie Provola

ABSTRACT. Italy, for its particular shape, is one of the countries most characterized by agricultural activities within the park areas, the presence of which is one of the most characteristic elements of the landscape, occupying vast areas both in coastal areas than in the interior. In these areas, agriculture is identified mainly in the local production, often one of the main economic resources of the territory. The proposed research is part of a wider project that aims to enhance the overall biodiversity in the Italian agro-food sector, with particular reference to local productions that insist in areas of particular environmental sensitivity. The research project aims to reconstruct the history of some traditional products of Italian agriculture from production to consumption, estimating economic, social and environmental impact. This work presents the most significant results of the analysis conducted on the Madonie Provola, that is a typical cow cheese produced in Madonie Regional Park (Sicily) The methodology used is that of the case study (Creswell, Maietta, 2002; Laws et al., 2003; Yin, 2002), approach widely used to study in Agricultural Economics and Rural Sociology. The interviews are intended to collect the information about the production costs of Provola, the environmental and the social sustainability of Provola and the marketing analysis. The economic analysis conducted by financial ratios and the calculation of the cost of production of Provola based on the use of the simplified balance sheet showed a great profit for farmers. The companies surveyed are practicing sustainable agriculture: in general the environmental indicators used have values comparable. In particular, the companies do not resort to the use of plant protection products and bring only organic fertilizers by manuring; the value of the indicator suggests a practice of self-sufficiency forage for extensive farms and therefore the use of a sustainable grazing. From the social point of view, the farms have a very low risk of abandonment of farming, because of are run by young farmers, including women, and the company's agricultural profitability is low. It is also estimated high probability of permanence of the population in the rural area as companies do not make use of temporary labor. Moreover, this factor represents a way to preserve agriculture and culture in rural areas.

09:15 *Andrea Zappalaglio*

The "Piadina Romagnola" mess. A new legal case for an old question: what is a GI?
SPEAKER: *Andrea Zappalaglio*

ABSTRACT. Background and Aims On 15 May 2014 the TAR Lazio (Italian Administrative Tribunal) set aside the specification of the product "Piadina Romagnola PGI". This very underestimated case must make us reflect on what PDO/PGI schemes really are and what their true potential is. Indeed, the restrictive interpretation of GI protection accepted by the Administrative Tribunal (that may be reversed on appeal) may not be completely in line with the text of the relevant EU Regulation 1151/2012. The paper is aimed at reflecting on the nature of EU PDO/PGI schemes with the intention of

understanding what practical and strategic role they can/should play in the protection of origin products and what should be left to private-based tools such as collective marks.

Methodology The legal analysis conducted in the paper predominantly applies a conceptual approach. It is necessary to investigate the concept of EU PGIs and its underlying policy as well as that of marks. Once the legal function and essence of these instruments is clarified, it is possible to draw some conclusions based on the "Piadina Romagnola" case and especially on the analysis of the positions of the opposing parties.

Results Art 5(2) EU Regulation 1151/2012 defines the characteristics that a product must have in order to qualify for PGI protection. The artisanal production of the good is not among them, nor the high-quality nature of it. In addition, the whole Regulation presents some gaps that allow for some flexibility. A more restrictive standard can be achieved through private forms of protection such as collective and certification marks. Indeed, this strategic use of marks was explicitly accepted by the annulled specification.

Conclusions The "Piadina Romagnola" case shows two different ways of construing GI protection. The first one considers it as a way to involve and benefit different undertakings, artisanal or not, that are linked to a specific territory. The second one considers them as a pure indicator of niche quality opened to few selected producers. However, this view is less in line with the text of Regulation 1151/2012 and implies a call for a re-conceptualization of the institute. In the last analysis, the potential of GI rules as well as their strategic use must be realistically assessed. If specific groups of producers want to achieve a higher level of protection, they should probably resort to the trademark system in addition to GI protection without expecting too much from GI rules alone.

09:30 *Emilie Vandecandelaere*, *Tamara Zivadinovic* and *Pascal Bernardoni*

Lessons learnt on GI vs territorial brand: the case of Kopaonik ajvar, Serbia

ABSTRACT. The aim of this paper is to present the process, followed by a producers group from the Kopaonik mountainous region in South-West Serbia, of developing a regional branding for their local products. It also provides insights in comparing the two approaches: GI for a single product vs. territorial label for a basket of goods. This case comes from a FAO/EBRD project of supporting GIs development in Serbia through pilots, which is a result of EBRD partnerships/collaboration with leading producers in Serbia. In this pilot, Foodland Company – producer of quality traditional F&V products - was interested in regional branding of Kopaonik products in collaboration with local producers and processors. There were two options: defining a key local product as GI, or a regional label for a basket of local F&V products. Kopaonik is famous for its winter sports, mountain attractions and naturalness, but it is also a production/collection area for different fruits, especially wild blueberry. After a consultation process and inputs from advisers, the working group (producers and local self-government) chose to go for the GI approach for the Kopaonik Ajvar (a traditional quality preparation from grilled pepper). Justification of this choice provides elements for comparing two approaches (GI-product or label-territory). The common point was to use the Kopaonik's reputation for promotion of local products and to focus on a single product that can benefit from the Serbian GI policies, perspectives of EU market and the high quality GI product image. Additional value of the case is that the original working group has formed an Association "Kopaonik original", which will apply for registration of the GI Kopaonik Ajvar and will be in charge of GI management/promotion. In future, their intention is to lead the

processes for other local products too (like blueberry slatko). The association includes representatives of bigger and smaller processors from the Kopaonik area, and is actively supported by local self-governments and Touristic organisations. Finally, this case extends the concept of GI as an IP tool to protecting existing reputation: the Kopaonik is well known, but not yet associated to the ajvar (according to the consumer survey). The GI strategy will help transferring reputation of Kopaonik - natural and ski resort - to a local product with all characteristics of high quality product linked to the geographical origin.

09:45 *Delphine Marie-Vivien*, *Barbara Pick* and *The Anh Dao*

Geographical Indications, Collective Trademarks and Certification Trademarks in Vietnam: Confusion or real difference?

ABSTRACT. The actual legal framework of Vietnam for protecting geographical names designating origin products, remodelled in 2005 to allow the country's accession to the WTO, confirmed the choice of a sui generis geographical indication (GI) system with the particularity of a registration and management processes driven by state authorities through a top-down approach. In practice, collective or certification trademarks (TMs) are increasingly used as origin labels, following the same path of a state-driven process, with around 130 collective TMs and 36 certification TMs rather than with GIs (42). This is mainly explained by the very demanding criteria of the proof of the qualitative link with the origin for GIs, which can almost be considered as going beyond European 'experience. It thus requires resources and technical expertise that are lacking, which make the TM road easier. However, some products protected through a TM could in theory meet the criteria for a GI based on the reputation, a valid criterion.

Drawing upon case studies of collective TMs, certification TMs and GIs in Vietnam, the paper will show that the choice of a particular means of protection in Vietnam may sometimes be done in an arbitrary way, answering to a public policy of quotas. Further, it will seek to demonstrate that the choice between GIs or TM is not the most relevant factor to contribute to local economic development, preserve traditional knowledge and conserve biodiversity. Indeed, a number of contextual factors related to the actual operation of the initiatives, including the marketing channels, seem to be more significant. Moreover there is little awareness about the weaker level of protection conferred to TM compared to GIs, with trademarks including a logo and thus not enforceable against other uses of the name alone. Finally, in light of the arbitrary decision to go for TM or GIs, it seems legitimate to question the appropriateness of the EU's preferential policy for GI protection over TM in the newly signed Protocol to the Framework Agreement on Comprehensive Partnership and Cooperation between Vietnam and the EU where only Vietnamese GIs will be legally recognised in the European Union but none of the Vietnamese TMs. A good idea could have been to see whether some TM could have been converted into GIs, on the ground that the link with the origin is present in most of the certification TM and the government being behind TMs.

09:00-10:30 Session 5E: WG9 - Land-use transformations

Land use traditions under pressure

CHAIR:
Jorgen Primdahl

LOCATION: Aula 22

09:00 *Xiaohuan Yan* and *Xuexi Huo*

From subsistence to professional farming: the change of land use and cropping pattern in Northern China-short paper

ABSTRACT. This study analyses household's land enlargement behaviour and their cropping decision change in northern China. Information needed for the study was collected through a questionnaire survey in 2014, covering 1079 farm households in four provinces in northern China, namely Shandong, Henan, Shaanxi, Gansu. The sample farm households are mainly apple growers, chosen as specialized farms, among them, there are 203 households rent land to enlarge their farm size, accounts for 18.81% of total. Moreover, 177 of these households use their leased land for apple production, which takes up 93.17% of households who rent land. The descriptive result reveals that land transaction promote agricultural professionalization. The regression analysis revealed that land-holding size, subsidy, land transferability, and income per unit of land are positively related to both land rent and apple cultivation decision. Off-farm work time and negotiation time has negative impact on both land rent and apple cultivation decision. Whether household rent land from their relatives and friends and possession of rotavator positively affect household land rental decision. Whether household have tricycle is positive related to household apple cultivation decision.

09:15 *Ottavia Aristone*, *Stefano Magaudda* and *Anna Laura Palazzo*

Food is Territory. Traditions, Landscapes and Olive Economies in the Regions of Latium and Abruzzo

ABSTRACT. Olive growing played for centuries a major role in the central Regions of Italy, notably in Latium and Abruzzo, with acres of olive groves surrounding hill towns and hamlets, part of a strong tradition deeply rooted in the land. Nowadays, it provides a substratum of common knowledge within the countless variations of local cultivars featuring different landscape patterns within a single land cover class.

Abruzzo's and Latium's "Oil Cultures", where identity and economy issues find their balance, have been conferred the Protected Designation of Origin brand, DOP Aprutino-pescarese e DOP Sabina (Reg. CE 1263/96) according to strict technical production policies. Lately, the Common Agricultural Policy, locally enforced by rural development programs (RDPs), has enhanced the establishment of consortia collecting small producers (2014 was the International Year of family farming) by providing basic services: certification, presses, transparency in international trade, etc.

In these regions olive growing dates back to the Roman era and to the early Middle Ages, when monastic orders (Benedictine) settled in and shaped their huge estates, trying different species and improving yields. Centuries later, in the 1800s, a pervasive sharecropping reform leading to incentives for the planting of olive trees resulted in a dramatic change in land use with the progressive transformation of fields and woods into olive groves. Ever since, this economy has supplemented farmers' income from agricultural work. In several rural areas close to the cities, olive groves, once grown in combination with other crops and now, ever since the terrible frost of 1956, in specialized cultivations, have somehow preserved the structural features of the historic landscape. Their persistence in land use, which can even be read as a material survival of several

tree specimens, is a tangible sign that olive farming holds its own against urban sprawl.

Since the destiny of our regions is increasingly tied up with the efficiency and resilience of open spaces, related agri-forestry strategies and health and food security policies, the attractiveness of these peri-urban contexts lies in coupling the privileges and facilities of the city with the benefits of the countryside: a better living environment, a healthier lifestyle, and also nature close at hand.

09:30 *Noelia Soledad Bedoya-Perales*, *Guilherme Pumi*, *Edson Talamini* and *Antônio Domingos Padula*

Globalization of food and land changes: rethinking food security strategies in an interconnected world

ABSTRACT. Global value chains (GVCs) in the agrifood sector have transformed the face of global production and are reshaping world trade to an increasing extent. This raises questions about land-use transformation trends in the primary products' originating countries, in response to changing international consumer demands, and the implications for food security. To address these issues, we focused on how Peru's land has been displaced in response to international coffee demand for the period from 1995 to 2013. Results show that consumers around the world have stimulated the growth of export-oriented agricultural production in Peru. This has created new opportunities for upgrading in GVCs; however, land-use impacts embedded in the international agricultural trade lead to new concerns over local food security. This paper argues that to understand the land-use change process and links with GVCs is fundamental to the food security challenge.

Keywords – Coffee; Peru; Global Value Chain; Market Orientation; International Trade; Agricultural Frontier

09:45 *Alessandra Corrado*

Land access and sustainable agriculture in Italy: policies and initiatives in times of neoliberalism

SPEAKER: *Alessandra Corrado*

ABSTRACT. In the Italian context, neoliberal policies aiming at pursing new dynamics of accumulation and economic development in times of crisis have been promoted with even more evidence and contradictions according to a tendency generalized to the European. They are centred on new forms of privatization of public and common goods and the exploitation of natural resources. Agriculture and land are also themselves invested by this process – in some ways comparable to the land grab till now analyzed especially in the global South. In Italy different local groups and institutions, movements and networks of farmers and citizens are engaged in practices and initiatives for the protection of natural resources, local agriculture and the promotion of sustainable agriculture. The question of land use has become really relevant in this perspective especially after national laws (D.L Salva Italia in 2012 and D.L. Terre Vive in 2014) and their application at the regional level have promoted the liberalization of prospecting and extraction activities (for oil, gas and minerals) and the selling of public lands. After the reconstruction of the general framework within which changes in land use are

developing, this paper focuses its analysis on some case studies in Italy concerning local and regional policies as well collective initiatives around land use addressing different societal expectations for alternative models of agriculture pointing out their innovative as well as controversial aspects.

09:00-10:30 Session 5F: WG11 - Urban agriculture II. Grass-root initiatives and community gardens

Contested urban land-use models

CHAIR:
Paul Swagemakers
LOCATION: Aula 15

09:00 *Laura Calvet-Mir* and *Marina Di Masso*

Agroecology in the city: urban gardens for an agroecological transition

ABSTRACT. Agroecology is a scientific and social practice critical of modern agriculture and its impacts. It fosters socio-ecological sustainability through the reconnection of social and ecological systems, and a balanced use of local resources. It emphasizes the application of participatory methodologies and seeks synergies between scientific and traditional ecological knowledge within a process of adaptation to local cultural and environmental conditions. As a multi-dimensional framework it articulates three perspectives and scales: productive (farm level), social (community), and political (society). In the urban context agroecology is a common benchmark among self-governed community gardens, which in turn are claimed to be mechanisms for an agroecological transition in the cities. In this paper we approach how the agroecological framework is implemented in those urban gardening experiences. In particular, we study how and to what extent each of the three agroecological dimensions is being developed. Our case study is Barcelona, Spain, where self-governed community gardens are bottom-up gardening initiatives started by different social movements and groups, most of them originally squatted. Our field work was conducted from March to June 2014 through a combination of qualitative methods, including the collection of background information, semi-structured interviews, field diary, and participant observation. We also performed a review of the available literature on urban gardens in Barcelona, including scientific articles, master's thesis, and grey literature. Our results show that the social and political dimensions of the agroecological framework are approached by urban gardens in a larger extent compared to the productive one. Indeed, stated motivations and benefits are mainly framed in social and political terms, pointing out that urban gardens enhance social cohesion and promote collective action, a result backed up in literature. However, we find that specific references to productive dimension-related benefits of urban gardens (i.e. the maintenance of agrobiodiversity and its associated knowledge) are less abundant. We conclude that further research should deeply investigate the role of agrobiodiversity in urban gardens, since the maintenance of agrobiodiversity and its associated traditional knowledge is a basic element for social-ecological systems' sustainability.

09:15 *Elizabeth Calderón Lüning*

urban community gardens - here to stay?
SPEAKER: *Elizabeth Calderón Lüning*

ABSTRACT. We have witnessed how urban community gardens have been stemmed by

grass-root initiatives, based on the commitment of engaged citizens. Urban gardens, locally organized fruit orchards and different forms of urban agriculture are creating spaces for community building and collaborative learning as well as touching upon often forgotten questions of environmental justice. They make visible and advocate in questions of climate change, sustainable resource management, biodiversity and environmentally compatible and sustainable consumption. As places of self-organization and participation, environmental policy awareness is strengthened and promoted. Not only do these initiatives have a broad medial impact and influence on public opinion, they also reach and integrate population segments not traditionally taking part of the "green" and environment-affine discourse.

Despite the positive response towards this new urban phenomenon within both sciences, policy, as well as planners and in the media, their situation is often precarious. Based on our recent work supporting new gardens in their initial starting phase and evaluating their needs and risks, we have found key issues such as long-term availability of land and financial strains often putting the longevity of the gardens at risk. Despite growing demand of space within the city, local authorities are losing influence and power to support new initiatives in their efforts to attain and maintain community gardens. Therefore, to allow the proliferation and evolvement of these educative and experimental spaces, and to allow for new social groups to be incorporated, we have to find new strategies and partners. On the basis of our past work we have identified a possible key actor as a future partner for the development of urban community gardens – housing associations. Through the cooperation with housing associations, we not only influence sustainable housing and urban development, but also reach new target groups. 2.5 million homes in Germany are owned by municipal housing companies. 5.2 million people live in them. They have access to land that often is both socially and ecologically un- or under-used. Tapping into this potential can contribute to sustainable, resilient urban development as well as the construction of strategic food reserves in densely populated areas. We are evaluating the potentials and requirements of integrating community gardens into the work and planning of housing associations as a form to proliferate these spaces as community based answers to environmental and social injustice and as a way of incorporating productive landscapes in our living environments.

09:30 *Md Abiar Rahman* and *Rob Roggema*

Scope of urban agriculture to combat the food challenges in Dhaka city

ABSTRACT. Dhaka is one of the fastest growing megacities of the world where about 15 million people live in 360 km2. It is the largest and fastest growing city of Bangladesh. A large number of people are moving from countryside to Dhaka for their subsistence, which already exceeded the carrying capacity of the city. New settlements and infrastructures are being developed on agricultural lands. Due to over population, poor management and unplanned settlement, it is experiencing multi-dimensional problems and challenges. With rapid and unplanned urbanization, incidence of urban poverty increases alarmingly in Dhaka. It is losing some 2.5 hectares of fertile land every day to brick kilns, housing projects, industrial structures and roads. According to agricultural statistics, four 'upazilas' and three metro areas have lost 7,982 hectares of agricultural land between 2002 and 2011. The loss of agricultural land has forced about 300,000 farmers to change professions. It has been reported that 53% water body and wetlands of Dhaka city have been decreased in last decade due to induced landfill for infrastructural development, while 59% of vegetation and cultivated land has been

reduced. Urban people have to rely on rural areas for supplying food. Climate change is worsening the situation. As a result, food security of urban people in terms of food availability and quality is very poor. Urban people spend more than half of their income on food. In many cases, people cannot afford food as the price is getting higher. Therefore, food production at household level in urban areas could be a substantial solution. In Dhaka, where land is most expensive, traditional agriculture is difficult. However, crops such as vegetables, fruits and herbs can be produced on flat and accessible rooftops with a good design by using available resources in Roof Top Gardening (RTG). The gardeners buy their materials at the adjacent markets of the city. If proper technological and technical supports are provided, most of the owners of the residential buildings are interested in RTG. This will ensure the supply of quality food at household level and improve the urban living environment. Our paper discusses the current problems of Dhaka has to face in food provision and presents the results of a design week, which delivered several design solutions to combat food challenges at different spatial scales.

09:45 *Brittany Kesselman*

The contribution of community food gardens to food sovereignty in Johannesburg, South Africa

SPEAKER: *Brittany Kesselman*

ABSTRACT. The paper addresses the question of how urban community gardens contribute to food sovereignty. While the concept of food sovereignty was developed by peasant movements to address the injustices in the current globalized industrial food system, it has also come to be applied to urban contexts. For purposes of this paper, food sovereignty is broken down into six elements: 1) Access to adequate, nutritious, culturally appropriate foods; 2) Sustainable income/ livelihoods; 3) Localisation as well as democratisation of the food system; 4) Environmental sustainability of the food system; 5) Empowerment of marginalised groups; 6) Empowerment of women/ promotion of gender equity. The paper focuses on access to nutritious foods, food system localisation and empowerment, while also considering the importance of scale in assessing garden impacts on food sovereignty. Research was conducted at two case study gardens in socio-economically deprived areas of Johannesburg, South Africa, with additional research at other gardens around the city. The research found that the gardens do increase access to nutritious foods, but that levels of vegetable consumption (by garden members and the surrounding community) do not necessarily increase to recommended levels. The research found evidence of food system localisation at the case study gardens, in the form of face-to-face relationships between customers and farmers; shortened food value chain; and a contribution to the local economy. Gardeners report gaining knowledge and skills. This form of empowerment may occur through training or simply by learning from experience. However, there is little indication of transformed social relations, or even of increased consciousness of the need for such social transformation. While community food gardens do contribute to food sovereignty in a number of ways, their transformative potential is not being fully realised. In order to transform the food system and people's relationship to it, additional education and improved networking opportunities will be required. Thus in addition to the technical assistance already being provided, government agencies and the non-governmental organisations that support food gardens should consider providing these types of support.

10:00 *Lola Domínguez García*, *Paul Swagemakers* and *Xavier Simón Fernández*

Sustainable management of green space in the city-region of Vigo (Galicia, Spain)

ABSTRACT. The dominant role of global food supply chains to feed urban dwellers, and claims to solve food and nutrition safety (FNS) while facing global challenges linked to resource scarcity, environmental degradation and climate change (Morgan and Sonnino, 2010; Marsden and Sonnino, 2011) call for empirical research on how to reorganize the food system effectively. Although European citizens are generally food secure today, this is not the case for all European citizens: 80 million people live below the poverty line and among them, 30 million suffer from malnutrition (Source: Eurostat and European Congress of Experts on Nutrition, 2009). Next to quantity, availability and the quality of food increasingly the origin of food is on the agenda: how food is produced, consumed and distributed (Goodman and Depuis, 2002; van der Ploeg, 2014). While in modern metropolitan areas processes of urbanisation and industrialisation often result in the abandonment of land that traditionally has been used for farming, stockbreeding and forestry activities, the remaining green space in metropolitan areas increasingly is considered to be an asset to deliver multiple sustainability and health benefits to the urban population is (Forster and Getz Escudero, 2014). This combined with different food crisis of over the past decades results in practitioners to reverse the disconnection between agroforestry production and food consumption. In this context we focus on how a multitude of actors (farmers, consumers, urban and rural dwellers, market enterprises, NGOs, and policymakers) strategically sustains food security in the city-region of Vigo (Galicia, Spain). Like in many cities in Europe and in the global South also in the case study area grassroots initiatives recover (potential) synergies between often-underused green space and the implementation of a more sustainable way of food production. Among the initiatives are urban gardeners, small-scaled enterprises, horticulture farmers and neighbourhood communities. They apply new approaches to urban and peri-urban farming, thereby each of them touching upon the importance of multifunctional land use in combination with closing cycles and short food chains. This contribution identifies, maps, and analyses the activities that perform ecologically (so as organic farming) and use locally available resources (so as biomass production in use as compost), and selling the local produce directly. Finally it draws conclusions on how the grassroots initiatives contribute to a more sustainable agro-food system as well as on how governance strategies recognise the importance of this alternative food system, and enable or block its performance.

09:00-10:30 Session 5G: WG13 - Care Farming/Social Farming in more resilient societes

Knowledge and transition

CHAIRS:
Marjolein Elings and *Helen Elsey*
LOCATION: Aula 5

09:00 *Elina Vehmasto* and *Katriina Soini*

Development of the Finnish Green Care concept and action: towards a definition

ABSTRACT. Green Care is currently understood in Finland as an umbrella concept for the services utilizing nature-related interventions for benefits of various target groups in the social and rehabilitation arena as well as in the educational sector. Since introduction of the concept in Finland in 2006 it has became popular among the rural institutions (research, education and extension organizations) and rural entrepreneurs. In Finland the concept has emerged interest among particular broad audience and type of actors.

Accordingly many Green Care projects have been launched across the country especially during past decade. At the same time it has been great challenge to achieve a mutual understanding over the consistency of the concept and the activities/phenomena. The definitions of Green Care vary from country to country reflecting the policy setting, current practices, and the interests of the promoters. In Finland efforts have been put to find a common definition for Green Care.

The evolution of a concept can be seen as an expansive learning cycle/process according Yrjö Engeström (1987, 2010). Expansive learning leads to formation of a new, expanded object and patterns of activity oriented to the object. Expansive learning calls for formative interventions. In formative intervention the subjects face a problematic and contradictory object, which they analyze and expand by constructing a novel concept with contents of which is not known ahead of time to the researchers. In formative interventions a researcher aims at provoking and sustaining an expansive transformation process led and owned by the practitioners. The contents and course of the intervention are subject to negotiation.

The Finnish researchers have conducted formative interventions in the evolution of Green Care in Finland since 2006. Their work has been influenced by the international discourse on the topic, and later on by a number of Finnish research and development activities in the field. As a result of number of activities, the Green Care is currently considered to compose of two types of services: 1) Green care, as cure and rehabilitation and 2) Green empowering targeted to prevention, education and recreation of special groups. This division is a result of a systematic analyse of the customer types, targets of services, requirements for education of service producer, laws, regulations and quality attached to the service group, and types of methods used while providing the services. The paper analyses the development of the concept and the typology of the Green Care services.

09:15 *Roberta Moruzzo*, *Francesco Di Iacovo* and *Cristiano Rossignoli*

Social farming and social innovation in the perspective of new rural policies

ABSTRACT. Social farming (SF) is an innovative practice differently organised both in EU and all over the world, and organised in accordance with local needs, cultures, institutions and resources. SF links agriculture with a broad range of sectors (health, social affairs, education, justice), related competencies, and it match with diverse rules and policies related to each of the sectors involved. SF mobilises local unexpected resources from agriculture in order to meet local emerging social and economic needs. Social innovation (SI) can be considered one pillar of the EU 2020 strategy and all EU policies are translating the SI concept into tools and policy instruments that in the case of rural policies are related to innovation partnership and operative groups. This is why the organisation of SF initiatives and its formal recognition is the outcome of a strong process which implies strong negotiation and knowledge brokerage able to locally - but also regionally and nationally - reorganise the interest of many private and public stakeholders and to re-orient their attitude and way of acting along towards an innovative perspective. Perhaps, in some Country SF is embedded in the State-Market logic where the State recognizes and pay new providers –farmers- using nature based solutions (soft subsidiarity specialised model of SF). In others cases the innovative core regards the use of natural tools toward the negotiation of principles like co-production of economic and social values, a deep subsidiarity among many actors and the promotion of civic

economy (deep subsidiarity communitarian model of SF). Each SF models has diverse outcomes and in the same time demands specific processes able to foster innovation. Especially in the communitarian model of SF, the evolution can be better analysed under the lens of transition theories and the analysis of boundary objects able to link and to attract the interest of many actors into a new arena of interests where to co-design small bricks of a new society. Starting from the Italian situation and the results of a research action process in Tuscany, the paper focuses on SF as a SI process and its dynamic in its development process in the light of new political tools defined in the perspective of European Innovation Partnership and Operative groups (RDP 2014/2020).

09:30 *Marina García-Llorente*, *Cristiano Rossignoli*, *Francesco Di Iacovo* and *Roberta Moruzzo*

Social farming practices to promote social-ecological sustainability in rural areas

ABSTRACT. Public services and social support are specially required in rural areas, characterized by a depopulation pattern, aging of rural communities and isolation; as a consequence of the transition from rural to urban societies. Thus, the welfare state crisis makes rural areas especially vulnerable to the decline of public services. At the same time, rural areas and its ecosystem services are vulnerable to global change consequences. Rural areas and its ecosystems are the source of most essential services demanded by both urban and rural areas (e.g. food from farming, forestry, genetic materials, climate regulation, mass stabilization and control of erosion rates, cultural heritage, aesthetic experiences, etc.). Ecosystem services have an impact on economy, cultural, ethnological or environmental values. Though, the current human transformation of land cover have promoted the loss and abandon of most intangible ecosystem services (not included in conventional markets), especially those involved in the regulation of ecosystem processes (regulating services) or those related with the spiritual enrichment, culture, recreation and aesthetic experiences (cultural services). Under this context, neither public services (state/market public expenditures), neither public goods (in terms of ecosystem services) could be guaranteed, and new models are required to maintain their supply. They would need to (1) look for different sources of public services with an emphasis on the role of nature on human wellbeing, (2) rethink the governance framework behind public services provision, uncovering the role of local communities and non-formal institutions on it. Social farming is a good example of transition management and social innovation tackling both aspects. In this study, we present social farming and ecosystem service approaches in rural and agrarian landscapes. We use the social-ecological system framework to analyze the complex relationships established between biophysical and social systems in the context of agricultural areas conducting social farming. Then, we explore the key elements of both approaches and their potential association. We intend to facilitate the social farming approach to embrace its environmental relevance, being not only a social innovation solution but a nature-based solution. At the same time this provides an opportunity to find the explicit connection between ecosystem conservation and human wellbeing, uncovering the health values provided by agricultural areas and ecosystem services. It would also provides a case where governance solutions are found beyond market instruments, uncovering the relevance of bottom-up approaches and community institutional possibilities on the governance of agroecosystems to increase their environmental conservation.

09:45 *Georg Wiesinger*

The right concept in the wrong place? The Interrelationship between Care Farming and Social Capital
SPEAKER: *Georg Wiesinger*

ABSTRACT. A wide range of terms such as Social Farming, Care Farming, Farming for Health, Green Care in agriculture, etc. describe the diverse approaches utilising nature as a means for providing health and wellbeing services to vulnerable groups through structured and organised programmes on farms. Growing public awareness of the importance of nature for human health, on the one hand, and the need for sources of additional income for marginalised farms, on the other, are contributing to the swift development of farm-based social, pedagogical and care activities across Europe.

Many of these Social/Care Farming (SCF) concepts appear to be well designed in terms of organisational structure and the functionality of services. But the emphasis is mainly put on the model as such while the role of the physical environment and the local communities tends to be utterly neglected. As a matter of fact, the use of SCFs in working with target groups prone to social exclusion, such as drug addicts or ex-convicts, has in many cases provoked a negative response from the local population and thus prevented the establishment of SCF facilities. Social capital theory, which was initially proposed by Bourdieu (1986) and further elaborated by Coleman (1988), Putnam (1993, 2000) and others, might serve as an explanation for this reaction on the part of local communities. Social capital refers to connections among individuals, i.e. social networks and the norms of reciprocity and trustworthiness that arise from these. In that sense social capital is closely related to what some have called civic virtue. The difference is that social capital calls attention to the fact that civic virtue is most powerful when embedded in a dense network of reciprocal social relations. The amount of social capital revealed in networks of reciprocity, honesty, trust and tolerance relies on interdependencies between socioeconomic development and traditions of civic involvement. Social capital allows citizens to resolve collective problems more easily. Joiners also become more tolerant, less cynical and more empathetic towards those who are less fortunate, and thus also more tolerant of vulnerable social groups.

The presentation will discuss the results of a comprehensive survey conducted in three Austrian case study regions. The findings suggest that policy makers should recognise local social capital more clearly as a key issue in the process of establishing new SCFs. After all, even the best concept can fail if implemented in the wrong place at the wrong time.

09:00-10:30 Session 5H: WG14 - Rural tourism (agri-tourism) and changing urban demands

Rural Tourism offer and demand

CHAIR:
Antonio Raschi

LOCATION: Aula 19

09:00 *Marcelino de Souza* and *Ivo Elesbão*

Pedagogical rural tourism promoting the multifunctionality of agriculture: analysis of three experiences developed in Brazil

ABSTRACT. Pedagogical rural tourism is characterized as a set of educational activities undertaken in the context of rural properties using agricultural and livestock activities as well as natural and cultural resources with small improvements in the existing

infrastructures as a didactic resource. The main objective of this research was to analyze the educational role played by agriculture based on the pedagogical rural tourism and its relations with social, environmental, economic, cultural, and health and food safety functions. For that purpose, 8 entrepreneurs from the "Viva Ciranda" pedagogical tourism project in Santa Catarina, 5 entrepreneurs from the "Rural Tourism and School – Echoing" project in the Federal District, and 9 entrepreneurs from the Pedagogical Rural Tourism of the State of São Paulo were interviewed. The analysis of the data showed that the practice of this kind of activity has a set of features that benefits several aspects: economic ones – allowing the owners to complement their household income by adding value to their agricultural products and the sale of services developed in the properties; social ones – related to the improvement of owners' self-esteem and the recognition by the community of the work developed in the properties; educational ones – by enabling school groups the exposure to knowledge and practices associated with rural and natural environments; environmental ones – evidenced by the concern to promote environmental education; and, food security ones – from direct contact with activities that promote the recognition of the origin of the food consumed.

09:15 *Vincenzo Fucilli*, *Rinaldo Grittani*, *Ruggiero Sardaro*, *Francesco Petrillo*, *Claudio Acciani* and *Francesco Bozzo*

Territorial framework and agritourism practice in the northern Salento (Apulia region, Italy)

ABSTRACT. In February 2015, the Territory Landscape Plan of the Apulia Region (PPTR) was approved. This planning tool is characterized by a high cultural and political value, as social, economic and cultural stakeholders were involved in the construction process. The aim concerns the definition of objectives, strategies and projects for the increase of the quality and usability of the regional landscapes, hence for the growth of the community awareness towards historical and cultural values. To this end, the plan focuses on rural areas and agricultural sector, putting them in a holistic local and socio-economic context. This strategy is implemented through the town-country pact, one of the five local projects proposed by the PPTR. Such an approach is very relevant since Apulia is characterized by unique and variegated rural landscapes that have strongly contributed, in recent years, to the growth of the regional rural tourism. One of the areas that are consolidating their tourist sector is the northern Salento, in which natural beauties, such as rural and coast landscapes, coexist, characterized by olive groves, historical rural houses and charming towns. Hence, the research aims to study the context and specificity of agritourism in Ostuni and Fasano territories, neighbouring municipalities with similar landscapes that are consolidating their districts based on the excellence of the rural tourism. These areas, however, highlight some differences: on the one hand (Ostuni), there is a greater sensitivity to the landscape aspects, on the other hand (Fasano) there is more attention to the quality of the services offered. Therefore, the study analyses these two rural contexts by means of the relationship between agritourism and territorial framework in order to check the sustainability of the development processes and their consistency with the programmatic guidelines of the PPTR. Qualitative approaches, such as semi-structured interviews and photographic material will be used. The latter, in addition to the traditional illustrative purposes, is a research tool aimed at the interpretation of the rural landscape through techniques of the sociological analysis, such as photo-elicitation, visual focus groups, etc.

09:30 *Sandro Antenucci*, *Davide Barillà*, *Roberto D'Auria*, *Carlo Hausmann*, *Franco Torelli* and *Umberto Selmi*

The demand for Italian Agritourism

ABSTRACT. The Italian Agritourism is a really original formula, a model with peculiar characteristics, different from any other country. It is no coincidence that Italy is the only European Country with a specific legislation for the enhancement of the rural heritage and the national territory. Nowadays the Italian model is the focus of interest for many countries in the world because of its ability to exploit local resources; however, it has always shown a fundamental weakness in the great diversity of forms and rules established by local law. Also the difficulty in clearly communicating the quality of available services was an important weakness. An effort to harmonize design and communication of the quality was therefore necessary. This project was launched in 2013 by the National Observatory of Agritourism, which has entrusted the technical working group inside ISMEA the implementation. In order to carry out the project, characteristics and trends in domestic and foreign demand were deeply analyzed. The desk and field research conducted by Ismea have highlighted that the demand of an urbanized society is particularly complex, also because it comes out from sometimes contradictory elements. Ismea research also led to several hypotheses about market segmentation; an example is the model mainly based on two parameters: • the preference of experiencing in a dynamic way instead of a restful and relaxing stay • the propensity to live on the farm doing the activities proposed by the farmer instead of considering the farm as a base for visiting the attractivenesses of the area. Every group of consumer shows significantly different requests and expectations. Even more complicated is the picture of the foreign tourists, composed of really peculiar cultures, behaviors and feelings. Some areas of the world seek tangible elements (such as comfort, plenty of food, healthy products, etc.), while others have a propensity for intangible aspects: intense feelings, unforgettable emotions, unusual and genuine situations, history and culture of rural planet, green philosophy, the idea of preserving local areas. The Ismea research have resulted in a national scheme for classifying the quality of services, subsequently accepted by almost all local governments; it is based on a shared list of objective requirements (quality descriptors), completed by a system of easy to control scores, a selected list of important requirements, an institutional and national brand, a graphics system to identify categories.

09:00-10:30 Session 5I: WG19 - Food Security: Meanings, Practices and Policies

Food Security Policies: international experiencies

CHAIR:
Roberta Sonnino

LOCATION: Aula 11

09:00 *Moema Kelly Sá*, *Victor Oliveira* and *Daniela Carvalho*

Outlook for the purchase food program (PAA) in one the county of the Northeast of Brazil

SPEAKER: *Victor Oliveira*

ABSTRACT. Among the actions aimed at contributing to the fight against famine and poverty in the poorest regions of Brazil, the Food Acquisition Program (PAA), created by the Federal Government in 2003, has proposed as the strengthening of family farming. This strengthening is through income generation, in addition to promoting access of the population to food and nutrition insecurity purchasing healthy foods. This program

allows the formation of an arrange of socio-productive inclusion, involving the countryside and urban areas. In this context, the state of Pernambuco, investigated the progress of the PAA in the County of Garanhuns, located in the Territory of the Southern Agreste. Even with a significant rate of urban population, with about 89.1% of its 136,057 inhabitants, the city proves to be as important center of convergence for the other municipalities of its surroundings that make up the territory, largely with the supremacy of rural population. In Garanhuns, PAA is operated in buy direct mode and simultaneous donation since 2012, a partnership between the County government and the Agronomic Institute of Pernambuco - IPA. To that end, acquired at market price fresh products and processed products (cakes, pastries, cookies etc.). Currently, 34 farmers are registered with the IPA to provide their products alone and can get an annual income of up to R$ 6,500.00 (2,000 U$). Foods acquired are passed on to 10 charities that receive and assist about 1,000 people in a situation of food and nutrition insecurity among children, young and old. Therefore, it appears that the implementation of the PAA in the purchase and simultaneous donation mode enables family opportunities for local farmers market opening and completion of income; still benefit a needy public wide age range, which will have access to a higher quality food. However, problems with the program regularly gives rise to the need for a continuous process of procurement and supply of feed, requiring more concrete actions to what actually occurs strengthening family agriculture in the municipality and the help of the public served with the donations, benefiting an increased number of persons.

09:15 *Milena O.W. Capistrano* and *Renato S. Souza*

Food and farming meanings: reconnection between producers and consumers in a food security policy

ABSTRACT. The thesis addresses the constructing meanings in the food security and the key local agents in the reconnection between producers and consumers of agroecological food by means of the Food Acquisition Program for Family Farming (PAA) in Brazil. It is an operational dynamic of the Food Bank of Urban Rural Formation Center Irmã Araújo (CEFURIA) empirical analyse. This center assists the population affected by food and nutrition insecurity and social vulnerability in Paraná state. In this respect, agroecological farming families implement a project mode of Simultaneous Donation of Program. This paper aims to analyze reconnect producers and consumers in the institutionalization process of this policy as a short circle commercialization of agroecological products, as well as to measure the public intervention in meeting the basic needs of individuals. It is assumed that the construction of social relationships is linked to the inherent characteristics of social agents that operate as individuals assisted by the program, and that are able to influence and 'create' reconnection factors. Furthermore, it is assumed that such social relationships are affected by normative and regulative operational dynamics that are created at a local scope by social agents that implement the Program. Finally, it is presumed that social relationships created by social agents can influence the creation and modification of shared meanings and values, as well as the behaviors and attitudes in promoting the feeling of reconnection between producers and consumers of agroecological food. This debate aims to incite a cognitive approach focusing on individual and organizational social action in the institutionalization process of a public policy that has been analyzed in recent studies due to its capability to reconfigure production, distribution and food consumption models, facing disconnections of the current food system. Thus, a qualitative methodology was applied. Participative observations and semi-structured interviews with agents located in

different points of the Food Bank of CEFURIA, from production to consumption were conducted. The results were as expected. The trajectories and views of individuals and organizations involved in the Program implementation in Curitiba and in the settlement of Lapa, as well as the organizational configuration and dynamic operational created by them to execute the Program through the Food Bank of CEFURIA may influence social relationships and creation, modification and sharing of institutional elements along the food circle. These relations may influence attitudes and behaviors of the agents in order to promote reconnection between producers and consumers of food.

09:30 *Luca Fernando Ruini*, *Roberto Ciati* and *Carlo Alberto Pratesi*

The Double Pyramid of the Barilla Center for Food and Nutrition: a tool for informing consumer choice and promoting sustainable food consumption

ABSTRACT. It is well known that our daily food choices significantly affect not only our personal well-being, but also the environment. Food production is very intensive in terms of land and water resources, and greenhouse gases emissions. Starting from this premise, the Barilla Center for Food & Nutrition has devised in 2010 the Double Pyramid, a graphic framework aimed to relate the environmental and nutritional impacts of food consumption in order to increase people's awareness on these issues. This paper will present the scientific underpinnings of the Double Pyramid as well as its usefulness as a framework for appraising and comparing the impacts of different consumption patterns.The Double Pyramid consists of two frameworks, outlining the relationship between food products and nutritional value according to the principles of the Mediterranean diet (Food Pyramid), and food products and environmental impacts in terms of water, land and CO2 intensity (Environmental Pyramid). The Double Pyramid shows a strong correlation between healthy and environmentally-friendly products. The food products whose consumption is recommended to be more frequent, such as fruit, vegetables, and cereals are also those associated with low environmental impact. The concept has been tested by assessing the environmental impact of two different menus, with similar macronutrient profile but different quantity and quality of animal products. The results suggest that a diet based on the principles of the Double Pyramid generates lower environmental impacts than a diet relying mainly on a daily intake of meat.Thanks to its communicative efficacy, the Double Pyramid is certainly a valuable tool for helping the consumers decide what to eat on a daily basis in order to adopt a sustainable diet. This paper will also provide an estimation of the impact generated by the use of the Double Pyramid model on consumption patterns of the general population.

09:00-10:30 Session 5J: WG20 - Revolutionary solutions for local food systems

Social innovation in local food systems: methods, tools and needs

CHAIRS:
Silvia Paolini and *Paola Scarpellini*
LOCATION: Aula 20

09:00 *Francesco Di Iacovo*, *Angela Galasso*, *Silvia Paolini* and *Paola Scarpellini*

Revolutionary solutions for local food systems

ABSTRACT. In recent years practices carrying social and economic innovation through agriculture and food production have rapidly grown, both in numbers and in terms of quality and attention paid by the society. Even more modern economic sectors (like

informatics or tourism) are looking with interest to these potential innovative charge coming from the primary sector. These practices find the way for identifying and implementing solutions that, besides being economically sustainable, contribute to the social and environmental community improvement. These initiatives are “revolutionary solutions”, carrying real social innovation in a lot of fields, like: environmental and nutritional education to new generations (school gardens, pedagogical practices,…); environmental safeguard (biodiversity, landscape, energy, ...); governance, with modern and participated experiences (food planning, common goods management, urban-rural solutions,…); social justice paths (food access, social farming, critical consumption, poverty reduction,…); urban planning (community gardens, farmers’ markets,…). These practices are related to food production, based on both rural and urban communities’ wide needs and requirements. Often involves a large number and kind of stakeholders, each with a different expertise and role as farmers, third sector, institutions, users, consumers, different forms of active citizenship. Local food systems as well as individual practices and their impacts on the development of territories, may be analyzed by using a wide range of theoretical and methodological tools, from very different points of view, and with the contribution of various sciences and expertises, within a multidisciplinary debate, able to involve the society. However there is a strong feeling that, even for a strong dynamic of change taking place at present, in the fields there is a lot more innovation than normally encoded and debated. We have now the need to bring out the practices that proved to be effective carriers of solutions, in order to better understand them also from different scientific view points. In this perspective, the aim of this working group is to give voice to the leading actors of the change, the ones working in the field, by selecting practices that may deeply change the way food and farming are designed, organized and managed. Aim of this working group is also to introduce practices in a context of international research, able to analyze and valorize them by making practices instantly more visible and easier to understand, so to facilitate their transfer in a logic of partnership between field innovators and scientists.

09:15 *Remco Schreuder*
Introduction to EIP-AGRI Agricultural Productivity and Sustainability
SPEAKER: *Remco Schreuder*

09:30 *Tjeerd Andringa*, *Merlijn E. Albering* and *Lieke F. Heupink*
Short Food Chains as Revolutionary Solution
SPEAKER: *Merlijn E. Albering*

ABSTRACT. We propose short food chains as a revolutionary solution and identify small-scale farmers as the revolutionaries to realize a sustainable and food-secure future. Food chains that are too long and com-plex cannot be understood and its actors will create more problems than they solve. These conclusions are based on recent insights in the origin of cognition suggesting two mindsets: one for problem solving and one for co-creating a sustainable future. Only food chains that are sufficiently short and overseeable can be understood and farmed sustainably. Farmers in food chains that are too long and too complex will gradually deplete the resilience of soils, livestock, and crops, and will harm societal health.

09:00-10:30 Session 5K: WG24 - Revaluing institutional food procurement

Enabling Environments and sustainable public food procurement: Institutional procurement Complexities - Integrating levels, scales and practices

CHAIR:
Camilo Lozano Torres
LOCATION: Aula 4

09:00 *Siobhan Kelly* and *Luana Swensson*

Institutional food procurement programmes – An inclusive business model for linking smallholders to local value chains

ABSTRACT. The Food and Agriculture Organization of the United Nations (FAO) under its strategic objective to enable inclusive and efficient food systems, is analyzing the role of institutional buyers in the development of smallholder market integration in food supply systems.

An institutional buyer refers to either a public or a private sector entity with a presence in the domestic market that purchases large quantities or volumes of produce. Despite the recognized potential of private actors as institutional buyers, the focus of this work is mainly on the public sector.

Institutional public buyer refers to public institutions such as schools, food reserve authorities, the military, prisons, hospitals, food aid organizations and relief development agencies. Typically these buyers do not have a profit motivation and are usually driven by the need to acquire food products for consumption within their own institutions or as food donations. They are often guided by public procurement policies that can leave little room for flexibility in contract negotiations or choosing suppliers.

To increase the knowledge on institutional procurement for smallholder market integration, FAO developed a series of case study appraisals. WFP's Purchase for Progress (P4P) was identified as an entry point for analyzing models of institutional procurement.

The P4P pilot was launched in 2008 in 20 countries to leverage WFP's purchasing power to support local agriculture and market development. P4P links WFP's demand for staple food commodities with the technical expertise of a range of partners, to stimulate smallholder productivity and collective marketing with the objective that smallholders sell their surplus to formal markets. P4P is a good example of an institutional effort that links the organization's procurement needs to local development concerns, by building a support initiative to increase the volume of staples procured directly from smallholders and or small traders.

The objective of the cases is to analyze the role of P4P within the overall framework of inclusive food systems and to identify examples of other institutional procurement models with potential for smallholder inclusion.

This paper will discuss lessons and policy recommendations based on a global analysis of the case studies which comprise seven countries: Ghana, El Salvador, Ethiopia, Guatemala, Kenya, Rwanda and United Republic of Tanzania. The analysis looks at the P4P experience in each country, including an identification of the main challenges and an assessment of their sustainability, potential for scaling up and replication.

09:15 *José Roberto Rambo*, *Silvia Maria De Almeida Lima Costa* and *Gilmar Laforga*

PRESENT INNOVATIVE ASPECTS IN THE CURRENT PUBLIC POLICY OF AGRICULTURE FOOD PROCUREMENT OF THE BRAZILIAN FAMILY

ABSTRACT. The aim of this article is to demonstrate the innovative aspect involved in public policies for food acquisition of the Brazilian family farming. Creating alternatives to improve performance standards, in both, food security (of quantitative order focusing on hunger containment), and the design of new market mechanisms mediated by public organizations, Brazil innovates determining an institutional environment, effectively able to create incentives for a quality capture of the food products, produced by family farmers, which would not occur in the sale of equipment of traditional distribution channels. This solves a market organizational failure for this segment. Using a theoretical cut based on industrial organization and Neo-Schumpteriana approach, some constraints are discussed on the extent of the screen policies, namely: the Food Acquisition Program of Family Farming - PAA, the National School Feeding Program - PNAE and the Paulista Program Social Interest Agriculture - PPAIS (operating in the State of São Paulo). The business model innovations, institutionally created, provide greater scope for the PAA and require major adjustments to the other two programs in achieving the stated objectives, referring to the need to review the coordination mechanisms between the social participants involved.

09:30 *Rita InÊs Pauli*, *Jéferson Schulz* and *Bruna Zajonz*

Dynamics of the National School Feeding Programme at state schools in the city of Santa Maria-RS

ABSTRACT. The article shows the operational dynamics of the National School Feeding Programme (PNAE) in state schools of the city of Santa Maria-RS. The methodological procedures include, in addition to the review of the literature about the theoretical approaches of the New Institutional Economics (NEI), an empirical analysis performed from the use of direct documentation technique in 14.63% of state schools in the city, em-phasizing relations involving the buying and selling pro-cesses by representatives of formal and informal social groups. The results infer that the administration of PNAE resources has taken place efficiently, but there were some failures in governance and perception of quality of school meals. These results could form the basis for the improvement of complementary policies and specific forays into infrastructural elements, enabling better quality in school meals and resulting in improvements for all social groups involved.

09:45 *Vivien Lunda*

The Organic Farming Strategy in Vorarlberg. Towards a socio-ecological transformation?

SPEAKER: *Vivien Lunda*

ABSTRACT. Possible key drivers to foster change in the incumbent food system are social movements, environmental and related agricultural sustainability movements as well as local efforts for building an alternative food regime in order to create a pathway for necessary environmental and social change by challenging the ways we think and talk about food. However, as it is not sufficient to engage actors and stakeholders as change

agents for a new agro-food system in political and social struggles, local food-system stakeholders from public and private sectors need to be actively involved and empowered for a complete transformation that requires a complete transformation of the society. Besides a supportive actor network, the positive interaction of actors on different levels is a prerequisite for a successful transformation. Besides the actor level, local action needs to be institutionally embedded at the level of technical, market, social and institutional support. When implementing a local food system strategy it is indispensable to take into account local institutional interests, though with consideration of dividing between local institutions that are a great support and are more successful in promoting democratic, reflexive localist solutions and institutions that merely perpetuate local inequalities. In this context, the Agriculture Strategy 2020 "Ökoland Vorarlberg – regional und fair" (Organic Farming Vorarlberg – regional and fair) is presented as best practice example towards a sustainable local food system in Austria that is both locally supported and institutionally embedded. In interplay with the local government this process is not only fostered through bottom-up approaches, but even supported by top-down engagement. Collective action where actors bring in their different perceptions over local, sustainable agriculture and build their joint strategies and aims resulted in a 16 objectives framework in fields such as quality of life, education, entrepreneurship, tourism and trading, agricultural income, local supply, organic farms, energy autonomy, protection of land and property and grassland management. This paper analyses the potential of the Organic Farming Strategy Vorarlberg to foster a socio-ecological transformation towards a local food system by questioning in what ways existing structures are challenged through reflexive and critical actions and in how far underlying values and beliefs are negotiated between actor groups. In the framework of an institutional analysis and narrative policy analysis relevant actors, institutions and structures as well as their relations and their role are identified. Expert and stakeholder interviews of involved actors give insight into sites of resistance and hegemony.

09:00-10:30 Session 5L: WG22 - Food System Transitions: Cities and the Strategic Management of Food Practices

CHAIR:
Nevin Cohen
LOCATION: Aula 14

09:00 *Nevin Cohen*

Food System Transitions: Cities and the Strategic Management of Food Practices

SPEAKER: *Nevin Cohen*

ABSTRACT. Socio-technical systems like food are composed of and shaped by the everyday practices that are performed in specific places. Transitioning large-scale systems involves changing the practices that constitute and reproduce them. This is true of the food system, which is enacted by the repetitive performances of everyday food activities (e.g., shopping, cooking, discarding) in communities.

Cities are uniquely positioned to change food practices, and by doing so transition socio-technical regimes like food to sustainability. Cities are tightly bundled agglomerations of everyday practices, and are the stages on which healthier and more sustainable practices are performed, repeatedly, until they become normal, everyday activities. Municipal policies, programs, and infrastructure influence practices, while activists, spiritual leaders, media, teachers and other urban thought leaders shape our understanding of practices. By strategically influencing food practices, cities can potentially advance

public health, improve the environment and economy, and ultimately transform the food system.

This working group explores the potential for cities to advance transitions through the strategic management of everyday food practices through various methods and cases. Together, the papers investigate the extent to which theories of social practice shed light on how changes in food practices transform the food system, the role of cities in fostering transformation through the support of sustainable food practices, and methods to map practices and the elements that shape them.

The four papers explore how cities and civil society groups have facilitated the adoption, implementation, and normalization of practices through changes to the elements of practices – the meanings attributed to a practice, its material dimensions, and the competences required for practitioners to engage in the practice. We examine changes in local practices that affect different segments of the dominant food regime (e.g., urban agriculture, food shopping, public health interventions, food recycling), which illustrate how city governments and city-based civil society groups have influenced the adoption, implementation and normalization of sustainable food practices.

09:15 *Beatriz Pineda Revilla* and *Arnold van der Valk*

Potentialities of practice-oriented sustainable food planning. An analysis of spatial food practices in Amsterdam and Berlin.

ABSTRACT. In the last decade, food issues have gained prominence on political and research agendas. Food is increasingly perceived as a lever with the ability to link different fields such as health, economy, transportation, climate, social cohesion and other. In the domain of sustainable food planning, conventional approaches, based on individual and behavioral patterns, have shown clear limitations. Rigid traditional top-down approaches impose restrictions instead of enabling opportunities. This paper aims at exploring potentialities of social practice theory (Shove, 2004; Shove et al., 2012) to provide an innovative framework for 'practice-oriented' sustainable food planning. In this practice-oriented approach, the unit of analysis is the practice and not the individual. By analyzing how food practices relate to each other, how their elements (meanings, materials and competences) are linked, who are the practitioners, etc., new pathways to sustainable food policy can be discovered.

In order to achieve a successful transition from conventional to practice-oriented sustainable food planning, cities must play a crucial role (Cohen & Ilieva, 2015). Living in a world of cities, the future food system will be determined by how the aforementioned food practices are handled in cities. This paper provides a tentative exploration of food practices in Amsterdam and Berlin. Acknowledging the great diversity of food practices taking place in these two cities, spatially situated food practices such as urban food growing and food retail (co-ops and markets) are exposed, because they highlight pros and cons of spatial planning in the field of sustainable food planning. Also the paper makes a contribution to the emerging discourse on appropriate methodologies in food planning and the contours of food practice scholarship.

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09:30 *Christophe Soulard*, *Mayté Banzo*, *Coline Perrin* and *Elodie Valette*

Urban strategies and practices for agriculture and food: six Mediterranean case studies

ABSTRACT. The Mediterranean region is one of the areas in the world most exposed to urban growth and increasing food insecurity. The population should continue to increase (from 446 million in 2000 to 570 million in 2025) and remains concentrated in cities and on coastlines, strongly depending on food imports. In this context, some cities in the Mediterranean begin to develop food and agricultural strategies that aim to renew and strengthen the links with the local agricultural production: these strategies involve short supply chains and alternative food networks, urban agriculture and gardening, farmland preservation, local procurement for schools meals or farm-to-school initiatives. This paper discusses the role of cities and local governments in the implementation of strategies for sustainable urban food systems. In six Mediterranean metropolitan regions we analyze urban policies and agricultural practices, along with the political processes involved. The comparison confirms that cities are pertinent actors, capable of encouraging new practices and transversal governance. Nevertheless, questions remain concerning their ability to mobilize the agricultural community, and civil society in general, both elements crucial to the sustainability of any agricultural and food strategy. In concluding, we discuss the conditions that could lead to the emergence and implementation of sustainable urban food systems.

This paper will discuss these questions using two perspectives. First it focuses on the motivations that can lead or not Mediterranean cities to seize food and agricultural issues. From the DAUME research project and the partnerships that were established through it, we describe what happens in 6 city-regions in the Mediterranean: Constantine (Algeria), Athenes (Greece), Montpellier (France), Lisbon (Portugal), Meknes (Morocco) et Pisa (Italia). We analyze how urban policies, focused on the necessity to deal with urban growth, face difficulties in interacting with approaches of agriculture and food related issues. This panel underlines the various drivers of the agriculture and food urban policies : land and urban planning priorities, food security, social or environmental issues, etc.

Secondly, we focus on the case study of the city-region of Montpellier (France, 500 000 hab.). Montpellier is currently elaborating a food and agricultural municipal policy, part of it involving changes toward more sustainable social practices. The analysis of this policy elaboration, which our research team was a part of (action-research), helps revealing the agricultural and food practices of the local authorities, the levers for potential action and the co-design process.

09:45 *Marta Antonelli*, *Sonia Massari*, *Carlo Alberto Pratesi*, *Luca Fernando Ruini* and *Eleonora Vannuzzi*

The transition towards more sustainable diets. How can urban systems contribute to promoting more sustainable food practices?

SPEAKER: *Marta Antonelli*

ABSTRACT. It is widely uphold that it is necessary to shift diets towards reduced levels of meat, increased consumption of fruit and vegetables, while promoting more healthy lifestyles, so to address environmental problems, support public health and contribute to finding new paths for feeding present and future generations in a sustainable and fair way. It is also recognised that any successful initiative requires a "systemic approach" that include not only individuals, but also governments, business actors, as well as civil society initiatives that work in synergy to promote a change practices towards the desired change (Dibb & Fitzpatrick 2014).

In 2010 the FAO defined sustainable diets as "are those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources". It is important to draw attention on sustainable diets as this notion help concentrate policy attention on transforming consumption, not just production and distribution (Lang 2014).

With over 50% of population living in urban areas and the largest wave of urban growth in history (UNFPA 2015), the issue of sustainable food consumption and production is rising up urban agendas. The challenges faced by cities vis-à-vis their urban food policies are common, although the local context influence to great extent the range of choice of policy makers. These local factors include the historical and cultural roots of the city, the characteristics of the local economy, as well as its geographical setting and natural resources endowment, infrastructure, and finally societal and political factors. In urban context, food can act as a "a vehicle to integrate the economic, social and environmental dimensions of sustainability, as well as for addressing justice and health issues at different geographies and scales" (Moragues 2013).

Against this backdrop, the overarching aim of this article is to investigate how urban systems can contribute to shift towards more sustainable diets and to create a system for producing, processing, distributing, and consuming food that is environmentally, socially, and economically sustainable. The study will explore these concepts theoretically while reviewing current experiences of cities that have engaged in urban food policies over the past few years. Finally, the study will provide a number of recommendations for different stakeholders at the local level.

10:00 *Isabelle Lacourt* and *Maurizio Mariani*

City Food Policies - How cities can foster the necessary change of paradigm of our food system

ABSTRACT. Cities concentrate people, goods, capital investments, infrastructure and knowledge. They gradually expand worldwide, housing a growing population, whereas rural exodus accelerates the decline of many territories. Despite the evidence that a city eats. It eats food, but also it consumes the land needed to produce it, food is not usually

considered among the competences of a city.

Despite this general trend, several cities start to re-evaluate food as a mean to improve urban planning and citizens' wellness, opening simultaneously several avenues for reflection, research and action. As illustrated by the different cases histories presented in this essay, they can be driven by different motivations, but share a common vision in which food-related projects are transversal to siloed mainstream policies such as health, education, landscape management, transport, environment, waste and water management, adaptation to climate change, local economy and social welfare, thus strengthening social cohesion and creating a social bond.

The needed paradigm shift in both food planning and policy making calls for a concerted commitment at both continental, regional and local level. To move in this direction, cities must equip themselves with adequate structures that works as a vehicle for change, embedding all different stakeholders, including citizens in a stimulating space of innovation, being in charge of vision-making and practical projects, looking at tailor-made interfaces of cooperation between urban centers and adjacent territories.

Twelve cases studies have been implemented within Eating City platform to evidence the relevance of city food policies promoting social and ecological resilience.

The exam of successful projects shows how these pioneers have been able to detect the capacity of food-related projects to strengthen social cohesion and create a social bond, on top of such benefits. Indeed, not only food can become a thread that connect all the main competences of the cities related to urban environment, economic development, education, solidarity, culture and leisure, health, politics and governance, but it can also give consistency to a synergic osmosis between cities and adjacent territories.

09:00-10:30 Session 5M: WG17 - Civic agriculture for an urbanizing society: production models, consumption practices and forms of governance

Re-conceptualizing agriculture and food as commons

CHAIR:
Maria Fonte

LOCATION: Aula 16

09:00 *Chiara Paffarini*, *Biancamaria Torquati*, *Valentina Fuoco* and *Lindsay Smales*

Urban food gardening: an analysis from a theoretical and empirical perspective

ABSTRACT. Urban agriculture can be divided in three major categories: urban food gardening, urban farming and non-urban oriented farming. Inside the urban food gardening category we can distinguish some sub-categories like family gardens, allotment gardens and community gardens, as well as inside of urban farming category are included rent equipped spaces like family gardens. These different typology of urban food garden may be different for production model, consumption practice and form of governance. The paper examines the different typology of urban food garden using the economic concepts of ri-valorous and excludable to classify them in private goods, common goods, club goods and public goods. The main variables considered are the key resources used, the key activity carried out and the shared values (like social inclusion, joint gardening, reclaiming the commons, etc.). Empirical analysis concerns the urban area of Rome where the urban agriculture movement is growing. Nine case studies were chosen and economic, organizational and social aspects of community and edible gardens

were analyzed. The data were collected through a questionnaire in 2014. The results shows that the community and edible gardens are increasing the socialization of groups of citizens that share the common goal of beautifying and enhancing their neighborhoods and re-qualifying some disuses area, despite the lack of a regulation about the community and edible gardens in Rome. The results underline also that these social aspects are more important than economic aspects in the case of common goods like urban community gardens that opposing the increasing privatization and commercialization of public space. While the economic aspects are important in the case of private goods like the food gardening in urban farming.

09:15 *Matteo Belletti*

Peasant Economics in the Twenty-First Century: building a ”polis” in the wild

SPEAKER: *Matteo Belletti*

ABSTRACT. The structural features characteristic of present-day humans are the same as those of the line of 3.5 million year old hominids to which we belong. From the beginning of humankind, food has played a crucial role in creating communities. Indeed, the changes in the early hominids that made language possible relate to their history as social animals in close-knit interpersonal relationships associated with collecting and sharing food. Conversely, nowadays the food economy is the most evident symptom of human alienation. Thus, the basic assumption of this paper is that civic agriculture based on the economy of the commons needs to rediscover the original nature of food, namely an element of mutual cognition and community creation. We explore how a rethought peasant agriculture can be crucial to such a goal. Nevertheless, peasant economics does not appear feasible in urban society mainstream economics and this creates the paradox of sustainable development. The Solidarity Purchasing Group (SPG) experience in Marche Region, Italy, shows the main features of this paradox and offers an effective perspective to investigate the role of peasant agriculture in a post-industrial society.

Keywords – Peasant economy, habit loop, quick fix.

09:30 *Nicolò Bellanca* and *Benedetto Rocchi*

Shared and relational activities in civic agriculture: towards a non –individualistic conception of well – being

ABSTRACT. The quality of relationships among people is increasingly perceived as a crucial determinant of well-being (Kahneman, 2006). Despite this relevant shift, economic analysis is still deeply rooted to an individualistic conception of people acting and living together. In this paper we shall argue that to better understand the subjective and inter-subjective multiple dimensions of well-being, it is necessary to further deepen its conceptual framework to deal with its genuine relational essence. The several forms of civic agriculture and short food supply chains emerged in the last decades are an interesting case to highlight the limits of an individualistic conception of well-being and to suggest a possible development of the analysis towards a genuine "relational" approach. Scholars widely agree that positive social impacts in terms of development of personal relationships and sense of community are among the benefits of their diffusion. Concepts as "social embeddedness" (Granovetter, 1985) and "relations of regard" (Offer, 1997) have been extensively used to depict the alternativeness of these forms agriculture

and food production. In this paper civic agriculture is analysed within a framework explicitly recognizing that some of its features are intrinsically not reducible to the simple interaction among individuals conceived as "independent "entities". Our framework focuses on the emergence of participatory goods (Reaumè, 1988; Taylor, 1995), i.e. goods whose individual enjoyment depends on sharing them with others, and on relations as a constitutive feature of individual being and acting (Emirbayer, 1997). Within civic forms of agriculture people follow pathways of personal change affecting the relational dimension of their lives, according with the use they do of money and spare time. At the same time these personal pathways contribute to the emergence of rural economies and cultures as participatory or shared goods.

Emirbayer M. (1997). Manifesto for a relational sociology. American Journal of Sociology, 103(2): 281-317. Granovetter M. (1985). Economic action and social structure: the problem of embeddedness. American Journal of Sociology, 91(3): 481-510. Kahneman, D. (2006). Developments in the measurements of subjective well being. Journal of Economic Perspectives, 20: 3-24. Offer A. (1997). Between the gift and the market: the econpomy of regard. Economic History Review, 50(3): 450-476. Reaumè D. (1988). Individuals, groups and rights to public goods. University of Toronto Law review, 38(1):1-27. Taylor C. (1995). Irreducibly social goods. In Taylor C. Philosophical Arguments, Harvard: Harvard University Press, 127-145.

09:45 *Anita Pinheiro*

Localization of food production in a rurban society: A case study of the role of facebook networks in Kerala, India

SPEAKER: *Anita Pinheiro*

ABSTRACT. Localization of food production is considered as one of key factor leading to the food availability within a particular locale which is a determinant of food security. It calls for the re-localization of food production from big farms to smaller ones and also to shorten the distant travel of food. This shortened food supply chain greatly reduces the dependence on food imports and thereby act as a vital component towards achieving self-sufficiency and sustainability in food production. It also eliminates the chances of vulnerability associated with external dependence for food. Therefore, studies on various aspects of food system localization are pertinent to the context of Kerala where a food-deficit economy exists.

Kerala is a coastal state in India and exhibits rurban phenomena in which the boundaries of rural and urban areas are blurred. It depends on neighbor states for more than 50% of its food and demonstrates high vulnerability to food price, supply cuts due to socio-political factors and quality of food articles. The growing health concerns about the pesticide-contaminated food has resulted in a shift towards self-sufficient food system and vegetable production is being localized in the state on a slow pace. Governmental and non-government agencies promote organic vegetable cultivation in backyards, schools, hospitals, government offices etc. in rural and urban areas. On the informal side, the popularization of facebook have been effectively utilized for the promotion of localized production of vegetables and other food articles. Drawing from the theoretical insights of Science & Technology Studies, this paper analyzes deeply the role of facebook networks in the promotion of self-sufficiency and sustainability in vegetable production and addressing the challenges of food system localization in Kerala. The study specifically looks into the functioning of three facebook groups viz. Krishibhumi,

Agriculture and Adukkalathottam which focus on technical and social aspects of localized farming in Kerala. The observations of the study indicate that these facebook groups play significant roles in motivating people to start backyard farming, acts as a seed repository of rare and local varieties, share the knowledge of innovative technologies for minimal-space cultivation etc. to a wider public. One of the groups also carry out field trainings to ensure inclusive approach towards those who do not have access to facebook. In these ways, the concerns of achieving sustainability in a rurban society has been addressed by them to an extent.

10:30-11:00 Coffee Break

11:00-12:30 Session 6A: Parallel Working Group sessions (4)

11:00-12:30 Session 6B: WG6 - Transition approaches

System oriented papers

CHAIRS:
Pieter de Wolf and *Myriam Sánchez*

LOCATION: Aula 18

11:00 *Myriam Sanchez-Mejia*

Dynamics of transitions: differentiated analysis and interventions for different institutional frameworks

SPEAKER: *Myriam Sanchez-Mejia*

ABSTRACT. Dynamics of transitions: differentiated analysis and interventions for different institutional frameworks Colombian indicators for rural areas (Ocampo 2014, Olarte 2015) compared to urban ones, illustrate a case for analysis and understanding of the “complex dynamics of societal change”. According to different studies and experiences, agriculture, a key activity in rural areas in Colombia, demands a technological transition to become a strategic factor of change. Different innovation environments, condition the patterns and mechanisms in technological transition processes in rural areas. Institutional frameworks are clear differentiators for these processes in developing countries (Sanchez 2015). It can be observed that public policies, as orientation for public and private planning of investments, are missing or are not strong enough to support a transition process in these cases. A multi-level perspective (Geel 2010) appears convenient to put together related aspects for alignment towards a socio technical transition, mainly when agents coordination is not evident. Not many examples of implementation of systems of innovation in Colombia, and/or studies of them are in place. A field of research is open in this subject. To build a framework for this research needs to clearly differentiate the contexts of existing references in other countries and circumstances. This paper aims to call the attention to some differences and similarities to be taken into account within common approaches of socio-technical transition processes, for different innovation environments, to contribute to differentiate analysis and interventions. It could be useful to analyse cases in EU countries, regulated through common, well-known agreements, compared to latino-american cases, with different conditions, regulation and innovation systems. The institutional framework is not the only difference, but is probably one of the most relevant for interventions in an actors oriented approach. A compared analysis of dynamics of transitions in rural areas for different innovation environments could result from the cases to be studied in the WG6 AGURB2015, to motivate research on the subject, in other non-EU countries and regions.

11:15 *Pieter de Wolf*, *Emiel Wubben* and *Karel de Greef*

Transition: enhancing collective action over diverse stakeholder communities

ABSTRACT. The re-connection of agriculture and urban society includes the challenge of re-connecting diverse stakeholder communities. A Dutch research project developed a framework, based on different transition and network theories, to reflect and intervene on this process. This is especially useful for partners, like research and consultancy, who are involved in innovation processes as a project manager or process facilitator. The framework is built on the communication systems theory of Luhmann, after van Assche et al (2012). This theory describes society as a collection of interacting social systems. Additionally, the concept of boundary work (Clark et al, 2011) describes the process between such distinct networks or stakeholder communities towards collective action. This also links to stakeholder management theory (Freeman et al, 2011) and Ties theory (Granovetter, 1973), that reflect on the composition of the stakeholder network and the interests of the stakeholders. The multi-level perspective (Geels, 2011) and strategic niche management (Schot, 2008) concepts analyse the wider context from a transition perspective and help to analyse individual initiatives as a niche. The framework was applied on several case studies from biobased economy, urban agriculture and sustainable food chains, in which collective action of various stakeholders was developed. The role of research in this process was a specific point for reflection in these case studies, but also in interactive sessions with researchers involved in similar projects.

11:30 *Octavio Avendaño* and *María Cristina Escudero*

Chilean Agricultural Entrepreneurs and Free Trade Agreements

ABSTRACT. The main goal of our investigation is to analyze the behavior of the agricultural entrepreneur organizations toward the free trade agreements (FTA) signed since 1990 in Chile. In order to do this we will, firstly, select all the FTA that include import and export of agriculture commodities. Secondly, we will elaborate a data set of the main top leaders that control the 4 most important organizations: Sociedad Nacional de Agricultura (SNA), Consorcio Agrícola del Sur (CAS), Asociación Agrícola Central and Sociedad Agrícola del Norte. Thirdly, we will report the most important stands of those board of directors previous the adoption of the FTA by the government and Congress.

In the past history of the country, those organizations such as SNA and CAS had a protagonic rol implementing the agrarian reform (1964 – 1973) and decades after they also have and important role implementing the liberalization of the economy during the Pinochet years (1975 – 1982). In both occasions, the impact that those organization had was a consequence of their boards coming together. After 1990 these organizations have had also the ability to influence on the decision making process regarding agricultural issues and on the content of the FTA but the result had not been even for all entrepreneurs. As part of the explanation for this is that the relationship between the main organizations has varied over time depending on who are the losers and winners of specific policies. Sometimes they have been able to act together –mobilizing resources- but sometimes they have not.

In sum, based on recent literature on interest groups we assume that the closeness and estrangement between the organizations has been the consequence of changes on their leadership. This relationship can explain why sometimes each organization fight for their

particular interest and why sometimes they have been able to gather together and fight for collective goals.

11:00-12:30 Session 6C: WG2 - Short food supply chains (regional products; farmers' markets; collective farmers' marketing initiatives; alternative food networks; CSA)

Building New Links between Producers & Consumers: Non-European Experiences

CHAIR:
Chul-Kyoo Kim
LOCATION: Aula 21

11:00 *Chul-Kyoo Kim*, *Mima Nishiyama* and *Jong Duk Kim*

East Asian 'model' of local food?: key features and implications

ABSTRACT. In both Korea and Japan, short food supply chains such as farmers' markets, CSAs, and local food shops have been attracting strong public attention in recent years. Health & price concerned consumers and economically difficult farmers consider the short food supply chains as an alternative to the existing food channel dominated by large supermarkets. Yet, East Asian local food experiments seem to lack active initiative and participation by the actors of consumers and farmers. That is, the central government and local governments have been playing an active role in promoting local food while consumers and farmers remain passive and interested in financial gains. For example, there are more than 50 local food shops supported by the government in Korea. In Japan, local governments and semi-statal agricultural coops are arranging local food shops. In both cases, grass root engagement by social actors, i.e., farmers and consumers, is thin. We analyze the key common features of local food systems in Korea and Japan by locating them in the historical context of social and agricultural development in each country. We argue that in order to make a genuine local food system, they need to be embeded in social values such as solidarity, participation, and democracy.

11:15 *Potira Viegas Preiss* and *Flávia Charão Marques*

Tendencies on the Brazilian local food movements: an analysis on Collaborative Purchasing Systems

ABSTRACT. There is a scarcity of studies around the Brazilian Collaborative Purchasing Systems (CSA) that may help to understand the contributions that these initiatives can generate to social change. Very few studies were developed, although there register of more than 45 initiatives in the country, such as networks, groups, collectives, associations that somehow has established direct relations between producers and consumers for marketing local food products. Only a small number of those initiatives consider themselves as "CSA" systems, having since 2013 a national CSA Network to articulate and disseminate them. There is also a "Network of Responsible Consumption Groups", a denomination that is more accepted in the country and which articulates a wider range of initiatives. This article aims to present a characterization of Brazilian scenario, using data collected on a survey carried on 2014 among different groups, which are complemented with literature review and in deep research in some cases. The analyses includes a basic profile of the groups, a location map, functioning dynamics, number of consumers and producers involved, as well as considerations on the impact that engaging in those initiatives have towards actors social practices. We also introduce a dialogue between

convergences and disparities comparing Brazilian case to the North-American and European local food movements, contributing to the debate of how these experiences can feed the whole movement. We are considering Collaborative Purchasing Systems as a cultural response to global forces, in which the notion of globality and modernity as a homogenizing process is challenged to consider how actors create agendas for action. Then, the analysis is framed by the 'counter movements' notion; this approach take into consideration the heterogeneity of actors and practices involved, where different social constructions are made on issues such as ecology, locality, region, quality parameters and consumption cultures, in a context where producers and consumers no longer have a passive role in absorbing and following the precepts of the hegemonic food system; and through their agency can seek to incorporate practices and arrangements more consistent with social construction of new agendas for food local realities.

11:00-12:30 Session 6D: WG5 - Entrepreneurial skills and competences, knowledge and innovation systems and new learning arrangements

New entrepreneurial learning arrangements

CHAIRS:
Gerard McElwee and *Robert Newbery*
LOCATION: Aula 16

11:00 *Marcello De Rosa*

Between individual and collective entrepreneurship: how to puzzle out rural entrepreneurship?

SPEAKER: *Marcello De Rosa*

ABSTRACT. Urbanizing processes have deep impact on rural entrepreneurship and stimulate strategies of both qualification and diversification of farming activity. Moreover, relocalization of food consumption emphasise the relevance of reconnection perspective through the development of alternative food networks. Therefore, two perspective of "rural" may impact on rural entrepreneurship and on rural innovation: 1. Rural as space of production, with the progressive transition from the productivist paradigm toward multifunctional paradigm. Here, different entrepreneurial opportunities are at stake: a. Individual entrepreneurship carried out through the development of alternative food networks and through the qualification of agricultural niche products; b. Collective entrepreneurship carried out through valorization of collective marks, like geographical indications. 2. Rural as space of consumption, rural areas becoming attractive, in account of the supply of a basket of goods and services, within integrated projects of rural development. Consequently, diversification strategies involves farming activities, with the purpose to provide consumers with a diversified set of agricultural and not agricultural goods.

Against this background, entrepreneurial skills of farmers need to be updated, in order to fulfil learning gaps linked to the development of new activities. May a single innovative farm develop innovative models of rural entrepreneurship along each one of these trajectories? The paper fits in this context and aims at analysing entrepreneurial paths in rural areas and the needs for skills in order to second various strategies. The analysis is based on a case-study of a rural family business (CasaLawrence in region Lazio), which has promoted an innovative model of rural entrepreneurship focused on the valorization of endogenous rural resources and on the full employment of family works. The evolution of entrepreneurial skill in the farm and the needs for further updated skill will be investigated through the support of questionnaires to the family members and to other

actors in the territory. The results of our analysis should shed light on how family entrepreneurship in a rural area has played a fundamental role in stimulating innovation along paths of differentiation and diversification of agricultural production. Finally, policy implication at the beginning of the new programming period for rural development (2014-2020) will be discussed.

11:15 *Francesco Conto*, *Sara Djelveh*, *Adrienn Molnar*, *Xavier Gellynck* and *Alessandra Conte*
The LEADER Initiative in Apulia Region: a way for smarting the rural-urban relationships?
SPEAKER: *Sara Djelveh*

ABSTRACT. Europe is at an economic and social crossroads and nowhere more so than in rural areas. The continent faces the challenge of creating smart, inclusive and sustainable growth while several demographic and economic changes threaten to leave rural regions behind, and put pressure on the security and growth of the European economy. There is an urgent need to extend the growth agenda beyond the current focus on smarter cities to include Europe's rural regions that account for 77% of the continent.

Farms, and agri-businesses in general, are called to address a growing innovation demand requiring the transformation of the sector's production system. Within this model, the agricultural sector integrates functions from the service industry, thus resulting in more complex, differentiate and higher-value production of goods and services (as in the case of agro-tourisms, didactical farms, orthotherapy practices, etc.). From these innovative processes arises the need to pass from a productivist paradigm to a new rural paradigm integrating multifunctionality in agriculture and thus contributing to transform the role and the profession of farmers, who become agricultural/ farm entrepreneurs. Several studies in the field of multifunctional agriculture (actor oriented approaches) highlight the different strategies allowing the integration of the productive activities with societal and cultural activities impacting the local development.

Considering Apulia Region as illustrative for the innovation gap that separates urban areas and the surrounding rural areas, the paper presents the LEADER Community Initiative as a successful example to strengthen and organize rural-urban partnerships. The European regulatory system explicitly considers the promotion of agricultural innovation among its objectives, identifying different tools for achieving this objective. Among these instruments, the role of lifelong learning and knowledge sharing is crucial in order to develop skills and knowledge within the sector's stakeholders, thus contributing to the development of human capital. To this extent, the paper presents a set of local and transnational initiative that, particularly through the involvement of local actors and the use of ICT solutions, foster rural entrepreneurship within the new rural paradigm thus highlighting the factors arising as key components for a successful strategy to integrate LEADER approach and actors in a comprehensive rural-urban strategy.

11:30 *Biancamaria Torquati*, *Roberta Illuminati*, *Lucio Cecchini* and *Sonia Venanzi*
Relationships between Regional Innovation Systems and Dynamic entrepreneurial eco-systems: an explorative analysis

ABSTRACT. Member states of European Union had the opportunity to implement a new system of innovation through the application of Regulation (CE) n. 1698/2005 during the 2007-2013 programming period. Referring to the content of Art. 29 policy-makers have built a tool that can aggregate the offer and establish contacts between entrepreneurs and public research institutions. The most suitable tool to connect farmers, consultants, researchers, enterprises and others was found to be that of "partnership" created using a bottom-up approach, that is demand-driven. The result was the Measure 1.2.4 of Rural Development Programme (RDP) that has used the vehicle of the public-private partnership in which the approach of networking, knowledge, co-creation and collaboration between different partners» (Hermans et al., 2012; p. 9) was strengthened. The present study analyzes the relationships between regional innovation systems and dynamic entrepreneurial eco-systems in an Italian Region, Umbria, where 137 projects of innovation are been funded. The analysis has been carried out by measuring the innovation capacity expressed by the dynamic entrepreneurial eco-system through the equivalence of the 137 projects with the action plan, the ability to create partnership, the ability to involve primary sector, the level of integration whit another measures of RDP and the financial dimension of the project. A statistical analysis has been conducted on the five variables by the principal component analysis and the cluster analysis. The results point out that the ability of the primary sector to be involved in creating partnerships and networking are considered necessary but not sufficient in order the project is largely corresponding with the action plan. Among the sectors involved, livestock farms and no specialized farms have shown a greater ability to be involved in the partnerships. The great involvement depends on the need to facilitate innovations related to the use of by-product, the improvement of environmental performance, the processing and marketing of products, the testing of new products and processes. The wine sector and olive growing farms have shown a low interest in creating partnerships by asking for innovation more closely tied to the new products testing and processes and to the improve of environmental performance. Farms are less interested in partnership where the role of scientific research is predominant (biodiversity, food quality and safety, water management). In this case research institutes, industry and agribusiness are mainly involved.

11:00-12:30 Session 6E: WG7 - Regional branding and local agrifood systems: strategies, governance, and impacts

Effects of Geographical Indications protection

CHAIR:
Andrea Marescotti

LOCATION: Aula 3

11:00 *Dominique Barjolle*, *Philippe Jeanneaux*, *Emilie Vandecandelaere*, *Catherine Teyssier*, *Stephane Fournier* and *Olivier Beucherie*

Geographical indications economic impacts: a methodology to assess well established cases over the world

ABSTRACT. Geographical indications (GIs) may be considered as tools for the development of sustainable food systems, and stakeholders at local and international levels often require economic data relating to the development of GIs, especially in terms of impacts. Unfortunately, little work has been done to collate and generalize them and analysis of the economic impacts of GIs as a whole has not in general resulted in any clear-cut conclusions. In addition, although the economic impacts of GIs have been well

documented by various researchers (Moschini et al., 2008; Josling, 2006; Dinopoulos and West, 2005, Colinet et al., 2006; Rangnekar, 2004; Jena and Grote, 2010), empirical demonstration of the net benefits of GIs is relatively sparse, especially in countries where GI procedures are more recent (outside Europe). The objective of this paper is to propose an original methodology to collect data from various GI cases over the world and analyse them in a way to authorize some clear evidence about GI economic impacts. While the study encompass a variety of cases (10 cases with different products, scales and countries), common factors for their establishment have been considered for their selection allowing a common sense of a " GI actual concept ": • A good justification : an origin-linked quality or reputation has been well demonstrated and defined in the specifications , • Fruit of an heritage, the GI process is based on collective action (managed by a group of producers) • As an economic tool (differentiation and protection), it is being used on the markets.

The economic impacts are considered at the level of enterprise, value chain and in terms of resilience, considering the following: price, income for producers (and hence redistribution of value down to the first link in the chain) and market access. Another interesting aspect of the methodology relates on the collaborative work between: an international development agency (FAO), researchers and economic experts and Master students from 4 universities: ETH Zurich, Agricultural Economics Group; VetAgroSup, Clermont Ferrand; School of Agricultural Studies of Angers (ESA Group) within the specific framework of the Food Identity MSc; Montpellier SupAgro (MSA). The paper will also highlight the first main results from the 10 cases - Kona coffee (Hawai), Manchego cheese (Spain), Ryukyu Awamori liqueur (Japan), Darjeeling tea (India), Penja pepper (Cameroun), Taliouine saffron (Morocco), Colombia coffee, Tête de moine cheese (Switzerland) Futog cabbage (Serbia), Litoral Norte Gaúcho rice (Brazil).

11:15 *Raphael Belmin*, *Jean-Marc Meynard* and *François Casabianca*

Geographical Indication as a tool to strengthen sociotechnical quality niches. The case of Corsican clementine.

ABSTRACT. In this paper, we explore the socio-technical mechanism through which Geographical Indications (GIs) can strengthen alternative quality models. Building on transition theory, we analyzed the reconfigurations of the Corsican Clementine basin under a recent Protected Geographical Indication (PGI). Results show that the PGI stimulated 3 processes - the construction of a local norm, the coordination of actor network, and the strengthening of quality - which together contributed to the success of the Corsican Clementine, despite its specific quality and production model were challenging the competition rules of the citrus sector. In the light of transition framework, these findings suggest that the PGI strengthened a prior existing socio-technical niche by regulating tensions with regime.

11:30 *Aliou Baguissa Diallo*

Can Localized Agri-Food System be a relevant policy to cope with market liberalization? Evidence from France dairy products market

SPEAKER: *Aliou Baguissa Diallo*

ABSTRACT. In the current context of reforms in the Common Agricultural Policy

(CAP), in particular with the abolishment of milk quotas, price and storage support, the future of cheese industry in France and Europe represents a challenge for the agricultural sector, agro-food supply chains and public policy makers at regional, national and European levels. Indeed, market liberalization is likely to increase competition, production and farmers' exposure to price volatility. This paper argues that Localized Agri-Food Systems (LAFS) can substantially attenuate the negative impact of market liberalization, in particular farmers' exposure to price volatility, since by definition LAFS relies on local resources and depend less on international market. Secondly, because of the differentiation strategy developed by LAFS, they are not competing directly with standard milk products. Finally, even though the quota milk is abolished at the community level, farmers involved in quality differentiation strategies are allowed to control production to achieve a better balance supply and demand on the markets (EU regulation n° 2081/92 and CAP 2015). To illustrate, we compare the volatility of price of two contrasted cheese supply chains, PDO Comté and Emmental. PDO Comté is a Localized Agri-Food System with a strong and structured collective action whereas Emmental is an industrial cheese supply chain. As a preliminary step, we present basic measurements of price volatility (coefficient of variation, standard deviation, range-based volatility) for both supply chains. We go further and use econometric models (ARCH, GARCH) to estimate price volatility of Comté and Emmental cheeses. Using monthly data through 1996 to 2009, we found that PDO Comté price is trend stationary whereas Emmental price is difference stationary. This result suggests that any shock has a temporary effect on Comté price whereas shocks have permanent effects on Emmental price. Turning to price volatility, we found that Emmental price is 10-15% more volatile than Comté price, according to different measurements. Thus, we conclude that PDO Comté is more resilient to shocks and price volatility than Emmental.

11:45 *Claire Delfosse* and *Erik Thévenod-Mottet*

The denomination Gruyère : a heritage to share

ABSTRACT. The denomination Gruyère was a subject of debates between Switzerland and France since the end of the 19th century and even nowadays. Recalling that long history, through the legal frameworks and the development of justifications, allows us to analyse the spread of cheese-making know-hows, the social and economic evolution of close but politically divided regions, as well as the changes that occurred during the last decades in relation to the national and international recognition and protection of geographical indications (GIs). The cross-border and disputed case of Gruyère can bring an interesting light on the value of a denomination for origin products, not only the economic value but also the social one. A complex process of collective organization, definition of the product standard and construction of an image took place for both the Swiss and the French Gruyère. The recent result was a new situation of legal sharing of the denomination between Switzerland and France, for two cheeses with different characteristics. Hence it is worth to compare the Swiss and French initiatives to get a protection for Gruyère, as their differences are much higher than one would expect for a shared denomination. Also considering other examples like Mont-d'Or and Pisco, we assess whether the existence of homonymous and/or trans-border denominations favours conflicts or indifference rather than close cooperation. Assuming that geographical indications should not necessarily be designed according to administrative borders, the differentiating effects of a national border have to be integrated to the very concept of GI.

11:00-12:30 Session 6F: WG9 - Land-use transformations

Forces for change in agriculture: environmental regulation, consumption and policy responses

CHAIR:
Teresa Pinto-Correia

LOCATION: Aula 22

11:00 *Peter R.W. Gerritsen* and *Elena Lazos Chavero*

"Contesting climate change policies": stakeholders, climate change and land-use transformations in the south-coast region of Jalisco state in western Mexico

ABSTRACT. Climate change has become an issue of great concern in political and scientific fields at both global and national levels. Therefore, new policies and programs have been formulated that seek to mitigate the negative effects of this phenomenon. However, perceptions and views of stakeholders living and intervening in regions affected by climate change and submitted to new policy implementation is not often taken into account. This contrasts the fact that the importance of stakeholder participation is now generally recognised and the development of new governance schemes has become a commonly -used policy instrument. Based on the above, in the period 2012-2015, an EU-financed European-Latin-American research project (titled The Role of Biodiversity in Climate Change Mitigation - ROBIN), with case studies in Bolivia, Braszil and Mexico, was developed with the goal to describe and analyse the role of biodiversity and its importance in mitigating climate change. Among great many activities, it sought to understand the perceptions and opinions of regional, state and federal stakeholders regarding land-use transformation and climate change. In this presentation, we show results from the ROBIN project from the Chamela-Cuitzmala watershed in the south-coast region of Jalisco state in western Mexico. More precisely, we present the results of several workshops that we organized in the region, analysing the testimonies of the main stakeholders involved (farmers, municipal authorities, state and federal civil servants, opinion leaders, etc.). During these workshops, different participatory methods and techniques were applied, such as group discussions, participatory mapping, the Metaplan technique, and Fuzzy Cognitive Maps. From our results, contradictions emerge between different stakeholders coinciding in the same territory. In this sense, clear stakeholder-related perceptions and opinions could be distinguished: views from local stakeholders substantially differ from stakeholders external to the region. Moreover, power relations shape the relationships between the different stakeholders. In this sense, a notable mistrust was identified between regional stakeholders and those from governmental institutions, especially state and federal level. We end this paper with a discussion on stakeholder participation in climate change policies and actions based on our case study from western Mexico.

11:15 *Fabio Bartolini*, *Gianluca Brunori*, *Oriana Gava* and *Maria Andreoli*

Assessing the effectiveness of alternative designs of greening measures. The case of Tuscany region.

SPEAKER: *Fabio Bartolini*

ABSTRACT. The provision of public goods is at the heart of agriculture's multifunctionality and have a prominent role in the reform of Common Agricultural Policy (CAP). Environmental regulation within the CAP is conducted by design a set of environmental instruments, among which the most important are cross-compliance and agri-environmental schemes, respectively under Pillar I and Pillar II. The CAP reform can return a heterogeneous payment in turn at similar greening commitments. This paper

aims at assessing the ex-ante impact of alternative designs of the greening measure, with the application of mathematical programming models. The design of the alternative scenarios encompasses the identification high effectively measures taking into account farmers preferences in front of greening commitments. Effectiveness of alternative greening designs, are assessed taking into account set of environmental benefit provided by farmers located in different agricultural areas (rural, urban, peri-urban) that describe potential drivers of HNV or a measure of sustainable management.

11:30 *Mara Cossu* and *Carlotta Sigismondi*

Strategic Environmental Assessment potential in addressing environmental challenges for rural development and planning

ABSTRACT. At European level, territorial complex systems show a high rate of uncertainty both by social and environmental point of view. Within the EU 2020 Strategy, the Common Agriculture Policy (CAP) could have played a significant role in addressing environmental challenges in rural areas. This chance seems to be lost. Although the expected role, Rural Development Programmes are not shaped as planning instruments, rather as funding schemes on a voluntary basis. Nor the I Pillar direct payments seem to have any potential in driving decisions on the territories, being the greening an obligatory component which can only be managed at an enterprise scale. In a word, they lack a territorial perspective. Both the I and II Pillar of the CAP seem not able to face critical territorial dynamics like rural soil consumption and fragmentation, mainly due to urban sprawl and infrastructures. Under this point of view, the gap in governing rural areas seems evident between planning and sectorial development policies, to which rural land management seems to be often delegated. Strategic Environmental Assessment, if properly intended as a continuous sustainability integration process, could help filling this gap. It can, and should in any case, prefigure and assess partially predictable environmental and territorial scenarios in order to draw a shared and multilevel territorial frame supporting sectorial and territorial policies and instruments. In this way, it can directly contribute to territorial management and give substance to planning decisions. The paper presents the case study of the Strategic Environmental Assessment of the Rural Development Programme 2014/2020 of the Lombardy Region, in Italy. The environmental assessment was focused on the definition of a territorial based scenario, drafting and assessing all the dynamics acting in different ways on different landscape units of the Region. The territorial point of view led to adopt an assessment approach based on the consideration of vulnerability and resilience potential of different territorial units in responding to policy inputs. Practical information has been provided for the implementation phase, delivering territorialized criteria for funding and for monitoring. The soil consumption and fragmentation has been one of the main concerns of the assessment. Through this approach, environmental assessment aims to drive sectorial policy, bridging it to territorial planning choices and supporting the environmental and territorial effectiveness of the Programme, by stimulating a cooperation approach among local actors and farmers.

11:45 *Teresa Pinto-Correia*, *Cecília Fonseca* and *Mara Almeida*

Countryside consumption as a new driver of food production – transition in land use strategies spreading in Southern Europe

ABSTRACT. Many areas in Mediterranean Europe are characterized by an agricultural

small scale mosaic, with olive groves combined with pastures, fruit orchards, and vegetable gardens. These small scale farm units have increasingly lost their importance as production units over the last decades, even if farming has been maintained by aging local population. In the last two decades, these parcels became extremely attractive for new comers, who settle in the rural context as lifestyle farmers. Further, local people return to the land, due to the new values and also the economic crisis. Food production is increasing again in multiple complex modes, and new management arrangements. A study in the municipality of Montemor-o-Novo, Southern Portugal, provided substantial data on the amount of vegetables and fruits produced in the small scale units. Besides, findings revealed that keeping a production, in a vegetable garden, orchard and grazing animals, has different meanings and dimensions related to the household economy; the human-nature co-production relations and identity, which ultimately constitute forms of resistance of the lifeworld to the instrumental rationality brought by State regulation and formal market relations, two spheres from which apparently small holders try to keep some degree of autonomy. Our tentative hypothesis is that these small production units are one strategy related to the pluri-activity and pluri-income nature of the Mediterranean rural space. A much novel and resilient form of food production that bring together different types of farmers, and different generations, which nevertheless remains unseen by the agri-food regime and therefore also outside policy targets and innovation support strategies.

12:00 *Filma Calalo*, *Nelita Lalican*, *Rene Limosinero* and *Hospicio Natural Jr*
Crop production areas replaced with vacation houses

ABSTRACT. Because of high elevation and cool weather condition, Tagaytay City, Philippines became a tourist destination and a place for vacation to some. Business flourished in the area like leisure farms, vacation houses and small farms for urban settlers. Overlooking Tagaytay City is the Taal Lake surrounded by municipalities coming from Batangas and Cavite. All of these municipalities underwent transformation on land-use. One of these municipalities is Talisay in Batangas. Farmers who used to raise vegetables on the slopes of the mountains surrounding Taal Lake was transformed into subdivisions. The misplaced farmers went to the lake for fishing and putting up fish cages for some. The municipal government came up with policies on how to manage the lake to be ecologically acceptable, socially viable and economically feasible. Also they provided some livelihood programs for the households. Around 80 farmers were interviewed on how they adjusted to the changes in land-use in their locality. Some mentioned the raising of small backyard for vegetable production and integrating income from fishing to meet their daily needs. Some are engaged in livelihood programs introduced by the local government.

12:15 *Eva Kerselaers*, *Fanny Van den Haute*, *Anna Verhoeve* and *Elke Rogge*
Analysis of spatial patterns and driving factors of farmland loss: the case of Ghent, Belgium

ABSTRACT. In many countries, farmland is converted to other land uses, due to urbanisation and changing societal expectations for agriculture and the countryside. Specifically in peri-urban areas, we see an increasingly complex differentiation of rural land use and conflicting interests among the involved actors. In order to understand the trend of farmland loss, we picture recent farmland loss in Flanders based on a comparison

of Flemish LPIS-data between 1998 and 2013. LPIS or the "land parcel identification system" is a database developed to support implementation of the European Common Agricultural Policy (CAP) (EC, 2013) that contains information on the location of all farmland parcels. Starting from the spatial pattern of farmland loss that is provided by these data, driving factors will be distinguished. Both qualitative data on drivers of farmland conversion and GIS analyses will be used to provide insight in the "farmland's vulnerability to conversion". Based on literature and previous research in Flanders, we know that farmland loss is mainly caused by (1) planned conversions for residential areas, industry, harbour expansion, road development, nature development,…. (2) unplanned conversions for hobby farming, horse pastures, gardens, non-agricultural economic activities, … and (3) land abandonment due to marginalisation of agriculture (which is up till now not seen in Flanders, but is reported elsewhere in the world). Driving (or restricting) factors that will be investigated for the case study area are the spatial planning situation, the proximity of cities, soil suitability, private or public ownership, … If possible, analyses are performed for the whole region of Flanders (the Northern part of Belgium). When more detailed research is needed, the city of Ghent will be used as a case. The research results will provide insight in how (spatial) policy approaches are guiding current (farm)land use changes. Furthermore these insights should support for the development of effective policy approaches for farmland preservation at different institutional levels. This is highly relevant as the preservation of farmland is high on both policy and research agendas in relation to food security, climate adaptation, provision of landscape and open space, …

11:00-12:30 Session 6G: WG10 - Urban agriculture I. Urban agriculture and Urban Food Strategies: Processes, Planning, Policies and Potential to Reconnect Society and Food

Framing and Interpreting of the Urban Agriculture Phenomena

CHAIRS:
Jan-Eelco Jansma and *Heidrun Moschiz*
LOCATION: Aula 11

11:00 *Jan Eelco Jansma*, *Joseph Chambers*, *Eva Sabas* and *Esther Veen*

The Urban Agriculture Circle: A methodology to Understand the Benefits of Urban Agriculture

ABSTRACT. The lack of inclusion of urban agriculture in city planning directly affects the success of initiatives in this sector, which subsequently could impede future innovations. The poor representation of urban agriculture in planning can be attributed to a lack of understanding about the benefits of these initiatives from authorities. A better understanding can lead to a greater incorporation of urban agriculture in planning, which in turn would stimulate further innovation. A suitable methodology needs to be created to asses and demonstrate the benefits of these initiatives. A void that the Urban Agriculture Circle will address.

To develop a suitable methodology the authors extracted policy issues from a survey in four major cities in the Netherlands (Rotterdam, Groningen, Tilburg and Almere) during the regional elections of 2010. Next, they condensed these issues to 12 themes, looking specifically at those that could benefit from urban agriculture. These 12 were equally divided over the three identified categories of people, planet and profit, i.e.: 1) inclusiveness (people – 'Our city'); 2) environmental health (planet – 'Healthy city'); and 3) productiveness (profit – 'Economic city'). For a visual effect the themes were merged in a circle diagram. In order to qualify the importance of a specific theme in the aims of

an initiative, the authors created weighted rankings. They used a one to five scale ranking of importance, with five being an identification that this theme is an important component of the aim of the initiative and one being an identification that it is insignificant.

The usefulness of the circle was conducted with an analysis of several urban agriculture initiatives in NL. The results from this investigation identify that although initiatives tend to be more weighted in one of the categories of profit, planet and people more than the others, more often than not they cover multiple themes from the spectrum. The circle highlights the multi-functionality that is being seen in many urban agriculture initiatives. By having a better understanding about the multi-functionality and benefits of urban agriculture initiatives, cities can facilitate and stimulate innovations in urban agriculture in a direction that mitigate specific urban issues. More over initiatives could use the circle to show authorities their added value to the urban fabric. The circle makes clear that by formulating the specific urban issues that urban agriculture initiatives can help meeting, will support urban agriculture to gain ground in urban plans.

11:15 *Matjaž Glavan*, *Ulrich Schmutz*, *Majda Černič-Istenič*, *Stefano Corsi*, *Federica Monaco*, *Sarah Williams*, *Moya Kneafsey* and *Marina Pintar*
The economics of urban gardening - examples from London, Ljubljana and Milan
SPEAKER: *Matjaž Glavan*

ABSTRACT. Urban gardening is not a new phenomenon but it has received considerably more practical and academic interest in recent years, both in the Global North and the Global South. There are many studies available on the social and ecological aspects of urban gardening, but rather fewer on the economic aspects. Studies on economic aspects such as crop yields, inputs and outputs of production, productivity, economic margins and the contribution to home-economics in the EU are rare. While home production and subsistence have an important role to play in the Global South, its role and full potential in prosperous cities within the EU for food productivity and home economics is currently under-researched. This research compares crop production data from urban gardening (home gardening, allotments, community gardening) in three EU cities (London, Ljubljana, Milan) with commercial production in the EU and provides a model to assess the economic potential of urban gardening within a city's local agri-food system (LAS). For the analysis we use data from various sources: a 2014 survey conducted within the framework of the EU 'Foodmetres' project, and data from the London Harvest-ometer survey as well as other published data on home gardening and commercial food production. Results from the economic analysis show that home gardening can play an important role for the provisioning of vegetables and fruit in urban areas, especially for those products with a shorter shelf-life, such as soft berry fruits, but also many vegetables and herbs. Although profit is not the main motivation for most urban gardeners, the models show that productivity can be high in urban systems and that gardeners can earn above the minimum wage especially when using organic inputs and outputs i.e. organic food prices in the calculation. We conclude that in the Global North, urban gardening can be made into a serious part-time profession, which can be combined with other part-time jobs and/or used as step towards obtaining a full-time gardening career. In addition to the production economics, food eating and buying patterns, which are considered in this paper, there are also further documented socio-economic benefits from urban gardening, such as improvements in health and wellbeing, community life, skills and environmental sustainability, these may be assessed by e.g. the social return on investment method,

however they are not presented in this abstract.

11:30 *Shahrina Akhtar* and *Md Abiar Rahman*

Urban Agriculture in Bangladesh: Current Scenario and Policy Options

ABSTRACT. The leading development challenges of Bangladesh today include reduction of poverty and environmental management in the context of rapidly growing population, which means that the number of low-income consumer is increasing. Development of urban area has been occurring since couple of decades in Bangladesh without any plan and strategy. Population influx to urban area is very high as people are pushed to the cities because of limited job opportunities in rural areas. Agricultural lands have given way to housing developments and roads in an agriculturally based economy like Bangladesh. Most of the urban poor are concentrated in informal settlements, where there is no infrastructure or services to address environmental problems. Urban agriculture (UA) contributes to food security by increasing the supply of food and by enhancing the quality of perishable foods reaching urban consumers. The exploration of local socio-economic and institutional conditions that might promote and hinder UA is needed to implement policies that effectively integrate agriculture into the urban environment. The demands of city agricultural products can be met through urban and semi-urban agricultural practices. These demands in fact led to development of small-scale urban vegetable, floriculture and horticulture gardening, poultry, fisheries and livestock production. Growing markets have also sprung up in different corners of the city to cater the needs of the city dwellers. It creates a lot of job opportunities for the hither unemployed people and brings money to improve their livelihood. In the near future, urban and semi-urban agriculture will be accepted and implemented as a major intervention in food security and social security programs. It provides food, generates jobs, supports business and maintains the landscape. Already, there is a trend in developing urban agriculture in some cities to maintain and improve the livelihood of the poor people and help the city dwellers with supply of much needed food products. The only need is to organize and develop the urban and semi-urban agriculture in the city in a more planned way. One of the biggest policy challenges today is the inclusion of environmental policy into urban policy. Urban agricultural policy can be an integral part of a set of policies for sustainable urban environmental management.

11:00-12:30 Session 6H: WG11 - Urban agriculture II. Grass-root initiatives and community gardens

Lifestyle and business networks

CHAIR:
Paul Swagemakers

LOCATION: Aula 15

11:00 *Karin Dobernig* and *Sigrid Stagl*

Growing a lifestyle movement? Exploring identity-work and lifestyle politics in urban food cultivation

ABSTRACT. Urban agriculture has triggered great interest among urban consumers, city governments of the Global North in recent years. Scholarly discussions so far have either celebrated urban agriculture´s environmental and socio-economic benefits or elucidated a lack of opposition to the industrial food system. However, urban agriculture also presents

a social and cultural phenomenon that involves issues of identity, lifestyle, and political consumerism. In this paper we aim to explore whether urban agriculture shares characteristics of lifestyle movements (LM), in particular processes of identity-work, lifestyle politics and cultural entrepreneurship. In contrast to traditional social movements, lifestyle movements popularize the fostering of a coherent and personally gratifying lifestyle as a collective tactic for social change. Thus, participation is relatively individualized and private; the focus is on the transformation of cultural and economic practices and codes. Moreover, the structure of lifestyle movements is often dispersed and emerges around informal networks and cultural entrepreneurs. The study builds on 28 problem-centered interviews with urban farmers from 12 different urban agriculture projects in New York City. Findings show that urban agriculture allows its adherents to indulge in a shared ethos of re-engagement with nature, meaningful work, and authenticity. Moreover, processes of identity-work and lifestyle politics share characteristics with other lifestyle movements such as locavorism and green living. While not engaging in conventional protests or political processes, advocates are assured that by reorienting their everyday consumption practices and engaging in local food cultivation, they contribute to socio-ecological transformations. For the participants, urban food growing is part of a reflexive lifestyle that re-negotiates cultural codes, not only related to food but also to work, health and city life. The paper provides empirical insights into the recent popularity of urban food growing and reflects on the role and potential of small-scale niche innovations in the transformation to more sustainable food systems.

11:15 *Stefano Grando*, *Ingrid Jahrl* and *Livia Ortolani*

Grassroots versus business oriented short food chain models - competitors or partners? Evidences from Rome and Zurich

ABSTRACT. Short food supply chains (SFSCs) can be a way to reconnect food production and consumption, supporting small farmers which would have difficult access to mainstream market channels. In urban and peri-urban areas they can also contribute to enhance market channels diversification, widening the range of consumption choices and strengthening urban food systems resilience.

SFSCS can be based on grassroots initiatives, as well as small scale businesses committed to social and ecological goals (small farmers survival, green production methods, consumers' awareness and involvement). These goals do not necessarily limit profitability: on the contrary they can be a base upon which a successful short chain business can be established.

The contribution presents an analysis of six SFSC initiatives established in two metropolitan areas (three in Rome, three in Zurich). They are promoted and managed by different SFSCs actors (farmers, retailers, consumers), and range from farms direct selling to box schemes to CSA. Some are more business-oriented, some others present typical characters of non-profit grassroots initiatives.

The research was aimed at: • identifying factors supporting and/or hampering the development of such initiatives and their potential scaling-up in terms of both company's size and possible replication of a successful model; • analyzing the relations of competitiveness and/or complementarity between different typologies of initiatives and the contribution they can give to meet urban consumers demand and farmers needs; • analyzing the interactions between farmers and specialized retailers in the SFSCs. The

initiatives have been studied in a comparative approach with regard to various characters: aims and goals, type of actors involved, size and geographical scope, organizational and logistic models.

Main outcomes are summarized as follows: • urban context can be relevant for the presence of a critical mass of consumers willing to support SFSCs, through their consumption choices and also through their direct involvement but restrictive regulation and missing long-term commitments of local policy are often hampering factors for small scale initiatives and businesses; • different SFSCs typologies respond to different needs expressed by the various chain actors. In this sense complementarity can be seen between different typologies, whereas competitiveness can be present within them. Business initiatives can fill the gaps left by grassroots initiatives and vice-versa; • direct selling is often the first choice for small farmers settled in urban and peri-urban contexts; specialized retailers are considered an opportunity for market diversification but only rarely farmers rely exclusively on one market channel.

11:30 *Talis Tisenkopfs*, *Mikelis Grivins* and *Ilona Kunda*

Bricolage, urban agriculture and multilingual trajectories of city dvelopment

ABSTRACT. In this paper we analyse the evolution,multiplicity and synergies of functions provided by an SME involved in developing a highly successful urban farmers' market and becoming a facilitator of the development of a whole web of other functions – cultural, educational, community-building, self-expression, place-making, etc. Based on the example of Kalnciema Quarter (KQ) farmers market in Riga we address the research question how the complex interplay and synergies of various functions emerge and develop around connecting urban food initiatives with other development activities and functions. We reference to theories of bricolage, multifunctionality, transition and social innovation. We argue that synergies of functions around urban food develop as bricolage defined as the process of gradual building on what is at hand. In contrast to transition, bricolage not necessarily purposefully creates niches or challenges an existing institutional regime; it is rather making things happen by ad hoc doing, however its outcomes influence the ways how food is distributed and consumed in the city and how the public and politicians perceive food provision and food practices in a wider set of urban development activities. In the paper we argue that bricolage connects distant fields, interests, spheres of activity and social groups making food embedded in sustainable urban development process and stimulating formation of specific urban food policies. We identify three trajectories of bricolage: i) one that creates functional synergies between food and other social and cultural activities through social innovation, networking and skills development; ii) one that enhances business professionalism and new business models through entrepreneurial innovation; and iii) one that 'opens' policies and institutions through policy networking and policy innovation. We find that evolution of bricolage is related to story-telling. In case of KQ the self-representation of the SME evolved from a small architectural conservationist company to a global social media and web network "Markethopper" that connects farmers markets and consumers across the world. Persistency of grass-root bricolage is a driver for policy bricolage and incorporating various bottom-up urban food initiatives in city policies. Bricolage happens as dissolution of boundaries; it is multilingual and requires a dialogue. Introducing new functions and values around food in the city means overcoming linguistic boundaries and introducing new words, language, vocabulary and expressions (e.g. 'urban vitality', 'open

space') that are shared by various parties. Bricolage introduces new meanings.

11:45 *Ingo Zasada* and *Siddartha Lawrence Benninger*

Urban agriculture and community interaction in Pune, India

ABSTRACT. In the face of increasing relevance of enhancing urban resilience against a variety of global driving forces, food production in urban areas has gain increasing attention among the academic and planning community. This is particularly relevant in the context of the fast urbanising societies in transition countries, where strong rural rooting, community and family orientation as well as the prevalence of dietary traditions is confronted with a high pace of urban growth, changing lifestyles and nutrition security of the urban poor. Between these poles traditional forms of urban agriculture remained in housing environments, backyards and kitchen gardens are complemented by urban lifestyle-oriented micro-scale gardening in and on top of buildings. However, actual cultivation practices and the related provision of food and other ecosystem services are strongly depending on internal and external factors and drivers, such as the built environment, but also on individual characteristics and capabilities. Therefore a survey (N=120) has been carried out in the city of Pune, Maharashtra, Western India to (i) investigate prevailing cultivation practices of food production and (ii) to analyse the influence of external framework conditions and socio-economic situation, motivation, knowledge and networking of the individual gardening household. The survey revealed that with 60% of the cases conducting food production longer than 10 years and 31% even more than 20 years, urban agriculture looks back on a rather long tradition. Results show that there is a dichotomised typology of urban agriculture, strongly depending on the given urban environment, housing type and available space. Mainly (i) backyard cultivation in detached housing situations and (ii) small kitchen gardens attached to buildings in densified urban areas are found. Despite being small in area size, urban agriculture provides a large variety of commodities with >70 vegetable and >30 fruit types. In the large majority of cases organic production principles are coupled with organic waste management. A relevant share (25-39%) applies specific cropping arrangement and rotation practices, indicating a high degree of professionalisation. Moreover, strong network ties were found within (the female and individual family dominated) gardening community, through which knowledge, products and inputs are distributed. Particularly gardeners' clubs play an important role as knowledge brokers within the community. Concluding, urban agriculture represent a continuous and stable source of fresh vegetable food, contributes to social capital and community building as well as knowledge transfer not only for food production, but also for healthy lifestyle more holistically.

11:00-12:30 Session 6I: WG12 - Urban agriculture III: Effects of UA. Urban agriculture: a potential tool for local and global food security, economic, social and environmental resilience, and community health and wellness

CHAIR:
Parwinder Grewal
LOCATION: Aula 14

11:00 *Parwinder Grewal* and *Sharanbir Grewal*

Potential contribution of urban agriculture to local and global food security

ABSTRACT. Sustainable production of healthy food for the expected 9 billion people

without further harming the environment is one of the society's grand global challenges. Current trends predict that nearly one billion hectares of new agricultural land would be needed by 2050 to feed the growing world population, while productive cropland area is declining due to rapid urbanization and salinization of croplands. Urban agriculture, defined as the growing and consumption of food in and around cities, has been identified to have the potential to enhance individual and community health and wellness, increase local and global food security, strengthen city economies, reduce human impact on the environment, and promote a sense of community and self-determination. In this paper, we explore the role of modern urban agriculture including building-integrated agriculture and vertical farming, play in enhancing local and global food security. We find that urban and periurban agriculture provides as much as 90 percent of leafy vegetables and 60 percent of milk sold in Dar es Salaam, Tanzania as well as 76 percent of vegetables in Shanghai and 85 percent in Beijing. In the United States, households met 40 percent of the nation's fresh vegetable demand during World War II. We assessed the potential for local self-reliance in food for a typical post-industrial North American city, Cleveland, Ohio that has over 18,000 vacant lots amounting to 3000 acres of land. We developed three scenarios to estimate the level of food self-reliance for the city using the existing land and other resources. Scenario I, which utilized 80% of every vacant lot, could generate between 22 and 48% of Cleveland's demand for fresh produce (vegetables and fruits) depending on the vegetable production practice used (conventional gardening, intensive gardening, or hydroponics), 25% of both poultry and shell eggs, and 100% of honey. Scenario II, used 80% of every vacant lot and 9% of every occupied residential lot, could generate between 31 and 68% of the needed fresh produce, 94% of both poultry and shell eggs, and 100% of honey. Scenario III, which added 62% of every industrial and commercial rooftop in addition to the land area used in scenario II, could meet between 46 to 100% of Cleveland's fresh produce need, and 94% of poultry and shell eggs and 100% of honey. The analysis revealed that the enhanced food self-reliance would result in $29M to $115M being retained in Cleveland annually depending upon the scenario employed.

11:15 *Bernd Pölling*

Urban agriculture's added values – Europe-wide spotlights on economic, social, cultural and landscape benefits

SPEAKER: *Bernd Pölling*

ABSTRACT. Many publications about societal benefits and multifunctionality of agriculture in general, but also of urban agriculture in particular exist. Nonetheless, most of them are focusing on local case studies or on specific functions or benefits, while overarching qualitative and quantitative analyses are missing. Social and ecological functions and benefits of urban agriculture are dominating publications and the public discussions, while only little attention is raised to economic contributions and values. The conducted empiric work aims to tackle this knowledge gap of economic benefits of urban agriculture on a European level including good-practices from different countries. For providing an overarching view on societal benefits also social, landscape and cultural heritage added values of urban agriculture are included in this work. The Europe-wide investigation is based on case studies, which were conducted as an important contribution to EU COST-Action "Urban Agriculture Europe". About 80 deeply analyzed case studies, which were collected in 2013 and 2014, from ten countries distributed across Europe, are building the backbone of this work. The indicators highlighting the added values of urban agriculture are production value, paid jobs, volunteers involved, social

and educational services, managed open space, agro-biodiversity as well as cultural and natural heritage issues. Specific indicators are valuable to focus on economic, social, cultural or landscape aspects, which are in a summarizing way emphasizing multifunctionality. As mentioned before most publications address the non-economic added values of urban agriculture. Thus, this contribution's major aim is the economic perspective on the farm and local economy level. Urban agriculture is not a rural leftover, but part of the urban economy. Production values on the farm level generate values up- and downstream in the value added chain. Furthermore, urban agriculture is offering jobs inside the farms and also in the sectors connected to agricultural production, processing, marketing and provision of farm services. The EU-wide empiric work based on case studies exposes, that urban agriculture is a noteworthy business and contributing to the urban economy, while simultaneously offering various social, cultural, landscape, and environmental functions and benefits for cities and agglomerations.

11:30 *Erkan Polat* and *Atila Gul*

The Urban Agriculture, a New and Soft Solution for the Rurban Areas

ABSTRACT. The number of people living in urban areas is increasing dramatically. 50 per cent of the world population lived in urban areas in 2008, first time in the world history. This increased to 54 per cent in 2015. As urbanization proceeds, food insecurity issues in the cities are sure to increase. Megacities are particularly vulnerable to food insecurity, as they rely on lengthy supply chains to meet their consumption needs. Urban agriculture could mitigate some of these food supply risks. Urban agriculture produces 15 to 20 per cent of the world's food supply and could play a major role in achieving global food security. Urban agriculture refers to the production of both food and non-food products in urban, peri-urban and rurban areas. The growth of urban agriculture is a result of a global increase in migration to rural (from rural to urban) areas. Urban populations are more vulnerable to food insecurity, as they rely on external sources for their food needs and are thus exposed to greater supply risks. Some commentators suggest, however, that urban agriculture may provide the solution to food security issues in cities. The potential contribution of urban agriculture to food security differs between developed and developing countries. In cities in developed countries, urban agriculture is limited by a lack of space and the absence of economic incentives; however, in the developing world, urban agriculture has considerable potential to improve food security. Key issues, such as urban sprawl, contamination threats and legality, must be addressed for urban farming to have a sustainable future. The role that urban agriculture plays in food security is much greater in developing countries. It is practiced widely in developing countries such as India, Vietnam, China, Cuba, Ghana, Uganda and Kenya. In many of these areas, produce from urban agriculture constitutes a large percentage of total crop production. In some Asian cities, as much as 80 per cent of the population is involved in urban agriculture; in African countries, approximately 40 per cent of the urban population is involved. Urban agriculture is experiencing burgeoning popularity, with gardens springing up in many cities in Australia, Canada, the United States, England, France and New Zealand. Land plots to grow crops are diverse, including rooftops, basements, walls, recreational grounds and roadsides. These gardens mostly operate as community gardens. Despite its growing popularity, urban agriculture feeds only a very small percentage of the population in these cities.

11:45 *Lucie Sovová*

Food self-provisioning between tradition and alternative – lessons from allotment gardens in Brno, Czech Republic
SPEAKER: *Lucie Sovová*

ABSTRACT. This paper seeks to contribute to the discussion on alternative food production and urban agriculture as means to cities resilience and self-sufficiency. Allotment gardens played an important role in urban food systems in the past. However, this kind of urban gardening is mostly being omitted in the current debate, as it is less common in Western Europe and North America, where most of the scientific work originates. Contrarily, in the Czech Republic as well as other Central and Eastern European countries, allotment gardens are still widespread even in big cities. Growing fruits and vegetables in urban settlements brings the environmental benefits of localized food production (especially lowering the need for produce transportation), together with strengthening gardeners' relationship to place, food and natural environment. Allotment gardening is nevertheless often burdened with rather negative connotations from the socialist era when it was related to market shortage and limited options of leisure activities. For this reason, new local food initiatives and urban gardening trends inspired by Western examples commonly fail to connect with the long tradition of Czech gardeners and policy makers generally perceive allotments as obsolete relics of the past. Based on research from three allotment gardens in Brno, a city of 400 000, this paper investigates the socio-economic and environmental facets of self-provisioning of fruits and vegetables within this specific context and its relation to current trends in alternative food production. I examine gardeners' motivations and attitudes, different ways of use of the allotments and the functions and needs they fulfil. Using the method of consumer diaries, I furthermore try to quantify the amount of fruits and vegetables produced in the allotments and the level of self-sufficiency of respondents' households. From these data I extrapolate the potential of Brno allotment gardens for the city's food self-sufficiency. I conclude that allotment gardens are connected to specific meanings which differentiate them from other examples of alternative food networks. Nevertheless, they constitute a living practice complying with the ideas of sustainable food production, and they present a relevant feature for future development of resilient cities.

11:00-12:30 Session 6J: WG13 - Care Farming/Social Farming in more resilient societes
EU territorial
CHAIRS:
Francesco Di Iacovo and *Helen Elsey*
LOCATION: Aula 5

11:00 *Antoni F Tulla*, *Natalia Valldeperas* and *Carles Guirado*

Social Farming in Catalonia. Rural local de-velopment and social integration of people at risk of social exclusion

ABSTRACT. Social Farming (SF) is a longstanding phenomenon in Europe, emerging mainly in the rural and periurban setting. In Catalonia, it has become especially evident within the last 10 years, due to the 2008 economic crisis. There are direct benefits from SF in terms of employment, education, training and therapeutic approaches at risk of social exclusion. It is important to assess the social return on public and private investments in this activity and evaluate its impact in areas such as local development and social cohesion. The present research is analysing the economic viability and social impact of a sample of SF projects, using two distinct methodologies: the CANVAS business model and social return on investment (SROI). The first attempts to provide

guidelines for promoters of an SF initiative, from the emergence of the project idea to the creation of the enterprise. The second measures and quantifies the concept of value, incorporating costs and social, environmental and economic benefits. The study attempts to demonstrate how SF can be a profitable economic activity with an important social impact, while also contributing to better use of public resources and a more efficient system of social welfare.

11:15 *Jim Kinsella*, *Aoibeann Walsh* and *Helen Doherty*

Effectiveness of social farming for people with special needs and mental health challenges – the case of the SoFAB Project in Ireland and Northern Ireland

ABSTRACT. Institutionally-run farms were integral to health and social care services in Ireland and Northern Ireland throughout the 20th century. Such services relied heavily on religious congregations whose institutional farms and gardens delivered occupational rehabilitation and care services. In recent times the decline in numbers of religious providing these services has meant a loss in the benefits of farming or horticulture while at the same time the demand for services has increased. Public policy for health and care services has shifted in emphasis from institutionalised services of the past to community-based services that support people within their communities.

Drawing on the experience of social farming in EU states such as Netherlands, Belgium and Italy the EU-INTERREG project entitled Social Farming Across Borders (SoFAB) aimed to reconnect socially excluded people and farming on family farms. The SOFAB project piloted social farming services on 20 family farms in Ireland and Northern Ireland for one year beginning May 2013. Service users for the pilot period were 37 adults with intellectual disabilities who were availing of day care services and 29 adults who were using mental health services. They expressed an interest in 'trying out the farming experience' and each spent a day per week for up to 30 weeks on the farms resulting in over 1,600 person days of social farming experienced and recorded. Farm families who provided the service done so on a voluntary basis with the understanding that they would be best placed to continue delivery of these services on a paid-for basis at the end of the project. These farm households maintained detailed records of time and costs incurred during piloting which enabled a determination of benefits and costs of social farming as delivered through the project.

A remarkably high attendance (81%) rate by service users over the one year period underscored the extent to which people highly valued and enjoyed the experience provided. Benefits to service users were identified through the research in terms of: social inclusion; new skills; personal health and well-being; and personal progression. The farm families identified benefits they derived such as: personal development and enjoyment; job satisfaction and personal achievement; and reconnecting with wider society through new activities. Service delivery was shown to be highly cost-effective when compared to existing public services in both Ireland and Northern Ireland. The farmers who piloted the service have since formed their own organisation to promote and support social farming.

11:30 *Giuseppe Timpanaro*, *Vera Teresa Foti*, *Alessandro Scuderi*, *Salvatore Cacciola*, *Daniela Romano* and *Valeria Lo Giudice*

The Social Farm Network for the promotion of a new relationship between agriculture, economy and society

ABSTRACT. Social farming meant as that activity that employs material and immaterial resources to promote and carry out therapeutic actions, social and work inclusion of disadvantaged people, is the expression of the new post-productivist trend that characterizes the agriculture sector and a passage from a logic based on the maximization of quantity of agriculture products to a multifunctional one. In this perspective, social agriculture, offering public services to local populations may represent an element of social, cultural and political innovation of the territory focusing on the development of the social capital by strengthening the relational system and the development of reciprocity networks. The survey was carried out in Sicily, where Social Farming has taken root so much to become a separate scenario compared to the national one. In Sicily this phenomenon has gained special characteristics both from a juridical aspect and the operative and organizational ones, besides the ethics and professionalism of entrepreneurs. In Sicily Social Farming is aggregated under the name of "Social Farm Network" which included agri-social farms and "Associations for social promotion, social cooperatives and family ones", throughout the territory. In virtue of the fact that building a relationship network in a territory represents a peculiar characteristic of SF, this work's aim was that of studying the relationship network among the actors involved in Sicilian Social Farming in order to evaluate the network characteristics, strong points and sore ones. The study of the system relationship was carried out by adopting the Social Network Analysis (SNA) that is a system of techniques that measure the social relations deriving from different kind of ties and among different actors. It allows defining some explicative indicators of the relational behavior of these actors. Results provided a "map of the relationships" among all the operators involved into social activities of different kind, and in particular it showed the central role of the "Sicilian Social Farms Network" both within the coordination activities and intermediation ones, to draw relationships with outside-network operators. Finally, in order to widen the SNA analysis with reference to the typology of the relations surveyed and to understand if the network highlighted may represent a possible tool to contribute to the development of this phenomenon and to facilitate the coordination and participation to initiatives and projects for the Social Agriculture, specific qualitative data was acquired by ad hoc interviews of the actors of the network involved in social farming activities.

11:45 *Balint Balazs*, *Janka Horvath*, *Gyorgy Pataki* and *Hajnalka Petrics*
Social/Care Farming in the making: Hungarian experiences
SPEAKER: *Balint Balazs*

ABSTRACT. Social/care farming (SCF) is an innovative approach to nature-based activities and services organised at farm level with well-established discourses in Western Europe relating to multifunctionality, rural development, social inclusion, etc. Being a new concept in Hungary, SCF recently attracted fair amount of interest from CSOs and rudimentary acknowledgment of policymakers in Hungary. A new project has been funded by the Norway (EEA) Grants which is about to identify an appropriate socio-economic model of SCF in Hungary (http://szocialisfarm.hu/). Aiming to create a new sector in a novel field, this consensus-seeking initiative necessarily requires a cross-sectoral, cross-cultural, cross-disciplinary approach. In this paper we attempt to identify the emerging actors in this field, record the construction of this new network in Hungary, by analysing the underlying assumptions of participants relating to possible therapeutic,

educational, rehabilitation or social inclusion goals. We build on our own participatory observation experiences on the first forum on SCF in Hungary (January 2014) and on three community of practice meetings of experts in 2015. We identify common threads in the complex understandings of this field in the making and also attempt to outline analytical fields to classify social farming practices in Hungary.

12:00 *Gerald Assouline* and *Dominique Granjon*

The role of a territorial network in front of the economic pressures on the French social farming model

ABSTRACT. Strong values and identity of social farming projects In France, social farming projects have been built by non for profit associations, according to strong humanistic values like solidarity, education, inclusion. Social farming is not considered as a business in France. Even for individual farmers who envisage it as diversification.

The public support is a support by default . Social inclusion gardens take benefit from the national un-employment social treatment policy; . Farms with residence capacities get local public support (mostly from counties) because they contribute to alleviate the crucial lack of hosting capacities for disabled people. This makes the activity very dependent from public funding. For inclusion gardens, production and service selling may represent 15 to 25% of the resources. Those initiatives receive strong public support, mostly from municipalities, county and regional authorities. In fact, this feature does not mean that the initiatives escape to competition. The French neo-liberal decentralisation in the recent years meant that State transferred competencies and charges to decentralised authorities (regions, counties and inter-municipality level) with decreasing resources.

The managerial logic is increasingly influent Many of those associative structures are progressively absorbed by umbrella organisations (mostly managed by patients or family organisations)., which are also associations. They lead a concentration process. Those umbrella organisations recruit managers in charge of managing the social farming structures. On behalf of good management of public money, often farming activities in therapeutic hosting organisations are considered as too costly. This managerial pressure threatens the identity of therapeutic hosting projects and values shared by staff and families.

The role of a territorial network A multi-stakeholders network like ASTRA, with deep territorial anchoring, has to be multi-functional: producing knowledge and information for social farming project holders, sharing practices and experiences, defending and disseminating solidarity values, ‘helping’ public authorities to put social farming development on their agenda. Obviously, ASTRA can not escape to the contradictions already mentioned. Which development model ASTRA has to promote vis-a-vis public authorities? Managerial and cost saving or humanistic and non for profit? We simplify the dilemma, for sure. But it is crucial for broadening financial resources. We can see the impacts of financial pressure on the network strategy at local level and its role in opposing to managerial destructive logic.

11:00-12:30 Session 6K: WG19 - Food Security: Meanings, Practices and Policies

Urban Food Security practices: urban agriculture, street food and foof justice

CHAIR:

Ana Moragues Faus
LOCATION: Aula 19

11:00 *Agnieszka Łabonarska*

Geographies of urban food commons & justice
SPEAKER: *Agnieszka Łabonarska*

ABSTRACT. In the UK, we are currently witnessing increasing rates of food poverty, accompanied by obesity and food-related conditions, like diabetes or atherosclerosis. The official/mainstream discourses of food security tend to consolidate a view of food as a commodity, emphasising the issues of quantity and financial access to healthy food, hence poverty and malnutrition remain closely related. Moreover, the recent interventions focus on consumer choice (e.g. "buy organic") situating the power to shape the food system within the spaces of individualised consumption rather than in the realm of collective action and inclusive governance, as exemplified by the politicised struggles of rural food producers in many parts of the world, such as La Via Campesina. In my work, I argue for the creation of urban food commons as one of the ways to reverse these trends and to become one of the tools for achieving food justice/sovereignty in the context of an increasingly urbanised world. On the theoretical level commons provide a useful analytical framework and a new development paradigm characterised by a language that has a potential to transcend the urban/rural, society/nature, public/private, producer/consumer dichotomies; and in doing so contribute to the knowledge of strategies and spatial opportunities that represent the parameters for implementing (urban) food policies that are rooted in the culture of co-responsibility, co-production and solidarity. If we view commons as a relational quality, food sovereignty/justice needs to be understood as an ongoing process of collective action, education and critical reflection of our values and practices rather than an end state. Methodologically, I am drawing on Participatory Action Research (PAR) approaches with the Back to Front initiative in Leeds – a community development project initiated by the department of Public Health aimed at reducing health inequalities, by encouraging people in the most vulnerable (and ethnically diverse) communities to grow food in their front gardens, while recognising local assets: not only material resources (such as access to land or compost in the urban environments) but also skills and knowledge necessary to address food-related environmental, health and ethical concerns. Secondly, I develop my understanding through engagement with a PAR-guided Public Healing Garden project, which at the time of the writing, is being negotiated with the Leeds' Parks & Countryside department. Thirdly, I use the qualitative research with fifteen grassroots food-commons initiatives in the UK to offer reflections on the possibilities and barriers for creating, governing, extending and embedding commons practices.

11:15 *Sara Caramaschi*

Counteracting food deserts. The role of street food vending in reinvigorating previously underserved urban spaces
SPEAKER: *Sara Caramaschi*

ABSTRACT. Even if healthy food is back on the agenda of a growing number of cities, for far too many people, and especially for those living in low-income neighborhoods, the access to healthy options is simply out of reach. Many of these communities are oversaturated with fast-food chains and other sources of inexpensive and processed food, facing the highest risks of obesity, diabetes, and other preventable health challenges.

Unsustainable urban development, market failures and urban planning have mainly led to food deserts, areas without proper access to fresh, healthy and affordable food. These underserved urban spaces have recently received a great deal of attention, seen as the product of poor proximity, means of transportation and shopping options in low income neighborhoods. As cities seek to grow a more sustainable, equitable and livable environment, ensuring that healthy food is accessible to all is crucial. Alternative projects, initiatives and policies have been developed, bringing street food vendors to these unsuccessful parts of cities. Street vending, as an interim use, is a mean to promote a livelier and healthier city, a potential tool that may generate positive community changes, if the agenda used to promote it specifically address existing inequalities. This paper argues for the use of street food vending as an innovative tool to counteract food deserts and to activate the public space of previously dramatic urban areas, improving health and urban outcomes in places that need them most. It focuses on specific north-America street food strategies: New York City, Philadelphia, Seattle and Toronto have devised similar street food strategies with the aim to increase access to healthy food for the most vulnerable people.

11:30 *Julie Le Gall* and *Camille Hochedez*

Food Security and Multidimensional Linkage between Poor Urban Consumers and Nearby Agriculture: Towards a New Definition of Food Justice

ABSTRACT. Periurban and urban agriculture with its multifunctionality, is now on the agenda of most of the metropolitan areas, as a singular symbol of post-industrial era and sustainable urban systems. However, which urban populations are concerned? Whereas initiatives connecting local small-scale producers are part of daily routine of the well-educated and wealthy urban populations, there is indeed a growing disjunction between some disadvantaged urban areas and agricultural areas. This questions the everyone's access to local agri-resources (now almost synonyms of quality, in the common sense) and lets also emerge new patterns of metropolitan inequalities. Putting the emphasis back on food and social issues in research related to urban agriculture leads to reconsider the food justice framework. Indeed, the notion underlines what is denied in the current food system and emphasizes the fair distribution of food resources within a given area, both in farming systems and in the supply chain. However, there is a lack of analysis concerning the abilities of local agriculture to reduce or enhance inequalities in metropolitan areas. We propose thus a dynamic and innovative definition of food justice, not based on the fair or unfair distribution of local agricultural resources, but on the exploration of connections or disconnections between them and disadvantaged urban areas. How do we explain such linkage (or lack of linkage) and what kind of local geography does it design? Why does it contribute to create or improve food security and safety? Our communication builds on the comparison of four similar-size metropolitan areas, incorporated into different contexts: Lyon-Saint- Etienne, Malmö, Rabat and Curitiba. It points out three main results. First, taking account the producer/poor consumer's perceptions of each other better explains the fragmented geography of short supply chains; therefore, initiatives focused on awareness could promote the (re)connections. Second, although the Western model of sustainable city and its consequences on local agriculture do create common patterns on urban food systems, each deprived area also generates its proper strategie with agri-food resources, able to create alternative models for enhancing food security. Third, the relationship between poor populations, food security and urban agriculture relies on the local governance, but also on the political definition of "healthy" food in a context of urban pressures. Multidimensionality of

linkage between urban consumers and their nearby agriculture deserves therefore to be re-habilitated into the metropolitan theoretical and operational frameworks, to ensure sustainability and above all to foster social, spatial and food justice.

11:45 *Abdelsalam Tidjani*, *Giorgia Fiorella Nicolò* and *Mohamed Ag Bendech*
Les aliments dans la rue et la sécurité alimentaire des populations urbaines en Afrique sub-saharienne: le cas du Chad

ABSTRACT. Le secteur informel de l'alimentation de rue prospère dans toute l'Afrique Sub-Saharienne en raison du rythme accru de l'urbanisation (37% de la population vit en ville), du manque d'opportunités d'emplois formel ainsi que de l'introduction de la journée continuée de travail. Là où 47% de la population total est estimée comme pauvre, les services de restauration «for-mels» n'ont pas la capacité de répondre à la croissante demande d'aliments, à bon prix, ce qui constitue une opportunité pour le secteur de l'alimentation de rue pour prospérer. La présente étude vise à comprendre le contexte et les spécificités de l'alimentation de rue à N'Djamena et identifier des possibles points d'entrée afin d'améliorer la sécurité alimentaire de la population urbaine au Tchad.

12:00 *Irene Naigaga*, *Juliet Kiguli*, *Mercy Kyangwa*, *John Bosco Amuno* and *Rose Mugidde*
Threats for latent exposure to chemical food contaminants: a dilemma of urban agriculture in Uganda

ABSTRACT. The pollution challenges leading to exposure to food contaminants in the Lake Victoria Basin are a dilemma. Pollutants find their way into ecosystems and resource bases that are frequented by the urban dwellers, mainly women in their quest to sustain households. The situation is worsened by the lack of knowledge and gender insensitive environmental policies, yet this would have helped to inculcate a pollution prevention culture amongst the stakeholders. Where these policies remotely exist, they have remained disharmonious at best. As a result, initiatives that would have addressed pollution related effects on household health and the quality of ecosystem derived products are stifled. Efforts that seek to re-enforce poverty reduction strategies must now address themselves to the institutionalization of cross sectional action policies, backed by complete involvement of key stakeholders. It is here that gender advocates, environmental professionals, politicians, development partners and researchers, could dissolve the walls that have demeaned multidisciplinary efforts towards improving the quality of life for a common man.

Research was undertaken in Jinja, the second biggest town and industrial place in Uganda. A survey, interviews, and focus group discussion were conducted with urban dwellers and policy makers. Data was analyzed and indicated a strong relationship between patterns of resource use, modes of exposure to contaminants in polluted environments and gender. For example, it is men who do the fishing while women look after homes and carry out most of the domestic activities. Unfortunately, people performing these activities in polluted environments are at greater risks of exposure to contaminants, either directly when they come into contact with the contaminants or indirectly through the food chain. The factors that were observed to predispose the poor urban dwellers to contaminant exposure can be classified according to people's activity lifestyle as follows: water contact practices, proximity of gardens to chemical and

microbiological contaminated sites, close range of residential areas to chemical contaminated sites and vector breeding sites, lack of access to safe drinking water and sanitation facilities, and filthy homesteads and over-crowding in homesteads. In conclusions, it was realized that policy address is necessary and key to improving livelihoods of people in urban areas and urban agriculture is the survival strategy for poor women and men living in polluted areas.

11:00-12:30 Session 6L: WG20 - Revolutionary solutions for local food systems

Community based solutions I: welfare needs

CHAIRS:
Angela Galasso and *Paola Scarpellini*

LOCATION: Aula 20

11:00 *Stefania Fumagalli* and *Samuele Pigoni*

Crisis as a challenge to create new economic and social value for rural communities: the experience of social farming promoted by Coldiretti Torino and Diaconia Valdese

ABSTRACT. Nowadays the structural changes in Europe require a transition from the old re-distributive welfare to a new kind of welfare, called productive welfare, where the user cooperates to produce the new services. Firstly we have the citizen as passive user of services (around the ’50 and the ’60), or he/her appears as simple consumer (in the ’80 and the’90) and in the last period he/her becomes a co-producer: this is the effect of the co-production process. Generally speaking the co-production process is seen as a new way to guarantee some services towards the person: the ideation, the implementation and the evaluation of the service has to come from the co-operation between user and producer.. Following this trend in 2003 Coldiretti Torino tested lots of new experiences in the area of Social Farming, as nursery school or playground in the farm or working to enhance people in social emergency. Coldiretti Torino has been cooperating with the University of Pisa to promote a strategic plan to build a new model of Social Farming as well as the local development. At the beginning the aim was to make new paths for social innovation, to build a network of farms, farmers, stakeholders and actors of social public services where everyone had a connection with the others. Here we have the results of our work: 70 farmers and 23 social cooperatives involved, 13 cities, 1 association of cities, 1 GAL, 3 ASL and 10 consortia services.8 new enterprises,a new methodology to create value, the number of person involved and new services users and customers for the enterprises involved. Coldiretti Torino and the Province of Torino promoted an institutional path involving Agricultural Department, Training Department and Work Departments. Coldiretti organized a different type of meeting(e.g. World Cafè. EASW, Open Space) in order to cooperate in this network. Thanks to this meeting were born lots of important alliances on the rural area around Turin, as the relevant cooperation with the Diaconia Valdese. Firstly we worked together to create and to support an innovative startup of social agriculture and now we are working for the second experience. As a great result we have a permanent table were the actors involved have been working to create social innovation for the local development.

11:15 *Maria De Lurdes Silva*, *Isabel Mourao*, *Lia Jorge*, *Paula Rodrigues*, *Jose Raul Rodrigues* and *Luis Miguel Brito*

“Garden of Knowledge" - Strategic Project to Support Low Income Families,

Braga, Portugal
SPEAKER: *Maria De Lurdes Silva*

ABSTRACT. Urban gardens can play an important role for the well- being of citizens, for improved nutrition and health, towards environmental awareness and conservation of natural resources. They may have educational, cultural and simultaneously social purposes, facilitating work and income for disadvantaged social groups, reducing poverty and fostering development, particularly among the elderly, unemployed or homeless. In a context of high unemployment and low educational and professional qualifications, the Portuguese Red Cross - Braga Delegation, through its Community Center in Vila de Prado (CCVP), proposed the creation of a community garden as a way to contribute to the social integration of low income and socially stigmatized families. The site, with a huge landscape potential along the river Cávado, was abandoned and useless. The purpose of this study was to develop the design of this community garden, based on the characteristics and expectations of the beneficiary families, including : (i) the technical project of the organic horticultural production; (ii) the operation of the community garden, its promotion, dissemination and resources; (iii) an education/training plan to promote knowledge and potential professional integration; (iv) a plan of activities directed to the community to promote the project integration; (v) the evaluation of the impact of the project on the beneficiary families, particularly in terms of improving social relations and their social integration. The methodology developed throughout 2013, included the analysis of the characteristics and perspectives of the beneficiary families, by monitoring the application process; the study of the agronomic characteristics and potential of the site; the understanding of the interconnections with the community through contacts and collaborations with neighbors and local institutions; the evaluation of other social and community urban garden projects. For assessing the social impact on the beneficiary families, three technicians of the CCVP (social workers and psychologist) were interviewed. The project was called “Garden of Knowledge” (Horta do Saber) and included plots for 16 families (200 m²/plot) and a training course on organic farming (200 h). The impact could be described by a great motivation, commitment and willingness to participate, an opportunity for social integration and a significant contribute to increase families self-esteem, well-being and better health through improved food quality. Now, the site is a smart, multifunctional and inclusive park, as it promotes sustainability, food security, biodiversity, intercultural and environmental education. By bringing together several synergies it led to a better community's quality of life and a better environment.

11:30 *Salvatore Carbone*, *Giacomo Crisci* and *Maria Fonte*
La Nuova Arca: a new model of community life and civic agriculture

ABSTRACT. La Nuova Arca (LNA; in English: The New Ark) was born in 2007 in pursue of the common good through the establishment of a small community of families, which aims to the social inclusion of vulnerable groups of population: single mothers and children in need, migrants, refugees. Hospitality to mothers and children in needs was the starting point of this experience that rapidly evolved to include the experimentation of new forms of housing and new models of production and social relationships.

Agricultural activity is a central part of this project. His most important point of innovation is the experimentation of an economic model that accords centrality to the construction of networks of social relationships. The farm started in 2012, involving since the outset some Solidarity Purchasing Groups (GAS). It has quickly strengthen its

activity, in direct relationship with the GAS, which in 12 months grew rapidly in number, from 5 to 30, allowing the consolidation of the farm and the involvement in the work of mothers living in the community, some immigrants and other workers. Skills related to agricultural production processes and activities of distribution and packaging grew rapidly.

The New Ark quickly became a reference and an aggregation point for the other farms operating in the same territory, as well as a reference for a large number of GAS, especially in the coordination and management of the orders of non-local products, such as citrus fruits and detergents. One of the most original projects is Deterspilliamo, which consists in the on-tap dispensing of eco-friendly detergents produced by a firm originated from the experience of the Ethical Purchasing Group of Rimini, in the North of Italy. Re-use of packages is encouraged, while mothers of the family home are also involved in the project.

Common initiatives with other farms of the IX Municipality of Rome have also led to the mobilization of local actors for the defence of the territory, threatened by the opening of a landfill at Falcognana, after the closing of Malagrotta. Collective action, supported by the IX Municipality of Rome, was also directed to the creation of a municipal brand (DOM: municipal designation of origin), aimed at promoting local products and local farms that produce with sustainable practices.

Finally, agriculture activity has become an important part of the social and economic life of the community and an important link for the construction of solidarity and cooperative social relationships.

11:45 *Lucasimone N. Kogoj*, *Martina Perugini*, *Jacopo Facchi*, *Francesca Massetani*, *Enrico Maria Lodolini*, *Federica Giaccaglia*, *Ludovica Lancianese*, *Davide Neri* and *Rodolfo Santilocchi*

Multifunctionality in a vegetable garden

SPEAKER: *Francesca Massetani*

ABSTRACT. Farm multifunctionality represents nowadays one of the pivotal factors to add value to crop productions and enhance the development of agricultural sector in the urbanizing regions. Projects aim to make customers move closer to food production areas and didactical, recreational and social activities are interesting ways to diversify the services provided by farms. Innovative enhancement activities were developed in a farm in Ancona (Italy) on a surface (1500 m^2) cultivated as vegetable garden, throughout pilot projects implementation and experimental social paths. A self-service vegetable garden was designed and established in 2011 and equipped with a glasshouse for visitor's reception. The project intended to allow citizens to hand-pick their own fresh vegetables, meeting the increasing need to rediscover the countryside and reduce the distance between food production and consumption. Further, the glasshouse was used as crucial center to implement several didactical, recreational and social natural themed activities dedicated to children and families. In the same area, a pedagogic project, called "Summer in the countryside", was activated since the summer 2012. During the school vacation, weekly educational and play modules in the agricultural environment were offered for 4-11 years old children. During the activities, the vegetable garden was used as an open classroom and the natural environment served as source of materials to be used by children to experiment, learn and amuse, modeling toys with their own hands. Further,

social farming activities were proposed and activated. Among these, the project "Active longevity in rural areas" was established in 2015, aiming to evaluate the clinical and therapeutic benefits of motor and cognitive activities held in the countryside in over-65-year-old seniors. The elderly were involved in practical activities, related to the care and maintenance of a dedicated vegetable garden, and in exercises for the mind to improve the mnesic performances and promote the recall of emotionally pleasant experiences, with the cooperation of specialized medical staff. The provided activities allowed the farm to diversify the range of offered services and to improve visibility among customers. The number of participants to educational activities increased over time. The "vegetable garden" environment proved to be an effective location to host didactical, educational, recreational and therapeutic activities and to fulfill the multifunction objectives.

12:00 *Giacomo Crisci*, *Maria Fonte* and *Suleman Diara*

Barikamà: resistance trough food

ABSTRACT. Barikamà is a cooperative born in 2011 to facilitate the social integration of migrants from Subsaharian Africa. In 2010 Suleman, Aboubakar, Sidiki, Modibo, Ismael, Moussa participated to the riots in Rosarno against racism and the exploitation conditions of farm workers in the citrus production. Escaping from such conditions, they arrived in Rome, were they met the Solidarity Purchasing Groups (GAS): from this encounter Barikamà was born. Barikama' means 'resistance' in Bambara language, spoken in Mali, Senegal and Burkina Faso.

The cooperative is, indeed, the result of solidarity action aiming to integrate migrants and disadvantaged people through the production and sale to GAS of organic yogurt and vegetables. In the new relation people extended their capabilities. They learnt Italian and new work skills, and in such a way they were able to gain a small income, on which to base their autonomy in the new society in which they were living.

Under the advice and with the support of a group of people linked to the GAS movement (both consumers and farms), they learnt to produce organic yogurt with milk bought from an organic local farm. Yogurt is produced in a cheese factory near Rome, then is distributed directly to GAS, farmers' markets and individual families.

Today the Cooperative produces about 6000 litres of yogurt and gives work to eight people, among whom two persons suffering with Asperger syndrome. Facilitating the insertion into local social relations, the Cooperative has also facilitated the stable insertion in the labour market of some of his members.

The relation with the local community is such that when, in 2014, the Co-operative needed to make some productive investments (buy bicycles, an electric scooter, fridges and better equipments for production), they felt quite confident to launch on Internet and through the GAS movement a request of 20,000 euro: in few months 26,000 thousand euro were raised.

In 2014 in collaboration with the Casale di Martignano (where they produce their yogurt) they also started the production of vegetables.

Barikamà allows its member to gain confidence and satisfaction in a working experience,

creates a network of social relations, new opportunities for all people, Italians and Africans involved, to know and interact with different cultures. Its critical point is mainly the low income it can still guarantee. The experience needs to consolidate through the support of a favourable institutional context.

11:00-12:30 Session 6M: WG24 - Revaluing institutional food procurement

Up scaling Institutional Food Procurement: Pathways and barriers

CHAIR:
Luana Swensson
LOCATION: Aula 4

11:00 *Claire Cerdan*

The contribution of local agrifood systems in food policies of cities

SPEAKER: *Claire Cerdan*

ABSTRACT. In the current relocation process of food systems, more and more cities are experimenting new local food procurement policies. These experiences are quite different with the previous initiatives of support of agriculture that was conceived and reasoned from a rural area in oder to reveal specificities to ensure better integration in the markets and contributed to the development and recognition of what is called the agriculture of terroir or geographical indications.

The approach of SYstems Localized Food and Agriculture (LAS) is in this perspective and brings, since the late 90s, original contributions to the analysis of rural development by providing a central place to resources, territory and local food cultures [Muchnik et al (2008)]. The originality of the work on SYAL was thus to propose a method of analysis with attention to the enhancement of regional specificities, declined in several dimensions: specificity of men, their histories and institutions, specific ecosystems and landscapes; specificity of the products and related qualification process; specificity of consumers and their food crops that can be used as food resources development [Muchnik et al (2008)].

Public procurement projects networks and programs for school canteens cities refocus the debate on the need to take account of the logic of small businesses and their possible cooperation within a territory and interacting with urban developers of these programs.

the paper discuss here on the capacity and the relevance of the SYAL approach to meet the food safety requirements and to support local procurement policies of cities and especially school canteens.

To develop our proposal, we will rely on the communications of the International Congress on SYAL in 2013 that address recent school lunch programs (especially in Brazil). We first present the policies and programs specificities and limitations. We will then discuss possible contributions of SYAL approach to the analysis of these new agricultural and rural dynamics in those territories where the city becomes a key player.

11:15 *Lori Stahlbrand*

Socio-technical innovation in university procurement of sustainable local food: the role of “infrastructure of the middle” in sustainability transition

SPEAKER: *Lori Stahlbrand*

ABSTRACT. This paper will argue that “infrastructure of the middle” is a key concept that must be highlighted in order to understand how sustainability transition theory can be applied to food system transformation. It presents evidence from an analysis of university food procurement initiatives in Canada and England, based on detailed interviews with practitioners. The author herself was a practitioner (as the former leader of a Canadian NGO which promoted university procurement of sustainable local food), and thus brings a perspective informed by praxis, as well as academic theory. “Infrastructure of the middle” is a term I adapted from Kirschenmann et al.’s concept of “agriculture of the middle”, which describes the mid-size farms and ranches most under threat from an increasingly globalized food system. I coined the term “infrastructure of the middle” to include all the hard and soft infrastructure from roads, warehouses and processing plants to individual champions, non-profit actors and institutional habits that create a new “nexus of practice” for sustainable local food. This nexus of practice has the potential to connect small and mid-size farmers to public institutions that place high-volume orders, a market from which they have been largely excluded. In effect, “infrastructure of the middle” encompasses the moving parts of a socio-technical system required for food system transformation. This paper acknowledges the contribution of sustainability transition theory, which combines both social and technical innovation, and offers a process that includes both social and economic goals. My approach extends the traditional range of sustainability transition theory to public sector procurement of food, a key tool of the sustainability transition. This paper argues that the concept of “infrastructure of the middle” is crucial because it embeds public sector food procurement in local society, nature, and economies. I will argue that “infrastructure of the middle” is the operationalization of embeddedness in socio-technical systems for sustainable food transitions.

11:30 *Ivana Cristina Lovo*, *Luzia Falcão* and *José Divino Lopes*

The Urban Agriculture conquering the school food institutional market in Belo Horizonte/MG/BR. The Productive Garden experience in the period 2010-2015

ABSTRACT. The “From Seed to Table (FStT)” project sponsored by RUAF Foundation, was deployed in Brazil only at Belo Horizonte city, Minas Gerais State, in the 2010-2011 period. His goal was to make possible the generation of income groups "self managed" consisting of low-income families from the sale of healthy food produced in Urban Agriculture projects called "Productive Gardens". The project worked in two complementary dimensions of urban agriculture in the city: (i) creating basic conditions for low-income families linked to community gardens located in public areas so they make economically viable activity with a focus on self-management and (ii) providing elements for the public managers to structure programs to generate income, occupation of urban spaces and the promotion of food and nutrition security. The methodological strategy was guided by the action research focusing workshops so-called Field Schools, which addressed organizational, technical and marketing aspects. One of the results of the intervention was the sale of production for the national school feeding program, which aims to increase the consumption of vegetables among public school students. This ensured the supply chain strengthening by flowing the production and marketing of healthier food to students in these schools. Some farmers have signed up as individual entrepreneurs, have come to the National Register of Legal Entities (CNPJ), have got current bank account and contribute to Social Security. In April 2011 the Productive

Garden, in an area of 3500m2, with seven farming families, was providing healthy food for four schools and two Municipal Child Education Units benefiting approximately 4,800 public school students and enabling the generation of an average income of U$ 367.57/ month/farmer family. This experience was certified as a Social Technology by ABank of Brazil Foundation in 2011. So, the goal of this work is show the result of this institutional sale experience constructing a timeline in the period of 2010 until 2015.

11:45 *Annelise Krause* and *Sergio Scnhneider*

Evaluation of the Ecuadorian School Feeding Program as a promoting heathy local food production public policy

ABSTRACT. Ecuador is going through a nutritional transition with increase in the prevalence of overweight and obesity in the population, especially among children and young people, although undernutrition rates in the country are still very high. The country has great ethnic, cultural and food diversity, however, the introduction of ultraprocessed food in the Ecuadorian diet has provided changes in habits and nutritional profile of the population. Among the existing government programs whose purpose is to reduce malnutrition among children and youth is the School Feeding Program – Programa de Alimentación Escolar - PAE. The objective of this study was to reflect on the possible influences of the School Feeding Program - PAE - these changes the nutritional profile and its future possibilities. 24 hours Food Recall surveys were analyzed of a sample of mothers of children receiving food at school, in order to check the diet and compare with the menu offered by PAE. Were also analyzed data from focus groups to obtain information about the acceptance of food of the governmental program. It was observed that household food habit is still linked to the culture of local foods, with plenty of fruit and vegetables regional and linked to existing ethnic groups in the country. On the other hand, the Ecuadorian PAE offers a total of five products to be combined during the week spread throughout the country, and with great industrial processing. Children, in turn, partially accept products, and rejection is more recurrent in regions where indigenous or rural culture is predominant, as in the rural Amazon region. The products offered by PAE do not reflect the culturally established eating habits, and could be replaced by locally produced food that is regular used in the population. This condition could contribute - together with other policies to promote healthy eating – for the stagnation of nutritional transition and appreciation of local agricultural production.

12:30-14:00 Lunch

14:00-15:30 Session 7: Plenary keynotes lectures (2)

LOCATION: Aula Magna (Great Hall 1)

14:00 *Wayne Roberts*

Entrenching food policy in cities: how it looks from the trenches

SPEAKER: *Wayne Roberts*

ABSTRACT. Throughout most of the Global North, a food movement took shape during the 21st century that was largely the result of a "triple revolution" of sorts. Young people fell in love with food and the city at the very moment when food and cities were going through unprecedented transformations, and at the very moment when social movement politics were undergoing deep-going transformations.Some of the energy from the triple revolution found an outlet in food policy councils which spread across North America

and into Europe. The keynote is based largely on first-hand observation of the challenges faced by the most developed of these food councils, the Toronto Food Policy Council, which provide insights on international trends worthy of investigation by sociologists.

14:45 *Carlo Alberto Pratesi*

The path to the perfect food

SPEAKER: *Carlo Alberto Pratesi*

ABSTRACT. A journey across the many challenges that the concept of food sustainability and its application faces nowadays, vis-à-vis current production and consumption trends. It is widely upheld that one of the main contributors to anthropogenic climate change is the food system. Food production affects the environment through emission of greenhouse gases (GHG), by stressing the global nitrogen cycle, affecting biodiversity due to deforestation and monoculture practices, and also by leaching of toxic substances into water resources through the use of pesticides. The paradoxes affecting the food systems are mainly three. First, the coexistence of malnutrition and overweight problems. Second, nearly one third of all crop production is dedicated to animal feed or biofuels, despite persistent widespread hunger and malnutrition. Thirdly, the global community wastes on a yearly basis one third of global food production.

How can these problems be tackled? The lecture will highlight the importance of engaging all the different stakeholders as well as the need for developing integrate action across different spheres.

Sustainability has become a strategic factor in competition and the private sector has to take up this challenge. Consumers need to change their consumption habits away from GHG intensive diets toward more sustainable low-carbon foods. Responsible marketing, consumer education and awareness raising initiatives, as well as healthy lifestyles promotion are among the strategies that have the potential to trigger healthier and more sustainable food consumption.

Finally, the lecture will highlights the dilemmas that make the pathway towards sustainability challenging, also from a policy point of view.

15:30-16:00 Coffee Break

16:00-17:30 Session 8A: Parallel Working Group sessions (5)

16:00-17:30 Session 8B: WG6 - Transition approaches

System oriented papers - Actors oriented papers

CHAIRS:

Pieter de Wolf and *Myriam Sánchez*

LOCATION: Aula 18

16:00 *Johanna Metzler*

The Social Construction of Space in Urban Agriculture

SPEAKER: *Johanna Metzler*

ABSTRACT. This research deals with the topic of urban agriculture in Vienna and its social construction of space. It has to be mentioned that the urban agricultural movement

is a young one which makes it very interesting for research because it's an unexplored field. This particular situation is intended to be examined in relation to the demonstration garden Karls Garten. Its goal is to introduce the concept of urban agriculture to the Viennese people and to spread its idea. The project developed out of the wish to transform a meadow in the center of the city into a multifunctional place. So people should get the possibility to learn about food and agriculture as well as perceive Karls Garten as a leisure area. To combine this functions furniture out of recycled wood was created. Therefore the association Karls Garten was founded which consists of four members whom already had experience in urban agriculture. It is important to point out that the project highly depends on sponsors because the city of Vienna didn't fund the project. The city of Vienna even could be seen as an obstacle for the implication of the project. The biggest challenge is the many laws of the city which shouldn't be violated by Karls Garten. However, it was very hard to get all information about these laws which resulted in a loss of time because for instance there was a long discussion if the project area has to be surrounded by a fence.

The theoretic focus of the research is given by the social space theory of Lefèbvre. It is based on the assumption that all space is socially constructed. The construction of space becomes visible through Karls Garten because the beginning of the research is the beginning of the demonstration garden too. Since urban agriculture is a counter-concept to capitalist agriculture, the research using Lefèbvre's theory questions, to what extent Karls Garten is a non-capitalist space. Further the capitalist agriculture is seen as the cause of many global problems like climate change. This perspective is also represented by the theoretical concepts of food sovereignty. However, food sovereignty goes even further and questions the perception of the country side as food producer. In practice this means that visitors of Karls Garten should start questioning the dominant capitalistic agro-system and engaging in alternative possibilities of a new agro-system.

16:15 *Marianne Hubeau* and *Fleur Marchand*

Importance of action labs to transform the agri-food chain towards sustainability: evidence from Flanders

ABSTRACT. The agri-food system is increasingly under pressure due to demographic, economic and environmental changes. Moreover, internal trends such as consolidation and private standards also affect the system. As a result, the agri-food system is urged to make a transition towards sustainability. Many sustainability experiments arise to respond to these trends. An important aspect to facilitate this transformation is to gain insight in these experiments. We define them as action labs as they are practice-oriented and in an experimental phase. The aim of this paper is to explore the process of collaboration within these action labs and with the mainstream agri-food system. We analyse four case studies to analyse how action labs could contribute to the sustainability challenges of the mainstream agri-food system. The results highlight 13 key factors of collaboration and link the performance of the experimental initiatives with the structure of the actor network and interaction to the agri-food system. Our research contributes to enhancing scientific knowledge on the role of collaboration in the transformation of agri-food systems.

16:30 *Kathrin Specht*, *Felix Zoll* and *Rosemarie Siebert*

Regional Open Innovation Roadmapping (ROIR) - Application and evaluation of a

participatory approach that integrates stakeholders into the development of regional innovations

ABSTRACT. This paper reports on the testing and evaluation of an operational approach that brings together different stakeholder groups to jointly develop strategies for the future implementation of regional innovations. The approach was designed and first tested by Schwerdtner et al. (2015), who called it Regional Open Innovation Roadmapping (ROIR). It integrates "open innovation" elements in technology roadmapping (TRM) in the context of sustainable regional development.

We adapted the method and applied it to the case of introducing innovative types of building- related urban agriculture (UA) to the City of Berlin. Those possible innovative types might include the installation of rooftop gardens, rooftop greenhouses, edible green walls as well as such innovative forms as indoor farms or vertical greenhouses. The term ''Zero-acreage farming'' (ZFarming) describes all those types of UA, being characterized by the non-use of farmland or open space (Specht et al. 2014). In order to define sustainable options for ZFarming, the ROIR approach was applied between 2011 and 2013. The aim was to find possible ZFarming-models for the metropolitan area of Berlin and to identify the options available for their sustainable implementation. During the participatory process, the participants (activists, representatives from lobby groups, planning and construction, research, sales and distribution, policy and administration), established a stakeholder network (of around 50 participants) called "ZFarm- Urban agriculture of the future", and a roadmap was jointly defined to enable administration, politicians, citizens and practitioners to deal with ZFarming in the future.

An evaluation of the participatory process revealed, that the chosen approach could contribute to increase the potential for ZFarming in different ways. Similar to what has been described by Schwerdtner et al. (2015) for the previous application of the ROIR approach, the approach was highly appreciated by the participating stakeholders, because it allowed them to reflect and decide on different development options. Moreover, the process stimulated the establishment of new networks and alliances, contributed to knowledge generation and created a common understanding for the future implementation of ZFarming among the stakeholders.

Schwerdtner, Wim, Rosemarie Siebert, Maria Busse, Ulf Freisinger. 2015. „Regional Open Innovation Roadmapping: A New Framework for Innovation-Based Regional Development". Sustainability 7 (3): 2301–21.

Specht, Kathrin, Rosemarie Siebert, Ina Hartmann, Ulf B. Freisinger, Magdalena Sawicka, Armin Werner, Susanne Thomaier, Dietrich Henckel, Heike Walk, Axel Dierich. 2014. „Urban agriculture of the future: an overview of sustainability aspects of food production in and on buildings". Agriculture and Human Values 31 (1): 33–51.

16:45 *Victorino A. Bato*, *Nelita M. Lalican* and *Danilo Lalican*

Transition from Conventional to Organic Farming

ABSTRACT. Should we go organic or retain the conventional farming on producing cereals? For short term commitments, we cannot leave the conventional farming to be able to feed the nation. However, by gradually mixing organic and inorganic system of farming, the possibility of raising organic cereals would be possible. In 2012, about 44

rice farmers were interviewed and mapped the location of their farms. Majority of them are practicing both organic and inorganic. Reasons are, they would like to prove the knowledge they got on organic farming. Others followed what their neighbors are doing. About 32 percent are practicing pure organic system of raising cereal. After three years, only nine percent are practicing pure organic and very few on mixed farming. The sustainability of the transition process failed for reasons that low production was attained in organic farming. Even if, organic rice commanded higher price, very few are in pure organic rice growing. The organic rice are being sold outside of the community. The sustainability of the transition process can be attained only after a long time. After the soil was able to recover and all the nutrients gotten have been returned. To reach the end of the long term process, transition approaches must be in place. These are provision of other livelihood that would support the still low production and analyzing the value chain specifically the cost of inputs and the social effect of the output.

16:00-17:30 Session 8C: WG2 - Short food supply chains (regional products; farmers' markets; collective farmers' marketing initiatives; alternative food networks; CSA)

Alternative Food Networks Examined via Cases

CHAIR:
Stephan Pabst

LOCATION: Aula 21

16:00 *Antonella Bodini*

Solidarity Purchase Groups, the aggregation model for local food distribution. First results of a direct study in Marche.

SPEAKER: *Antonella Bodini*

ABSTRACT. In recent years food networks have evolved towards a more participated model of food provisioning and distribution in urban areas of Italy. Consumers have organized themselves in solidarity purchases groups (GAS) to support as much as possible local producers and enhance local economy. This study presents the results of consumers choices, motivations and commitment of members of a GAS settled in a city of the central region of Marche. The paper shows that food quality and direct relationship with producers, as well as solidarity approach to consumption, are core factors for new sustainable economic paradigms.

16:15 *Daniele Ponzo*

An urban CSA in Ireland: model description, relationship with the wider agri-food industry and introductory exploration of its impact on the community

SPEAKER: *Daniele Ponzo*

ABSTRACT. Alternative agri-food networks are constantly growing in Ireland. The last few years have seen a development in farmers' markets, allotments, community gardens and generic "grow-it-yourself" initiatives. This is all happening against the backdrop of a highly specialized and factory-oriented agri-food industry, which is dominated by beef and dairy production and promoted by the Department of Agriculture (Food Harvest 2020, the governmental agri-food policy, generally emphasize conventional agriculture and export). But this approach has recently seen more questioning from the general public after alarming food scares. The aim of this paper is to describe the first urban CSA group in Ireland, founded by an international group of citizens based in and around

Dublin city centre, with a shared goal towards community-building initiatives and sourcing quality food locally. The paper will explore its relationship with the Irish agri-food industry and with other alternative, rural-oriented initiatives. These include box schemes currently active in the city but with little community involvement, rural and peri-urban CSAs (like the Cloughjordan Ecovillage experience) already creating a valuable contribution to the establishment of regenerative food systems and, finally, urban community gardens, seen both as community practical and learning initiatives and as a hub for debate and ideas exchange around food security and sustainable food production. This successful CSA initiative is described from the community building aspect - which differentiates it from a box-scheme or from a mere "buy-local" mind-set – as well as from the group strengthening-techniques, the application of conflict resolution skills and the "consensus method" approach which all contribute to making this a viable model. The effectiveness of an urban CSA comes not only from its focus on reducing food miles, but also - especially because it is in a urban context - from its ability to attract the right target of people and from its capacity to address questions from an unsatisfied generation (see Kate Soper's 'disillusioned seduced'), who seek a real alternative to massified consumption and to distant and "industrial-scale" food production. The paper will conclude with a description of the way forward for the Dublin CSA group and how the continuous evolution of the group is contributing to the members' self development. It will also outline some recommendations and "lessons learned" from this experience which could be beneficial to enhance this current initiative and export this model, with a view to replicating it in Ireland and in Europe.

16:30 *Jenny Sjöblom*

Community Supported Agriculture (CSA); a model for idealists? – How to find producers and consumers interested in CSA in Sweden

SPEAKER: *Jenny Sjöblom*

ABSTRACT. The unconventional model of agriculture Community Supported Agriculture (CSA) is expected to contribute to a more sustainable food supply and a sustainable landscape; the development of rural areas; a stronger relationship between producer and consumer, and a healthier diet. However, the question still remains; who is benefitting from CSA? According to Forbes and Harmon (2008) the concept require a certain amount of commitment to the philosophical ideas of the concept. A study regarding the origin and current development of CSA in Sweden (Sjöblom, 2015) also confirms that the model might only apply to idealists. In other words, it is not the conventional farmer who adopts the model. In the same study producers raised the dilemma of working with a concept completely new for both producers and consumers, which seems to be the case in Sweden. Many believed the greatest challenge was to find customers nearby. What seemed crucial for the development of CSA in Sweden seemed to be to make the concept more widely known in Sweden, for both producers and consumers as well as find out who the potential customers could be.

In this paper the results from studies on the motives behind producers and consumers attending Farmers Markets in Sweden (Nilsson, 2009; Nilsson and Mont, 2010) are compared with the results in the above mentioned study about the origin and current development of CSA in Sweden (Sjöblom, 2015) and other studies about CSA in Sweden. The motives behind producers and consumers attending Farmers Markets in Sweden has been compared with the motives behind CSA-producers and CSA consumers. Conclusion can be drawn that the producers selling at Farmers Markets as

well as consumer attending these markets could be a potential target group for CSA.

In Sweden where the notion of CSA is still in its infancy and where present producers operating according to CSA seem to think it can be difficult to find consumers as well as producers these results could be of great importance in order to strengthen the development of CSA. Even though results show that consumers at Farmers Market as well as CSA members tend to be more affluent then the general public, reaching towards this target group could be a first step in making the model more widely known. More studies then need to be conducted how the model could reach out to a wider public, not limiting the model to so called 'idealists'.

16:00-17:30 Session 8D: WG3 - Economic impact at the farm level

Multifunctional business models

CHAIR:
Roberto Henke

LOCATION: Aula 22

16:00 *Roberto Henke* and *Francesco Vanni*

Introduction Working Group 3 - Economic impact at the farm level

ABSTRACT. Introduction in attachment

16:15 *Bernd Pölling*, *Giulia Giacche*, *Biancamaria Torquati*, *Wolf Lorleberg* and *Chiara Paffarini*

Comparison of urban agricultural business models – empiric study on Italian and German cases studies

ABSTRACT. Farming in and around agglomerations has to adjust to specific urban and changing conditions over time. Many urban processes influence agricultural and horticultural enterprises: urban sprawl, industrial power, changing land use patterns, and population development including its societal demands and customer behaviors. 36 urban agricultural business models from Italy and Germany were investigated in this study to detect key strategies and success factors of business models. The German cases are from the most densely populated federal state North Rhine-Westphalia – more specifically from Germany's largest agglomeration Metropolis Ruhr and Aachen; the Italian cases are primarily from Perugia region, Umbria, and the metropolitan area Rome. Food production for the urban local market is only one of many adjustment strategies to the advantage of huge consumer markets in agglomerations. Further strategies include appropriate leisure time, education, social and health issues as well as new ideas of integrating the emerging and further growing interest of city dwellers in food issues and the emerging urban gardening. These business models have the potential to narrow the gap between food producers on the one side and consumers and society in general on the other side, which is evident in the industrialized world. 14 Italian and 22 German case studies of commercial urban farming have been analyzed by using Canvas Business Model described by Osterwalder, Pigneur and a large group of additional authors. The nine building blocks of this strategic management template are used to identify customers, offer, infrastructure, and financial viability of the individual cases from the two countries compared in this study. By considering these business models, clusters of characteristic commercial urban farming are defined in both countries and compared in terms of trans-national comparisons and similarities. Furthermore, these clusters are investigated regarding cluster-related success factors and problems exemplified by

suitable examples of farm businesses. The conducted analysis of Italian and German urban agricultural cases is based on a standardized questionnaire. The study highlights the economic added value of urban agriculture on farm level to be considered a viable part of urban economies. Additionally to the marketable contributions, the individuality and diversity of urban agriculture provides non-marketable added-values for urban societies, environments and landscapes.

16:30 *Patrizia Borsotto*, *Roberto Cagliero* and *Giorgia Pastorino*

Short chain approach and family farms: from acknowledgement to capacity building. The case of Alessandria Province

ABSTRACT. The Italian food system faces increasing competition and the reduction of the "safety net" provided by the CAP. Briefly, among the factors of weakness we could count: the fragmentation of production that affects the level of production costs and on the visibility of the products; the low degree of vertical and horizontal integration of supply chains that undermines the competitiveness of the offer. Among the strengths that characterize the Italian food system, briefly we could mention: the wide variety of products that depends from environmental variability, the quality of the offer of agricultural products; the key role played by the Italian tradition. The trends of the last two decades, thanks to the role of Community policies, push to the direction of a new model of multifunctional agriculture and economically diversified . The process of modernization and globalization of production systems, markets and trade led to the declination of a multitude of innovative forms of organization of food chains. The farm, once abandoned or decreased the links with traditional distribution, is now faced with new choices on business and sell strategy. This work presents the most significant results of the analysis conducted on a sample of farms in the Province of Alessandria. The focus of the survey was carried out via questionnaire to farmers and stakeholders. The aim of the study is to analyze the farmer's choices in order to intercept requests of consumers. Under this point of view the real focus is to let the consumer understand both the intrinsic quality of the product and the intangible quality perceived by the market. In the other words all the intangible aspects that have to be described and explained in face of a higher level of price. The results obtained for some production sectors (horticulture, viticulture, livestock, beekeeping) highlight the need to evaluate the equity of prices and therefore try to check the production costs in order to stabilize the profits and identify intrinsic elements that could justify the higher value of the product sold in direct way. This is very relevant in the view of the so called “squeezing agriculture” process (Van der Ploeg, 2006), where the agriculture production is compressed between the rising costs of inputs and the decreasing prices of wholesale markets. Family farms, especially affected by this threat, could find in the direct selling a concrete strategy to face this risk and activate an opportunity to increase profits.

16:45 *Fabio Bartolini*, *Gianluca Brunori* and *Francesca Galli*

Understanding determinants of adoption of direct selling strategy among Tuscany farmers

ABSTRACT. In recent years a growing number of farmers has implemented alternative marketing strategies, based on the internalisation of value chain segments. Such tendency is driven by the low level of prices paid by retailers, the pressure to diversify marketing strategies to reduce risk exposure and the change of consumer’s preference towards short

chain or local products demand. The present paper aims at investigating determinants of adoption of farmers' direct sell strategy. We investigate Tuscany farmers using data collected during the 2010 census. A double hurdle model allows to estimate adoption of direct selling as a two steps model: firstly identifying the determinant of decision to adopt direct sell strategy (i.e. whether invest or not in direct selling) and then the determinants of the share of farmers' production sold directly to consumers, among all other commercialisation forms. Preliminary results shows that motivation and skills are main determinants direct sale as well as the closeness to urban areas, confirming demand driven effects.

17:00 *Donatello Caruso*, *Francesco Contò* and *Virginia Namiotko*

An evaluation of investment in Agritourism: a case study of Puglia Region

ABSTRACT. This research explores the role of multifunctional farms in developing and promoting the rural tourism and so farm income; correlatively the focus is on process and actions to support the development and refinement of cultural attributes, traditional values and regional identity. The importance of multifunctional farming activities is remarkably evidenced by the significant changes made to the EU's Common Agricultural Policy (CAP) within its rural development policy. Multifunctionality and rural tourism has received a lot of attention over the last decade from scholars and policy-makers. Methodologically, it is a deductive reasoning exploratory research, staring from the analysis of the 25 Local Action Groups (LAGs) which cover the entire Region of Puglia, in Southern Italy. The LAGs are local agencies that process the Local Development Programme (LDP) and manage financial funds by the European Union and by the European Agricultural Guidance and Guarantee Fund (EAGGF). The aim of this work is to conduct ex-ante analysis of the impact of the new CAP policy instrument of the case Measure 311 (Axes III) action 1, 2 and 3 of the Rural Development Program 2007-2013, also adopted by the Region of Puglia, whose main aim is – in accordance with art. 20(b)(i) of Council Regulation (EC) no. 1698/2005 "Diversification into non-agricultural activities"; in particular, Action 1 is related to Investments for the supply of agri-tourism accommodation in the business context in accordance with applicable regulations; Action 2 provide investments for the supply of educational services and education for the population, with particular reference to the school and students and in synergy with the national education system; Action 3 is related to investments for the supply of health services for the benefit of vulnerable groups. The methodology is based on the cluster analysis, of the data achieved by the Regional Management Authority enables us to observe how 319 firms have actually been admitted to the benefits of the Measure in question, we analyze the differences between group means and their associated procedures.

17:15 *Abdusame Tadjiev*, *Shavkat Hasanov*, *Bakhodir Abdullaev* and *Nodir Djanibekov*

Options for promoting farm cooperation in water use and its economic impact

ABSTRACT. This paper studies cooperation in water use between farmers in one of the irrigated areas of Uzbekistan by using cooperative game theory model. The formation of coalitions between three farmers is analyzed using a cost game (three cooperative communities) for water service costs spent by farmers. We show that the farm cooperation will decrease the costs. The game theory solution concepts are determined by application of Shapley value method. Keywords – cotton, wheat, irrigation system,

cooper-ative game theory, water service costs.

16:00-17:30 Session 8E: WG5 - Entrepreneurial skills and competences, knowledge and innovation systems and new learning arrangements

Rural/Urban entrepreneurial knolwledge exchange

CHAIRS:
Gerard McElwee and *Sarah Marie Nischalke*
LOCATION: Aula 16

16:00 *Montserrat Soronellas-Masdeu* and *Yolanda Bodoque-Puerta*

Local cultures and global discourses in emerging rurality

ABSTRACT. The aim of this project is to study certain economic, social and cultural initiatives that have emerged in rural areas, particularly over the last decade, as ways of dealing with the current structural crisis affecting small towns and villages and their traditional forms of reproduction. The study of how these emerging initiatives are manifested and the specific forms they take will not only highlight the role of the state and the market, but will also reveal how local populations adapt to or resist them, generating through this process new images and values, and a demand for new services and products.

Our initial hypothesis is that these initiatives arise from the combination of, first, the cultural elements that have traditionally guaranteed the social reproduction which provided meaning and cohesion in rural communities; and, second, factors that are firmly embedded in contemporary conditions of life and globalised society, such as tourism, international migration or environmental awareness. The combination of these two sets of factors, traditional rural and agrarian culture on the one hand, and the ways of life, contemporary sensibilities and scientific culture on the other, has been used by rural communities (stimulated in the last decade by the favourable context offered by European rural development aid) in development projects, some of which are now established and widely known (rural tourism, agricultural transformation organic farming…), and other emerging, pioneering, less familiar and perhaps more domestic projects (small-scale organic initiatives, recovery of biodiversity, agricultural education, etc.) that have helped to overcome the hurdles to the continuation of what is now a more diverse rural way of life, and to bridge the urban-rural gap. All of the above uncovers new, highly specific forms of governmentality and territorialisation in rural areas that warrant analysis.

Exploration of these initiatives, particularly those developed in the last four years in the context of economic crisis affecting Europe, offers a very interesting view of the capacity for resilience in rural areas. The experience of the structural and secular crisis in these areas and the alternatives that emerge when elements of local cultures combine with global conditions can be useful to explore measures that will enable us to learn and understand the extent to which culture can act as a factor of social cohesion today. The study is therefore of great interest from both a theoretical and an applied perspective, essentially addressed to development and management policies in rural areas.

16:15 *Adrian Wood* and *Gerard Mcelwee*

Barriers and opportunities for entrepreneurial wetland farmers in Zambia

ABSTRACT. This paper reviews the case of wetland farmers in Mpika, Northern Zambia, where market opportunities, first opened up by the tarring of the Great North Road in the early 1970s, have become much stronger after the expansion of the mobile phone network in Zambia, after 2005.

The paper discusses the barriers and opportunities, for the development of an innovative off-season wetland farming technique by groups of farmers supported by a local entrepreneur and innovator to create a major supply of vegetable to the urban markets on the Zambian Copperbelt 400 km away, and into the mining complexes in neighbouring Democratic Republic of Congo. To sustain and develop new forms of production and to coordinate product marketing and selling over such distances farmers have formed two types of community institutions; village natural resource management committees and marketing groups. Growing from some 40 such wetland farmers in 2008 there are now over 200 engaged in this production in three wetlands in the Mpika area.

This paper illustrates the experiences of these farmers by exploring how one innovative entrepreneur has been able to both learn from some farmer groups and on his own develop new techniques which he has shared with several communities. Combined with improved urban market access, these increasingly entrepreneurially aware farmers have developed new social capital – in the form of wetland management and marketing institutions, and have been able to meet both meet their subsistence needs and progress to different scales of production and engagement with the urban markets, local and far away. Specific case studies of two farmers exemplify the nature of this experience and explore the ways knowledge has been developed and disseminated.

16:30 *Sarah Nischalke*

Feminization of agriculture in the Hindu Kush Himalayan region - Emerging challenges and risks to women farmers

SPEAKER: *Sarah Nischalke*

ABSTRACT. Globalization has reached even the remotest places in the HKH mountains and encourages migration, so that especially the young productive males leave the farms. Traditionally, women and men, both are majorly involved in agriculture in the Himalayas and respectively shape the way farming is done there. They choose the crops that are planted, the livestock that are kept and also decide on system transformations and innovations. The paper examines how in times of environmental and socioeconomic change, the spaces of opportunities as well as challenges change for women and men. The changes in the farming system and local economy expose women to new tasks of disaster, food risk and farm managers, for which they are often unprepared. The traditional labor division requires men to do important parts of the agricultural work, which they, of course, cannot do, when they are absent. Often remittances are not enough to compensate the lack of labour on the farm. And women do not have the same opportunities as men to access markets, extension services or alternative livelihood options due to restrictions in mobility and cultural constraints. Out-migration of men not only increases the workload of women but also challenges them as farmers and changes regional and national farming systems. The trend of out-migration and feminization of agriculture changes the value that is attached to farming. The society perceives it more and more “socially demeaning occupation” due to the poor education, hard physical labour and a low standard of living of farmers. The examples used here are Nepal and

Assam/India, where traditionally men take care of field crops and large ruminants, whereas women are responsible for horticultural crops and poultry, which are now the intensified sectors cultivated on the farms. Furthermore, field research has shown that under stress women particularly push alternative economies, encourage share-cropping, sharing of fowl, handicrafts material and work, bartering etc. However, in many cases women have not gained in regard to power and reductions in labour. Decisions are mostly taken by men and often based on economic considerations only. Hence, the key question of this presentation is how well women and men are able to utilize new opportunities and overcome the challenges and how women farmers can be helped to cope with climate-related environmental changes; for which it is imperative to improve their access to a range of entitlements.

16:45 *Sofia Joy Quillope* and *Nelita Lalican*

Empowerment of Women in Agricultural Extension

ABSTRACT. The introduction of Information and Communication Technologies which are becoming the signs of urbanization or a modern society did a lot in agricultural extension. Thru ICT, agricultural extension improved rural community through easy access to timely and accurate information. Trainings were provided on the use of computers, tablets and cell phones as gadgets for access and inquiry on solutions to problems. In the past, there is only a very small opportunity for women to gain access to agricultural assets, inputs, services and to rural employment compared to men. The chance for women to develop on their own is less since they cannot utilize the right information and resources. But nowadays, the gap between men and women accessibility became lesser, especially so that trainings from Non Government Organization like the International Rice Research Institute and Government Organizations like the Department of Agriculture, catered not only the needs of men but also of women. Based on attendance sheets generated on IRRI's training and workshops conducted around the world, women from rural areas are interested to attend. In most of the ICT trainings, men are busy in the field so they instruct their wives to attend the ICT trainings. Also, these kind of trainings need continuity, so the women are the one completely informed. The women's role in the farm included decision making of financial budget and management of hired labor. They can easily apply the knowledge learned and shared with other farmers. For example, less cost for pesticides if they can increase the population of beneficial insects, and synchronized planting can avoid infestation. Several men and women who went on training were interviewed. Men and women received the same trainings but the growing opportunities for women is flourishing. Trainings gave them the chance to generate knowledge by themselves and the benefits of doing what they learned. The drive to apply the knowledge they learned has a large impact to the decision they make in the farm. As such women are very important in the success of a farm both in terms of productivity and sustainability. Women tend to be more adapted in the learning process and are more efficient in translating learning into functional knowledge and information that can be shared to other people.

16:00-17:30 Session 8F: WG7 - Regional branding and local agrifood systems: strategies, governance, and impacts

Geographical indications and the market

CHAIR:
Claire Cerdan

LOCATION: Aula 3

16:00 *Silvia Scaramuzzi*, *Eleonora Del Poggetto*, *Giovanni Belletti*, *Andrea Marescotti* and *Lisa Spinicci*

Consumers' buying intention and willingness to pay for PDO and PGI products in large retail chains. Results from a direct survey in Italy

ABSTRACT. PDO/PGIs are rapidly entering the Italian market of large retail chains. PDO/PGI products suffer from the low awareness of this labeling scheme among consumers. In this background, the aim of this paper is to analyze how different levels of knowledge of PDO and PGI marks affect consumer behaviour, with particular reference to his buying intention (BI) and willingness to pay (WTP) within large scale di-stribution. The hypotheses of the research framework were identified through the analysis of the results of the scarce existing literature on PDO/PGI consumer be-haviour. The hypotheses have then been tested on a sample of 250 consumers, through a direct survey carried out in 2015 in Central Italy, within two major Italian retailing companies: COOP and Esselunga. The empirical analysis confirms the poor knowledge of consumers of EU PDO/PGIs . The level of information affects consumers' BI and WTP a premium price for PDO/PGI products, which increases though not significantly when consumers have knowledge of the certification labelling scheme.

16:15 *David García-Brenes* and *Javier Sanz-Cañada*

Impact of Spanish big retailers strategies on Protected denominations of origin of olive oils

ABSTRACT. Olive oil has traditionally been marketed in Spain, and as in many of the producing countries of the Mediterranean Basin, as a commodity good, except for some Italian and French regions where it is recognized by some segments of consumers as a differentiated good. Policies undertaken by abnormally low prices of the mass distribution firms have been used to increase the ability to attract consumers to the business signs. These strategies are based on using olive oil as an appealing product. This work aims at a comparative study of the pricing policy of the Retail distribution with average prices received by producers for the past two seasons, and analyse the effects on the valorisation of olive-oils with protected designations of origin. This retail distribution strategy extends back along the whole olive oil chain and especially to the producers, as the weakest link in the chain, who suffer the worst consequences of this general lack of profitability. As negative side effect, these retail strategies contribute to trivialize the consumer perception of olive oil as an undifferentiated product. This seriously damage the collective strategies based on distinctive signs of differential quality associated with territory, and in particular Protected designation of origin extra-virgin olive-oils.

16:30 *Stefano Inama*

Branding products initiatives in LDCs trough GIs: the case of the Kampot Pepper in Cam-bodia and the Harenna Coffe in Ethiopia

SPEAKER: *Stefano Inama*

ABSTRACT. Abstract – Adopting a branding strategy based on GIs could be a viable complementary poverty reduc-tion and environmentally sound policy to commercial and subsistence farming in Least Developed Countries (LDCs).Yet, not all LDCs countries

have adopted such policy using GIs. This paper presents concrete evi-dence drawing from two case studies and two differ-ent policies adopted from the respective Governments: (a) The Cambodian pepper from the Kampot region, and (b) the Ethiopian coffee from Dallo Mena. The paper briefly depicts the comparative experiences of these two Governments, donors and their rural communities in promoting a branding of their local products.

16:45 *Tobias Eisenring* and *Erik Thévenod-Mottet*

Essential Packaging for Appellations of Origin

ABSTRACT. There is an abundant literature on the effects of the protection of geographical indications, that process being considered as a norm-setting of the product, a collective organization and a marketing strategy. The effects of such initiatives, based on the mandatory code of practice, can be traced in the social, economic and environmental dimensions. This paper focuses on a specific kind of appellations of origin, where the final product is composed of two or three elements or ingredients, therefore potentially involving two or more supply-chains. The mandatory use and the geographical origin of these elements are debated. We analyse the various current situations for some PDOs and the lack of conceptual coherence in this regard

16:00-17:30 Session 8G: WG8 - Food systems and spatial planning. Towards a reconnection?

CHAIRS:
Sonia Callau and *David Fanfani*
LOCATION: Aula 6

16:00 *Sonia Callau* and *David Fanfani*

Food systems and spatial planning. Towards a reconnection?

ABSTRACT. The early 21st century will very likely bring with it a further change in the urban model, one in which economic and environmental vectors will be the main factors in town planning and management. Making the best use of resources and delivering good services to citizens will be fundamental goals. In this framework, it will be hard to apply the adjective ‘smart’ and ‘slow’ to a city, town or metropolitan area without what is known as ‘food planning’. In this respect, farmland preservation and enhancement and food systems planning will continue to be key factors in terms of food supplies but also of energy and waste flows. All this means that the city of the 21st century cannot be planned without taking into account its agricultural space (intra- and/or peri-urban) and the reconnection between towns and their nearest food-producing regions.

The aim of this working group is to analyze how food systems can be integrated in urban and spatial planning in a more efficient way. To this end, we proposed some questions for the debate:

1. Why ‘local food’ is hidden behind the city’s boundaries? How could we trigger and improve local food systems and their efficiency? Can smart cities integrate the ‘food vector’ in urban and spatial planning? Can the city design support a smart food system which integrates ‘local food logistics networks’, embracing consumers, producers, retailers and collection and distribution centers?

2. Which organizational and partnership tools for urban-rural joint policies and projects (e.g agricultural parks, river agreements) could we apply, with the aim at preserving prime farmland and empowering farmers in participative planning processes and choices

The papers presented in this working group explore new planning tools promoting integration between spatial planning and local food production, distribution and consumption. A first bundle of papers analyses European urban agriculture typologies and governance initiatives enabling synergies between farmland preservation and local food promotion. This understanding is complemented by other works about methodologies and models to characterize peri-urban agriculture and potential for local food distribution and consumption systems (public food procurement, market places). Finally, the last part of the working group focuses on successful experiences dealing with spatial and urban planning and local food systems, ranging from urban to peri-urban agriculture and from vegetables production to cereals, forage and livestock production.

16:15 *Daniele Burrascano*, *Luca Montuori* and *Johanes Wiskerke*

Sustainable Productive Landscape in the Amsterdam Metropolitan Area: Towards an analysis on different scales

ABSTRACT. Over the next few years the global population will continue to rise. The number of people living in urban areas has surpassed the number living in rural areas and such, the world has become more urban than rural. This change thus implies the need to further develop urban food production systems and a need for increased sustainability of urban development. Urban agriculture has thus become an integral part of urban planning and design for the future development and sustainability of our cities. The Amsterdam Metropolitan Area (MRA) is one of Europe's most stable and successful regions. By 2040 the population of Amsterdam is expected to grow by half a million; meaning that an improved infrastructure will be needed to accommodate hundreds of thousands of new homes, including facilities needed for their sustenance. This inevitably increases the need for green spaces ensuring access to, and improvement of food distribution systems. Efficient planning and implementation of food distribution strategies will thus be important contributions to the development of the greater MRA. It's landscape, aside from agricultural concerns, should also include resources for leisure and recreation. The inherent challenges are thus to explore and expand the existing landscape, without hindering the growth and function of the metropolis. The incentive for the MRA, over the next few years, is to come up with a plan for sustainable development including incorporation of local food resources, especially since metropolitan dependency on international food sources is expected to increase. This is clearly an incentive for Amsterdam to try and reduce the impacts pertaining to food importation and to work towards more sustainable and local food sources. The Sustainable Productive Landscape project studies the overall impact food resources and urban design have on a city, and analyzes the potential development of new architectural and landscape strategies to facilitate urban development integrating both city/urban life and food production systems. The objective of this research is to analyze and compare several urban design strategies and projects regarding the integration of food production, processing, distribution and consumption into the MRA. This paper explores many typologies of urban agriculture in different scales (within the city, a metropolitan park, and urban district development), spatial forms and land use management with reference to alternative strategies together with taking into consideration open and public spaces - making the long term sustenance

of the city a measure of priority for the future.

16:30 *Rob Roggema*

Towards fundamental new urban planning for productive cities: the quest for space

SPEAKER: *Rob Roggema*

ABSTRACT. Recent research has shown that the average productivity of food within the city limits is low. In the Netherlands 0,0018% of the total consumption comes currently from inside the city. This places Urban Agriculture for a serious dilemma: does Urban Agriculture include a serious component of food production, or is urban Agriculture a cover-up for social processes of an urban population? Without neglecting the benefits of Urban Agriculture for social cohesion, the environment and education, the production of substantial amounts of food must also be part of Urban Agriculture. The space required for this is in the city however a serious problem. Current urban planning practice often focuses on the compact city and high density neighbourhoods or the creation of integrated large scale malls or urban centres. In this practice is often limited space available for public green, let alone the growth of food. Hence there are new planning and design concepts required to accommodate the demand for more urban food production. The city should, in some respect, be redesigned with the major question being asked: where do we find the space for growing food. In this paper the spatial capacity of the city will therefore be linked with a spatial typology derived from a combination of literature and design projects. Where large spaces are available, bigger Urban Agriculture types are possible. Depending on the urban environment a typical urban agriculture system can be designed. Several concrete examples of these designs will be discussed.

16:45 *Esther Sanz Sanz*

Characterizing peri-urban farming spaces. A methodology for urban planning.

SPEAKER: *Esther Sanz Sanz*

ABSTRACT. Urban growth is encroaching onto farmland. City seems indeed influence most peri-urban farms, at least on farmers' lifestyle. Urban concentration of consumers and customers for food and other activities generates new and promising opportunities of specialization rather than anticipation and short-term positions. Farms strategy is in most cases the result of spontaneous decisions depending on farmer's own situation, UE agriculture policies, commercialization options, labor availability and farmer expertise. We are looking forward to set up a framework considering all the stakes specific to periurban agriculture and practices for supporting spatial management decisions and planning. Scholars have broadly analyzed periurban farming in monographic studies, either regional case studies (par example, the French revue Cahiers Agricultures vol. 22, n°6 of 2013) or practices oriented studies (par example, the dossier n.158 of the revue Espaces et Sociétés dealing with "Agriculture and City", edited in 2014). But attempts of characterizing periurban farming are scarce. Notably operational definitions involving both urban and agricultural issues for supporting planning are lacking. For this purpose, we have drawn up a methodology to characterize periurban productive agriculture, in order to construct agri-urban landscape pieces involving cropping systems and structures as well as urban morphology. These landscape pieces are homogenous at the scale of little regions, and are defined combining quantitative and qualitative variables from the following fields: geography, agronomy, socio-demography, economy and political

organization. Founded in literature review, remote-sensing interpretation, field surveys, statistical analysis and on-site landscape lecture, this methodology is simple to manage and conceived to be applied in planning praxis at municipal or regional level to any study case. In this sense, planning suggestions are proposed specifically to every agri-urban landscape piece looking to integrate agriculture management in urban planning. I will present the results of applying this methodology to characterize the spaces of periurban farming on two Mediterranean case studies: one in Madrid metropolitan area (Spain) and one in Avignon. These cases are interesting to test the accuracy of the proposed generic methodology car, despite the great urban pressure existing in both regions, they are quite different: in one hand, Madrid is a metropolis with a compact and dense development, and in the other hand, Avignon study case is a low-density dispersed urban area.

17:00 *György Orosz*, *Gábor Ónodi*, *László Podmaniczky*, *Norbert Kohlheb*, *Dániel Molnár*, *István Váradi* and *Balázs Sipos*
Szentendre Eco Island in the Commuter-belt of Budapest, Hungary
SPEAKER: *Balázs Sipos*

ABSTRACT. The Agglomeration of Budapest with its 80 suburban settlements is a highly divided but interdependent area. Due to its uniqueness in Hungarian spatial structure, it requires especially coordinated planning and development. Though its area is only 2.7 % of Hungary's, the 25% of Hungarian population, 541 thousands people live here. A coherent periurban ring has been developed around Budapest; here the population growth was 30% during the last ten years.

Szentendre Island is a highly significant area in the Agglomeration of Budapest. Its area is 56 sq. km; its population is 10,000 people. In the Island there are four independent local governments working. Nearly 50% of the total area is agricultural territory. The most important role of the Island is the fact that it provides one of the most important drinking water bases for this rapidly urbanizing area. Consequently, strict environmental (protection of water resources, nature protection) regulations are available on the Island. Though the Island is centrally situated, its accessibility and infrastructure suit to these regulations. Hence, there is a real need for alternative logistical and power supply solutions.

In 2014, the concept of 'Szentendre ECO Island' was created in order to coordinate the alternative development programs. The aim of writing the concept was to determinate those integrated developmental objectives whose realization was important for local governments and entrepreneurs, and also fulfilled the strict environmental requirements. The concept contains objectives aiming the development of organic farming, tourism and infrastructure. Organic farming is an adequate strategy in order to satisfy the strict environmental requirements and the market demands of this urbanizing area. Organic farming helps to supply local institutions with local products. The development of tourism means the import of consumers. Due to strict regulation there is a chance for service supply besides product supply. These developments and the supply of population require infrastructural development as well.

In the article we briefly present this concept and its main elements. We describe in more details the proposals for agricultural development and we also evaluate the already realized agricultural and environmental practices. The concept 'Szentendre ECO Island' is a good example to show how it is possible to strengthen the 'ecological' identity of the

Island by ‘pure, adaptive technologies’. We show proposals that can also facilitate the conservation of environmental and cultural values of Szentendre Island, and can also enhance the living conditions of the local population.

16:00-17:30 Session 8H: WG10 - Urban agriculture I. Urban agriculture and Urban Food Strategies: Processes, Planning, Policies and Potential to Reconnect Society and Food

Examples of Urban Agriculture Policies Worldwide

CHAIRS:
Jan-Eelco Jansma and *Heidrun Moschiz*
LOCATION: Aula 11

16:00 *Heidrun Moschitz*

There is no urban food policy. Frames of food in Swiss policies

SPEAKER: *Heidrun Moschitz*

ABSTRACT. The topic of urban food is a hybrid one. There is no clear policy to address it, not the one legislation to regulate or only one administrative body to feel responsible for it. Urban food strategies and food policy councils have often been cited as spaces in which this hybrid nature is addressed and different views of food can be integrated through creating communicative spaces, involving the full range of stakeholders with their various views on food. This paper aims to better understand the different frames of food that are present in the various institutions relevant to urban food (policy) in Switzerland, using the case study of the city of Basel. Five political/strategic documents from the city level (coinciding with the cantonal level in this case) and seven from the federal level are analysed to identify the discursive frames of food in policies of agriculture, health, environment, planning, and others. The results show that food is not a major topic in most of the potentially relevant policy documents; in particular it is hardly mentioned at all in the planning documents of the canton. In addition, there are not many cross-references between the different policy documents; the policy fields remain focused on their core (institutional) interest. Food is largely assigned to agricultural policy, which explains that we find more mentioning of it in documents from the federal level (responsible for agricultural policy) than at cantonal level. Accordingly, food is widely mentioned in the context of food production; in particular health policies add a focus on consumption; but the processes of processing, transport and distribution are lacking. Overall, the dominant frame of food is an economic one, with the addition of an environmental frame. A socio-cultural framing of food could not be found. Furthermore, food is nowhere framed as a policy connected to cities or municipal policies. Thus, we can conclude that there is no urban food policy in Switzerland. The potential of food as a vehicle to integrate various policy fields and societal challenges is not reflected in Swiss policies.

16:15 *Maria Felicia Della Valle* and *Fulvio Adobati*

Feeding spatial planning. Rethinking agriculture as an integral part of the (policies of) city/region

ABSTRACT. The focus of the paper is the link between urban food strategies and policies at regional/national level. Related to the UFS, it means consider the importance of their integrative governance structure as the way that can ensures a balance between top-down and bottom-up elements. This can increase the resilience against short-term

political changes and slowing-down of civil engagement. Comparing some European food strategies (i.e. Brighton and Hove, Bristol, Pisa) and other experiences still in progress (i.e. Milan) the aim is valuate how an holistic approach and an integrative governance can increase the sustainability of the local food system in a regional food system. Their governance structures include city officials from different departments, producer and consumer organizations, processing companies, retail and science partners. On another hand, integrated urban agriculture projects, as well as integrated food community self-supply experiences are actually designing urban transformations on a significant scale. One of the main instruments that city administrations have to support urban agriculture and changes of food system is the territorial/spatial planning/zoning. Cities can facilitate local food production by designating land for urban and peri-urban agriculture and gardening. Spatial planning can support short food supply chains and diversity of food retail by planning for areas for independent food retailers or farmers' markets. Particularly important in this process is the connection of local or city strategies to their rural hinterlands, in terms of policy development but also in terms of reconnecting and integrating the food system. A sustainable approach to land uses and a way to rethink urban agriculture in a smart perspective.

16:30 *Adanella Rossi*, *Laura Fastelli* and *Silvia Innocenti*

Building local food governance. The pathway towards an integrated food strategy in the Pisa province.

ABSTRACT. In the context of growing awareness of the need for a transition to more sustainable food systems, the definition and implementation of a new food governance system appear crucial. The complexity of the processes underlying a significant change of the production and consumption models has made the definition of more integrated and advanced forms of management of food-related issues increasingly urgent. At the same time, the emerging willingness and demand by civil society to play an active role in practices and decision-making around food show the need for a more democratic approach, that is able to give voice to the new visions and interests. This thus leads to the necessity to redefine governance in terms of interests represented, modes of interaction amongst actors/fields involved, and operational and decision-making mechanisms. These exigencies appear particularly evident in the urban and metropolitan contexts, where the problems related to food provisioning and consumption find greater expression, but also new solutions can be more easily implemented. In effect these contexts are increasingly appearing as potential spaces for system and governance innovation around food related issues. The urban food strategies developed in a number of Western Countries are expression of this potential. As evident is, nevertheless, that the implementation of new food governance systems is not without difficulties. This paper analyses an experience in Italy (in Tuscany, in the territory of Pisa province), in which since 2010 public and private actors are interacting around the creation of an integrated urban food strategy. This experience is significant in the Italian context, in which it is representing a helpful pilot for the other initiatives that have been recently promoted in other regions. While exploring the dynamics developing over the process of definition and implementation of the various institutional tools, the paper critically analyses the challenges that the establishment of an effective governance system has to face. The problems related to the participation and interaction of the various public and private stakeholders and to the implementation of an institutional environment enabling the exercise of food democracy are amongst the main issues analysed.

16:45 *Juliana Luiz*

Urban Agriculture in Lisbon Metropolitan Area; from conflicts to politics

SPEAKER: *Juliana Luiz*

ABSTRACT. The presentation follows an on going research about urban agriculture in different contexts of Lisbon region – one of the most emblematic Portuguese case of non legal urbanization sprawl. It intends to focus on two main points: clarifying the existing conflicts among a wide diversity of urban rationalities related to forms and opportunities of access to resources like water, seeds, land, knowledge and infrastructures; reviewing the social and political context related to the regulation drafting process on peri-urban gardens. In the last ten years, the issue of urban agriculture has grown in Lisbon region, despite the marginal role of public policies in assessing and fostering its development. Today, only in the city of Lisbon (letting aside the neighbouring municipalities) there are almost 78 hectares which have been cultivated in public and private vacant land, by different social groups, for at least 40 years. The majority of those who have promoted this re-use of vacant land belong to (im)migrant communities from Cape Verde, or come from rural areas of Portugal, and they are cultivating urban areas out of the rules provided by official urban planning. These activities have been challenging the dominant land-use and urban-planning, to the point that their growing visibility became a development factor which couldn't be ignored anymore by authorities. In recent years the phenomenon started to be monitored by the Public Administrations: initially as part of a misapplication of planning and building guidelines and regulations, later on as an opportunity to renovate the same development policies. Different have been the behaviors of the several municipalities in the region, some of them mixing policies of eviction and promotion of new urban agricultural settlement, others trying to "learn" from the outcome of this spontaneous but massive expansion of allotment gardens. Meanwhile, interesting collective action took place, which strengthened this possibility of innovation of public policies. The recent emergency of urban gardens policies set by local governments mainly tried to answer to an existing informal phenomenon. But is it possible to legalize it without loosing its virtues?

16:00-17:30 Session 8I: WG11 - Urban agriculture II. Grass-root initiatives and community gardens

Urban gardening: functionalities

CHAIR:
Talis Tisenkopfs

LOCATION: Aula 15

16:00 *Rebecca Laycock*

What unique features can university community gardens offer an 'alternative' food system?

SPEAKER: *Rebecca Laycock*

ABSTRACT. The Community Garden (CG) movement makes up part of an 'alternative', and ideally more sustainable, food system. Universities are striving to encourage sustainability through their campus food systems, such as through community gardens, and taking advantage of opportunities to link these endeavours to the formal curriculum. Sustainability leadership in Higher Education can arguably contribute to transformative change in the larger food system by "[reshaping] relations between food and place," and making institutional commitments to sustainable procurement (Bartlett, 2011, p. 101,

111). By conducting an empirical systematic literature review of the existing literature on university community gardens and exploring its relationship with the existing literature about urban community gardens (Guitart et al., 2012), I identified a number of unique features of university community gardens. These are 'participant transience', agency possessed by student activists, and malleability of participants' lifestyles/habits. In this paper, I discuss the implications of these findings and argue that while they are only a small part of the CG movement, university CGs are important for (1) understanding the management of volunteer-led food initiatives, (2) engaging activists that have the agency to shift action towards key issues, and (3) encouraging young people to develop sustainable food habits.

I will first discuss how university CGs can teach us about managing challenges associated with 'participant transience'. For example, knowledge management is important for contributing to organisational learning and is inhibited by a lack of formal job descriptions and financial stability, and therefore of strategic planning (Ragsdell, 2013). Participant transience can also lead to neglect of work by local groups on similar projects, creating tensions between non-students and students, and depriving student projects of knowledge/mentors. I will then discuss how participants in university CGs are unique because student activists have the agency to choose what issue they address. Well-intentioned non-profits can remove the focus from grassroots movements in order to appease funders or the public, but student food activists aren't bound by this and have, arguably, the obligation to shift action towards issues that are most important (Adrangi, 2013). Finally, I will discuss how university CGs' participants are likely to develop many habits they will carry on throughout their lives because of their stage in their lifecourse. Because of this, students' skills, knowledge, and perceptions on their ability to contribute to positive changes developed throughout their university experience may have longer-lasting effect than those experiences of participants in other types of CGs.

16:15 *Pal Goda*, *Máté Kis* and *Nikola Trendov*

Comparative study on urban community gardening in Central Eastern Europe

SPEAKER: *Nikola Trendov*

ABSTRACT. The aspiration of launching urban community gardens is spreading in Central Europe. There are numerous definitions and interpretations of urban community gardening. One of the reasons for that is the variant purpose of these gardens. The joy of common work and creation and the meaningful time in well-designed gardens could bridge the gap between community members and with this approach a common understanding and social responsibility can be established as well. The quality of life in cities can be affected positively by creating public gardens in urban areas. This paper is aiming to collect the different types of existing practices of urban gardening in the CEE region and investigate the opportunities and the limitations of them. The authors compared five capital cities (Budapest, Bratislava, Prague, Warsaw and Zagreb) with a predefined qualitative and quantitative indicator system. The indicator system includes the following measures: How many community gardens exist in the city? What are the purposes of these community gardens (community building, educational and drug prevention programs, therapeutic garden, local food supply, greening the environment)? How is the cooperation of the community gardens with the local actors and social network (municipalities, NGOs, schools, nursing home, hospital, ambulances)? What is the usage of the grown produce (local school, market, restaurants, charity)?

16:30 *Juliana Luiz* and *Marcos José de Abreu*

Urban Agriculture between governments dynamics and local collective actions: the multiscales community gardens experiences of Brazil

ABSTRACT. The paper follows a diversity of urban agriculture collective initiatives in Brazil considering the relations between governments authorities and grass root initiatives; civil society organizations and social movements. Different experiences guide the presentation; community gardens, school gardens, health centers and community management of organic waste, as the case of Revolution Buckets Project (https: //cepagroagroecologia.wordpress.com/agricultura-urbana/revolucao-dos-baldinhos/). Also analyses the role of the participatory institutional spaces around the construction of the urban agriculture national public policy, as the National Food and Nutrition Security Concil – CONSEA. The proposal discussion focus on three main questions; (1) In what way, and to what extent is the collective initiatives of the urban agriculture responding to the social, legal and political constraints imposed to the grass root initiatives and community gardens by some public policies rationalities? (2) Will policies become more flexible and permeable to absorb proposals originating in grass root initiatives and community gardens civil society organizations? (3) What are the implications arising from constratints and imperatives imposed by outside of the collectives initiatives?

The ongoing complexification of the relation between the social movements, local and national authorities and the topic of (peri) urban agriculture shows the need to articulate a slightly different questions, to better catch and analyze dimensions of the object which are growingly considered important to monitor and explain the centrality that it is acquiring in family life, education, health, urban planning, as well as in a large range of public policies construction.

16:45 *Beata Gawryszewska*

Garden as an edible place in city landscape

SPEAKER: *Beata Gawryszewska*

ABSTRACT. People in Eastern Europe would live in garden environment, even in towns. In towns, cities and suburbs garden as an optimal place for living used to combine cultivation of ornamental and edible plants – vegetables and fruits as well. Home gardens in cities in the end of XIXth and during the XXth century were a basis of food security of many families, even on the symbolic level of meaning. In the paper will be shown transformation of function and form of allotment gardens and shared community gardens from traditional allotment garden for factory workers family to shared, often temporary pop-up community vegetable beds. Case studies from Poland, Latvia and Ukraine will be presented. The image of the allotment garden in Eastern Europe invariably associated with the cultivation edible plants. In the allotment gardens gardeners grow the same plants as in detached houses and in multifamily building sites. There are species of plants characteristic for the gardens, and not for the greenery in public spaces. At least Since the Middle Ages in the garden in Europe, there is the same set of species of plants, often edible and thanks to them, the image of the garden becomes recognizable in the city landscape. The image of a place with collection of ornamental and edible plants treated individually as objects in space became a signification of inhabited landscape. Thus garden secured not only food, than garden environment, as a substitute of living in the "generous" landscape. XIX-century city, to ensure a sense of "garden security" to their

inhabitants, produced allotment garden for factory workers. These types of gardens were mostly vegetable and rectangular shaped. These days traditional allotment garden change into recreational, freehand drawn spaces for leisure. They are removed from centers of cities and moved to suburbs. They are replaced by community gardens, smaller but cultivated vegetables, herbs and ornamental plants. During the economic crisis "hunger gardens" full of traditional, edible, wild plants became popular among singular city inhabitants, NGOs and communities. People are looking for and try to remember traditional edible plants, often still grown in gardens only as ornamental. Providing residents the opportunity to growing their own vegetables and fruits in community shared gardens, or more private allotments we create the minimum conditions to root in the landscape and to manage it in terms of participatory democracy.

17:00 *Joaquim Moura*

Implementing urban composting in periurban areas and small towns

SPEAKER: *Joaquim Moura*

ABSTRACT. Also in Brazil, waste is becoming a major concern for municipalities, that increasingly spend money to dispose increasing volumes of residues. At the same time, half this volume is made of organic wastes, which could be transformed in compost to go back to productive soils.

The challenge is to develop a cheap and effective system that could be easily introduced in small towns and periurban neighborhoods of bigger cities, saving money and energy, avoiding pollute nature, and producing a rich fertilizer for domestic and community gardens.

But more difficult than designing a proper system of urban composting is to organize the project, and integrate the main stakeholders, including the local government, community and commercial associations, school teachers and students, in order to motivate the dwellers to join the project and compost their organic waste.

Our project "Reducing Garbage" has started in April 2014, as a pilot-project to be replicated in 30 municipalities that integrate the "Mantiqueira Mountains Federal Environmental Protection Area - EPA" – an international "hot spot" of biodiversity at risk between our three largest cities: Sao Paulo, Rio de Janeiro and Belo Horizonte.

The EPA's Chief wrote a letter to 30 mayors inviting them to join our "participative planning group" – through internet – to exchange ideas and develop innovative solutions using the resources already available in their territories and communities, to reduce the waste disposed in the municipal landfills.

Ten out of those 30 mayors replied stating their interest to join our group, and one municipality was then chosen to be our "pilot", where the best ideas could be implemented.

Since then the project is advancing really faster than the usual speed that prevails in Brazil. So fast that the officers from the municipal Environment Agency and the Mantiqueira's EPA – who collaborate with us – are amazed by our methods and rhythm, a necessity if you want to make a difference in the real world.

In Brazil, there is a cultural handicap that spoils our producitivity, progressively smaller when compared to the developed countries's. To overcome this trait, coming from our colonial times but aggravated by the mass media culture, is a main concern, because our success depends on timely actions and living communications.

The paper will include pictures, and explore a practical way to compost kitchen and backyard wastes, and how to make the local government teams to do what they want to do.

16:00-17:30 Session 8J: WG12 - Urban agriculture III: Effects of UA. Urban agriculture: a potential tool for local and global food security, economic, social and environmental resilience, and community health and wellness

CHAIR:
Parwinder Grewal
LOCATION: Aula 14

16:00 *Costantina Righetto*, *Francesca Meneghello* and *Giorgio Prosdocimi Gianquinto*
Healing garden or gardening? Data from the Perceived Restorativeness Scale.

ABSTRACT. Observing natural scenes contributes to reduce stress, promotes positive mood states and feelings, and may facilitate recovery from different type of diseases. To our knowledge, little is known about the difference in the perceived restorative power resulting from being surrounded by nature or from working with plants.

The recent develop of the neuro-rehabilitation therapeutic garden "A Garden to Relive" in Venice at the San Camillo Hospital Foundation was an opportunity to evaluate its restorative potential among visitors. We focused on the psychological benefits and on the general well-being associated with the use of the garden. The aim of this project was to explore how the perceived restorative potential of the garden could change in relation to the frequency of the visits and to the activities carried out in the garden by clients, relatives, caregivers and by the staff of the hospital.

Some of these users were regularly engaged in the activities of horticulture and gardening, some of them were regularly walking in the park, and others were not regularly attending the park of the hospital due to their physical state or because of lack of time. All of them were asked to complete a questionnaire, the Italian version of the Perceived Restorativeness Scale (PRS), focusing on their experience in the garden.

The analysis showed that the different use of the garden results in a different restorative potential. Specifically, the restorative potential was significantly higher in people regularly engaged in the activities of horticulture and gardening in comparison to the other two groups.

16:15 *Myriam Paredes* and *Catalina Clavijo*
Sustainable urban agriculture in Quito, Ecuador

ABSTRACT. This research focused on determining sustainability and the importance that the practice of urban agriculture has on the lives of the families involved in this activity. Economic, environmental, socio-cultural and technological factors encourage

urban dwellers to practice organic agriculture based on agroecological principles. As a consequence of this, agriculture has become a concern for all citizens, both in rural and urban areas. According to the multidisciplinary approach proposed by Sarandon et al. (2006), the sustainability of agroecosystems must be measured through economic, environmental and socio- cultural dimensions. In this research, the technological dimension, with its respective indicators, was added to achieve a more complete analysis. A survey was used to access directly the urban farmers. The same was applied to a selected sample among the members of three organizations that promote urban agriculture within the Metropolitan District of Quito. Once we obtained the indexes in all proposed dimensions, we calculated the General Sustainability Index of every garden and every organization. Although in different levels, all analyzed gardens met the requirements to be considered sustainable, in every dimension and in total. Other independent variables also showed an improvement in the organization and social participation, in particular with regard to women, as well as a balance in the development of local capacities, alluding to the importance of human capital over economic capital in this kind of activity. The most important benefits of urban agriculture found in this research are the fairness in different aspects such as production and food distribution; distribution of opportunities; access to the required resources for food production and access to financial support and focused policies. Urban agriculture in the Metropolitan District of Quito represents a way of life, which protects and supports marginalized social groups that keep interest, ability and hope in this alternative. Since there is a population eager to continue this activity, it is recommended to generate appropriate public policies in order to recognize the families who practice urban agriculture as key actors that must access specific services and support from local governments.

16:30 *Chiho Kamiyama*, *Shizuka Hashimoto*, *Ryo Kohsaka* and *Osamu Saito*

Non-market food provisioning via home gardens and communal sharing in Satoyama socio-ecological production landscapes of Japan

SPEAKER: *Chiho Kamiyama*

ABSTRACT. A quantitative understanding of relations between ecosystems and human well-being is critical to a range of decisions and to local societies. Satoyama is a term applied to dynamic mosaics of socio-ecological production landscapes maintained through long-term human management, where people support each other to enhance their use of natural resources. Satoyama is found largely in rural and peri-urban areas of Japan. Such landscapes are often characterized by bartering or sharing of provisioning services – such as forest, agricultural and marine products – within and beyond their communities. The objective of this study is to quantify the quantity and varieties of non-market food consumed per household and to discover how food is shared in social relations and how they contribute to human well-being in Japan. The research was conducted in two parts. First, we conducted web-questionnaire survey over 1,500 samples throughout Japan and found that urban households consume smaller varieties and quantities of food grown at home and/or received from others than rural households. Social connections relating to use of natural resources were also weaker in urban area than rural area. Households in rural area primarily have social connections for sharing food within their communities. Among urban households, social connections beyond their communities, especially connections to rural communities, enhanced their food consumption qualitatively and quantitatively. Secondly, in-depth face-to-face interviews in 89 households in three communities with varying socio-geographic attributes were conducted in Noto Peninsula which is one of the five GIAHS (Globally Important Agricultural Heritage Systems) in

Japan. We found that the varieties and quantities correlated positively with the number of sharing partners, indicating that households with more connections to other households consume greater quantities and varieties of food acquired outside market transactions. Our results indicate that non-market provisioning of food enhances human nutrition and social relations. It is known that personal connections through agricultural activity contribute to preserve traditional cultures and knowledge in Japan. However, urbanization and globalization in recent decades have weakened such personal connections and the sharing mechanisms, which may undermine resilience of local societies against external shocks. Our findings of networks connecting rural and urban households for sharing non-market foods might illuminate a system of local sustainable agriculture and balancing market and non-market food provisioning will be key to building localized models of sustainability and resilient societies harmonized with nature.

16:45 *Majda Cernic Istenic*, *Matjaž Glavan*, *Moya Kneafsey*, *Ulrich Schmutz*, *Elizabeth Bos*, *Stefano Corsi*, *Federica Monaco*, *Chiara Mazzocchi*and *Marina Pintar*
Motivations and environmental practices of urban gardeners – the cases of Ljubljana, London and Milan

ABSTRACT. Urban gardens are found in many places around the world and are also very popular in Europe. Although this phenomenon is not new, its practices and impacts are receiving great attention from the media as well as from policy makers and experts from various scientific disciplines. The literature reveals that urban gardening has been receiving much more attention from social sciences than from natural sciences. Existing research on urban gardening in the Global North has shown that this phenomenon is more related to the pursuits of the population to affordable healthy food, recreation, relaxation and socialising than to poverty and food shortages. Currently much less is known about the ecological impacts of urban gardening. In this paper, the phenomenon of urban gardening is observed both from a sociological and an environmental perspective. The analysis focuses on motivations and environmental practices of different groups of urban gardeners: home food gardeners and allotment gardeners in public and private plots. For this purpose a survey was conducted in 2014 within the framework of the EU project Foodmetres. The sample size was 127 gardeners from Ljubljana, 42 from London, and 42 from Milano. Results from the analysis of motivations, practices and impacts of growing own food among various socio-economic groups in all three cities confirm the thesis of the predominantly non-profit, or hobby, nature of gardening. Non-profit motivations are also mirrored through the analysis of environmental practices, especially in the case of allotment gardeners growing their own food on private beds that champion organic production methods in relatively small-scale growing conditions with limited access to water, which is consistent with the thesis of ”quiet sustainability” of food self-provisioning. Further analysis of the differences and common themes found in the three cities will be given in the paper.

17:00 *Ching S. Sia*, *Hugh T.W. Tan* and *Nirmal T. Kishnani*
Food production in a highly urbanized environment: the case of Singapore

ABSTRACT. Ching S. SIA PhD Student Department of Architecture School of Design and Environment National University of Singapore ching.s@u.nus.edu

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Abstract

Urbanization, a ballooning world population, and climate change are contemporary problems affecting world food security. With almost 4.9 billion people projected to live in urban areas by 2030 and Asia accounting for 2.7 billion people, countries in the Asia-Pacific region are now tackling the problem of rapid urbanization. In Singapore, the role of agriculture has been on a steady decline the last 50 years. With almost 20 percent of land dedicated to farming in the 1960s, Singapore currently has 704 hectares of farmland, making up only 1 percent of its current land use. Of which, only 247 hectares are dedicated to food production, producing up to 10 percent of its local food. It is evident that food production is not a priority, from how Singapore has been planned, with farmland being converted to other uses to cope with the increase in population. Climate change and food security are critical issues that affect not only food-producing countries but also those that are reliant on food imports. As Singapore imports more than 90% of its food, there is no doubt that it needs to increase local food production and be more self-sufficient to improve its food security.

This paper will explore the history of Singapore's food production, from the Japanese occupation in the 1940s, to modern-day food production. Singapore food demand will also be detailed to understand how much food is being consumed and produced locally. Traditional farming areas and building-integrated farming will also be explored to understand the potential of these places, as Singapore has limited land resources allocated for food production. High-technology ways of cultivation in urban agriculture such as hydroponics, aeroponics, A-go gro vertical farming system, and LED farming to increase yield and reduce resources for farming will be discussed. Non-traditional farming systems that are uncommon in Singapore such as agroforestry systems and edible landscapes as a way of utilising existing passive greenery for food production will be considered.

16:00-17:30 Session 8K: WG13 - Care Farming/Social Farming in more resilient societes

Cooperation and LDC

CHAIRS:
Marjolein Elings and *Marina Garcia Llorente*

LOCATION: Aula 5

16:00 *Francesco Di Iacovo*, *Hajnalka Petrics* and *Cristiano Rossignoli*

Social Farming and social protection in developing countries in the perspective of sustainable rural development

ABSTRACT. In rural areas in developing countries numerous global trends concur to the creation of social and economic deprivation and to the impoverishment of local communities. These expose territories and local inhabitants to risk of abandonment and new exploitations. Worldwide inequality also seems to be on the rise (OECD 2011, 2013), especially in rural communities. In this framework, despite of the availability of

economic resources, due to their unequal distribution and the lack of services and public expenditure, the risk of marginalization especially for the less empowered in rural areas has been increasing. Therefore, there seems to be a need to redesign concepts and criteria for a sustainable development by tackling in parallel economic goals and the social dimension of sustainability. In the debate on rural sustainable development the provision of innovative and effective social services should be considered as a primary goal to support social inclusion, promote equality and tackle poverty, especially in low income developing countries (LIDCs) (Di Iacovo, 2014, OECD 2008). The paper presents the concept of Social Farming (SF) as a possible approach and practical way to foster sustainable development in LIDCs and as a valuable practice to enact the capacities of rural communities to tackle social needs. SF works mobilising local resources, like agriculture, under the principles of community subsidiarity, co-production of economic and social values, and the promotion of civic economy. SF also resonates with the characteristics of the traditional social safety nets that spontaneously rise in rural communities in order to cope with the lack of public investments. SF is widespread in European Countries and is experiencing growing interest elsewhere in the wake of the crisis of the welfare system. The paper also explores the relation between SF and social protection in rural areas. It discusses how SF might support and complement social protection; to promote livelihoods and enhance human rights, both the social and economic, of the less empowered through skills development and labour based income sources while also promoting social inclusion. Finally, the paper aims to demonstrate that the promotion of SF practices has relevant methodological implication in designing pathways of positive change in local communities.

16:15 *Mariajose Silva Vargas*

Analysing social farming initiatives in developing countries: a case study from the Ivory Coast

SPEAKER: *Mariajose Silva Vargas*

ABSTRACT. 1. Introduction

Multifunctional Agriculture is a solution for many rural issues. It means to use agri-rural resources for offering services beyond the mere production of food and fibre, while promoting development. Within it, there is the novelty idea of Social Farming (SF), which means to use agricultural resources in order to promote social inclusion, rehabilitation, and more to groups with low-contractual capacity, such as ex-prisoners or disabled people.

However, the SF concept has not been explored in developing countries. Thus, this paper is based on an investigation of the SF paradigm in Côte d'Ivoire through the analysis of the “Projet de réintégration de 2000 agro-pastoraux” (PRAP) project, created to reintegrate ex-combatants in the agro-pastoral field.

2. Problem statement

The problem is to achieve a sustainable socio-economic reintegration of ex-combatants, in a country in which agriculture provides employment to 60 per cent of the labour force, and where the war has left 74.000 ex-combatants.

3. Research questions

1.Which characteristics of the Social Farming paradigm exist or do not in the PRAP project? 2.How well Social Farming practices could be part of ex-combatants reintegration?

4. Methodology

Based on literature review and on the work done by the Social Farming Research Group of the University of Pisa, the conceptual framework: "Social Farming in developing countries: minimum requirements" was built. This was used to create three types of questionnaires for: governmental representatives; service providers; and ex-combatants.

5. Data Used

The qualitative data used was collected using the above-stated questionnaires in four different cities in Cote d'Ivoire: Abidjan, Bouaké, Korhogo and Ferké during the month of June 2014. Quantitative data from official documents and reports was also analysed.

6. Preliminary findings and conclusions

There are common characteristics between the PRAP and SF paradigm. The use of agri-rural resources and activities are at the heart of the PRAP project, to help beneficiaries with low contractual capacity such as ex-combatants, widows and young people in rural settings; also, Civic economy is a strong characteristic of rural customary laws. There are also some differences, such as: PRAP is a top-down created project; payments to communities are involved; and providers and users of services overlap. Some exceptional and wider contextual issues that could promote SF practices were also found.

In any case, SF realities do exist in developing countries. These might have some differences from the well-known definition, but by knowing them, more appropriate SF practices could be promoted.

16:30 *Marjolein Elings*, *Laura Van de Groep* and *Wouter Joop*
Developing a social farming project in Suriname

ABSTRACT. Suriname has great potential for the development of sustainable agriculture: there is enough territory available, the ground is fertile, the water supply sufficient and the climate is overall very favourable. By letting mentally weak or mentally disabled youth participate in this development in Suriname it will enhance this groups social and economic position. This is of great importance because there are very few possibilities for this particular group of youth to develop within the Suriname society. By creating a training programme which will help these young people to learn about agriculture and teach them practical skills they become more independent while also stimulating sustainable agriculture in Suriname.

16:00-17:30 Session 8L: WG19 - Food Security: Meanings, Practices and Policies
Spatializing Food Security: Cities and Rural-urban linkages
CHAIR:

Juliet Kiguli
LOCATION: Aula 19

16:00 *Dalia Mattioni*

The contribution of local food systems to healthy diets: a case study from the City of Rome

SPEAKER: *Dalia Mattioni*

ABSTRACT. There is growing consensus among food system scholars and practitioners that the industrial mode of agricultural production that grew especially after WWII has had, and continues to have, a number of negative consequences in terms of natural resource degradation, social injustice and ill-health. Not only are producers gradually losing control over the prices they are able to set, but consumers are also losing control over what they eat, and are no longer knowledgeable about where their food comes from, or what's in it. This has not come without health consequences, with much of the rise in NCDs and obesity attributed to the type of food currently being "made available" by the industrial food system both in developed countries and, increasingly so, in developing countries, as the supermarket model is exported. In order to counter this, local food movements emerged at the beginning of the 1990s especially in the USA and Europe. In supporting local food systems, consumers were keen to express three types of what Dowler calls "interlocking cares": a care for the environment and the local economy, a care about transparency and integrity in the food system, and a care for health and wholeness (Dowler et al, 2009: 212).

To the extent that food security is not only about quantity, but also about the quality of food that people have access to, the study will focus on one of the "cares" of the above equation, i.e. whether local food systems do indeed increase people's access to – and consumption of - healthy food, and whether the access is open to all social groups or limited to some. The case study of a box delivery scheme in the City of Rome – Zolle - will be taken to explore the topic. The consumption habits of six families that have been Zolle's clients for the past 5 years will be analysed to gauge whether any change has occurred in their consumption of fresh fruits and vegetables compared to when they purchased their food from other distribution channels, and if so, what have been the factors of success, and the difficulties that may still exist. Conclusions will be drawn on the impact that different food distribution channels in cities may have on the health of citizens, on which citizens, and on the implications for policy makers - both in developed and developing countries- to ensure the co-existence of different food distribution channels.

16:15 *Olivier Mora*, *Frédéric Lançon* and *Francis Aubert*

Urban-rural linkages and their future: impacts on agriculture, diets and food security

ABSTRACT. Recent debates on food and agricultural issues emphasize the significance of the spatialization of food systems and location of agriculture. In this emerging food system geography, urban-rural relationships play a significant role in food value chains, food security and nutrition, which is still poorly understood. The aim of this presentation is to explore these issues based on rural-urban scenarios at 2050. This research combines two approaches: a comprehensive scientific review of urban and rural changes, and a foresight workshop based on an expert group. Our results focus on four main future

figures: megacities and rural-urban blurring; role of intermediate urban centres in agri-food networks; household mobilities and multiactivities between urban and rural areas; counter-urbanization and re-agrarianization. These four scenarios help to understand how distinct issues might be articulated, and to better differentiate what is at stake for agriculture and food security in those specific forms of urban-rural relationships.

16:30 *Angela Crescenzi* and *Raffaele Mannelli*
Good food improves citizens' health
SPEAKER: *Raffaele Mannelli*

ABSTRACT. Experiments to search for policies and practices that slope integrated bimodal approach to food: quality and quantity excess or shortage of consumption is in this work as part declined, also bimodal represented by consumption in the family and outside the family context, which characterizes the developed urbanizing areas. The experience conducted from 2011 in Tuscany involved the health department and the direction of economic development, in particular the public health service in its local dial preventive health, business administration of food (restaurants, canteens, etc.). The definition of simple guidelines shared with the local business system , the collection of a significant number of participants in the companies has allowed us to realize a net present throughout the region . The network consists of about 500 companies have signed and used the guidelines . The network is identified by a logo. This logo is promoted in the consuming public by presenting the network as it makes easy food choices through which to gain health

16:45 *Rita Biconne*
New culture of the territory for food security in the Mediterranean region
SPEAKER: *Rita Biconne*

ABSTRACT. It is evident that food is an emerging field within planning with social, economic and environmental dimensions. It sits at the intersection of land use planning, natural resource management, human rights, evolving social and geo-political implications. Poverty, food, insecurity and malnutrition - long thought of as predominantly rural problems - are increasingly becoming also urban concerns. The rate at which urban poverty is increasing -compounded by the rate at which urban populations are growing- indicates that food security and malnutrition are going to be critical problems in urban areas in the 21st century. More recently, especially since the food crisis of 2007/8, many cities have become aware that cities have to plan strategies that aim to eradicate hunger and poverty and improve livelihoods, requiring innovative ways to enhance food security and nutrition of the urban poor and vulnerable households.

Taking into account the Mediterranean region, the challenges of food security assume a major complexity in the current historical period, particularly marked now by food price hikes, difficult access to natural resources, social unrest, and the effects of climate change. In this region, historically characterized by high biodiversity degree and agrarian traditions, communities had established different equilibrium between exploitation and conservation to create a variety of magnificent agroforestry mosaics, ensuring on the one side, a level of adequate food, healthy and sustainable, and on the other side, allowing that human intervention maintained the agrodiversity and biodiversity as guarantee of

stability.

In this framework, this contribution will propose a reflection on emerging issues of spatial reconfiguration to offer new perspective to enhance theoretical dimension of food security. The research will present analytical and methodological criteria oriented to a new culture of the territory, which puts the maintenance of good environmental status and sustainable agro-forestry as the core of spatial planning and territorial configurations. Three particular types of linkage will be considered: ecological - in the form of ecosystem services and appropriate land-use planning; socio-economic, including shorter, more direct supply chains; and governance dimension, bringing together urban and rural stakeholders to identify a common governance structures in a democratic and participatory way.

16:00-17:30 Session 8M: WG20 - Revolutionary solutions for local food systems

Community based solutions II: different needs (envoronment, food, knowledge)

CHAIRS:
Silvia Paolini and *Paola Scarpellini*
LOCATION: Aula 20

16:00 *Marcos José de Abreu* and *Oscar José Rover*

Organic Solid Waste Local Management: Analysis of a Community Model and Contributions to Urban Agriculture

ABSTRACT. This paper analyzes the experience of community management of organic solid waste in the municipality of Florianópolis / SC, southern Brazil, known as "Urban Agriculture (UA) and the Buckets Revolution". The project has been developed for six years in the Chico Mendes Community, Neighborhood of Monte Cristo, as a demand for solutions to environmental problems such as rampant urbanization and the rise of the suburbs in the cities, addressing issues of food safety and waste management. Currently, of the 2000 families living at the Monte Cristo neighborhood, over 200 families and 09 educational units designed its organic waste to a communitarian composting, run by community youth, in partnership with other organizations. About 15 tons of organic waste are collected per month, which are turned into 5 tons (about 33%) of organic fertilizer through thermophilic composting, returning to more than 30 yards and 05 school gardens to be used in foods production, herbs and teas. In total, through the six years of the project, over 800 tons of organic waste were treated. The waste management that values the organic fraction is the focus of this work, because the final product of this recycling is the organic compound, primary input for the practice of UA. Thus, this paper analyzes how community management of organic waste contributes to urban agriculture and food security in communities with socioeconomic and environmental vulnerability. It has characterized the process of municipal organic waste in the municipality of Florianópolis / SC and the process of community management of organic waste, as well as the experience of urban agriculture in the Chico Mendes community; evaluated the potential of the experience on community management to other communities, especially in terms of AU practices and food safety and nutrition. It was found that there are important interfaces between community and municipal solid waste management, but the last one doesn’t use the potentials of community experience, and it requires more support to qualify their results, which already was show very promising. Likewise, the municipality of Florianópolis, as well as others with similar characteristics, could use the waste management model built independently by the community and support

organizations, to restructure its management of organic solid waste.

16:15 *Adanella Rossi*, *Laura Fastelli*, *Silvia Innocenti* and *Francesca Bretzel*
The Food Council of Pisa

ABSTRACT. The need for a transition to more sustainable food systems has made the definition of more integrated and advanced forms of management of food-related issues increasingly urgent, especially in the urban contexts. As for many other cities around the world, also in the territory of Pisa (Tuscany, Italy), since 2010 a process aimed at developing an integrated food strategy has been promoted (the Food Plan of the province of Pisa). In the context of new reflexivity and mobilization created by the process for the definition and implementation of the Plan, in 2013 a group of citizens, researchers and professionals established the Food-Council of Pisa, an organization aimed at stimulating a reflection on the food-related issues at urban level and at promoting an integrated approach to their management. The Council started to operate identifying some specific areas of action, establishing relationships with the various initiatives carried out bylocal civil society, and trying to interact with public administrations.

16:30 *Angelo Savioli*, *Maria Fonte* and *Giacomo Crisci*
Il Papavero: the butterfly laboratory and the 'financial' strength of solidarity economy.

ABSTRACT. Il Papavero is a small organic family farm in the nearby of Rome. It produces strawberries and peaches that it sells to Solidarity Purchasing Groups (GAS) and to a firm that distribute organic production to GAS, schools' canteens and restaurants.

Owners of the farm, Angelo and Fiorella, present their farm as 'educational farm': of their seven hectares, three are occupied by woods, dedicated to receiving children of the primary school. To them, they like to show the beauty of biodiversity, through the 'butterflies laboratory" or the 'Bees house' in which children can watch how bees 'work'. They want children to learn also what is agriculture and have an other project called 'From seed to seed", where children plant a seed and follow the plant growing up to the maturing of the fruit and the production of new seed.

Angelo and Fiorella built a strong relation with GAS, so it starts one of the most innovative practice regarding their farm. Every year, in autumn, they had to face some financial difficulties, when setting up the production conditions for the strawberry production. Four years ago they decided to ask GAS for help. The request was launched through word of mouth and on Internet through the Lazio GAS Network: twenty-four groups responded.

The innovative practice started with the definition of a pre-financing contract between the farmer and the GAS involved, at the beginning of the growing season (generally autumn in this case). Following the signing of the contract, GAS proceed to the payment in advance of a quota of the product to be purchased during the year, generally 50%. This allows the farm to starts production without seeking any bank loan. When production is ready to be delivered to GAS, the rest of the amount due and eventually some extra

orders are paid. Price are established in the contract and remain stable throughout the year. In case of problems related to the production, a new solution is negotiated among parts (farm and involved GAS).

The initiative is now moving at the maturity stage towards consolidation and mutation to a form of community supported agriculture. Pre-financing was created in order to cope with rising costs for the use of organic and ancient seeds, but also to deal with the uncertainty of the purchase by the customers. The move toward a community supported agriculture model would help to overcome such difficulties.

16:45 *Michela Pasquali*

URBAN FRUIT Fruits and orchards as local practices for new forms of public participation and urban space. The experience in Rome

SPEAKER: *Michela Pasquali*

ABSTRACT. In Mediterranean cities, thanks to a favorable climates and a long historical tradition, an amazing variety of fruit trees is growing in public spaces like parks, gardens, streets. Urban fruit trees create a widespread orchard that is not harvested at all! Every year tons of ripe fruit falls on the ground and rots, creating management and cleaning problems, representing an unacceptable food waste! That the reason why Linaria, the non-profit organization that work about public spaces, create Frutta Urbana, the first project of its kind in Italy, that began in Rome in 2014. Frutta Urbana is a complex project, that offers the community innovative and ecological activities but also the opportunity to acquire knowledge for our common botanical heritage. The aims is to map, pick and donate the fruit that grows in the city's publics parks, gardens and streets. Frutta Urbana includes activities such as the creation of new urban orchards, as well as public events, courses and workshops. The online public map shows the positions of the trees across the city, becoming an accessible public tool, sharing information with those who are interested in picking fruit and who want to collaborate to identify and locate new trees. Continuously updated, the interactive map is also a free App for smartphones that uses the concept of crowdsourcing for social activism. The fruit harvests are organized with the help of RomAltruista, a non profit association that connect more than 10.000 volunteers and professionals who give us their time and skills. Freshly picked, the fruit is immediately donated to soup kitchens and food banks. The main objective of Frutta Urbana is to stimulate the consumption of fruit, an essential part of a healthy diet, to inform about food security and to raise awareness on more sustainable lifestyles. Frutta Urbana educative and training programs involve schools, communities and associations to street-picked fruit and collaborate with us in preparing and cooking a collective fruit jams, candies or fruit teas. Each product is a social experiment with people with disabilities, elders, and immigrants who can learn about the endless possibilities in preserving and processing fruit. Frutta Urbana wants create new orchards that will be productive gardens, botanical collections of old varieties, as well as places to learn, experiment, and share. They will be created in abandoned areas, schools, social centres, new squares, in the centre and in the outskirts. www.fruttaurbana.org

17:00 *Miriam Bisagni*, *Maura Calliera*, *Laura Borghi*, *Chiara Boccalari*, *Simona Solvi* and *Ettore Capri*

Food education at school "Add a seat at table"

ABSTRACT. The idea came out from the Association Piacecibosano (Piacenza) and developed in collaboration with the Research Center for Sustainable Development in Agriculture of the Catholic University and the Chamber of Commerce of Piacenza. Generally, young people are not fully capable of making independent and informed food choices and end up adapting to trends proposed by society. Therefore it's a priority to form a critical consciousness that can help young people to develop an autonomous and aware behavior choosing the food. Nevertheless, schools offers a poor number of initiatives about nutrition for students. In addition, the large amount of the projects regarding nutrition lacks a dialogue between the school system, institutions and associations, aimed at creating a shared educational orientation with respect to the theme of healthy and sustainable food. In Aprile 2013 the Association started some actions of education about nutrition. In October 2013, 350 boys from 11 secondary schools of Piacenza were involved in an Open Space Technology dedicated to food. In November 2014, was launched the project "Set an extra place at table" involving 4 secondary schools of Piacenza for a total of 30 students and 5 teachers. Students identified some issues of their interest related to food, organised them into five thematic groups and started a discussion with their teachers. Once defined themes and methods that will constitute the educational food program, it will be distributed among peers. Strengths of the program are the following: participation, nutritional awareness, empowerment, proactivity, peer communication, listening and consideration of the needs and demands of students and teachers, inter-institutional dialogue created between different schools around the subject of food, the connection between school and institutions. The problems found are the following: poor coordination that can affect the communication and management of organizational processes, need to find referee to coordinate each group of students and teachers in the design of interventions. The experience could be replicated in other contexts interested in addressing the theme of sustainable nutrition using a participatory approach with the actors of the education system.

16:00-17:30 Session 8N: WG24 - Revaluing institutional food procurement

Round-table and Concluding Remarks

CHAIR:
Sergio Schneider

LOCATION: Aula 4

16:00-17:30 Session 8P: WG25 - Postharvest Aspects of Local Food Supply Chains of Urban Centres

CHAIRS:
Jorge Fonseca, *Allison Loconto* and *Tanya Stathers*

LOCATION: Aula 7

16:00 *Eleni D. Pliakoni*, *Michael Ryan*, *Helena Pontes Chiebao*, *Lani J. Meyer* and *Cary L. Rivard*

Reducing postharvest produce losses for local growers through the implementation of high tunnel systems

ABSTRACT. The implementation of high tunnels for vegetable production has rapidly expanded in the United States due to various reasons including the expansion of organic and local markets. However, little is known about the effect of high tunnel production systems on postharvest losses or nutritional and physical quality of fresh produce at harvest and during storage. The aim of this work was to determine how high tunnel

production affects postharvest losses, quality and shelf life of organically-grown tomatoes and spinach compared to the open-field. Two tomato types (hybrid red cv. BHN 589 and heirloom cv. Cherokee Purple) and cv. Corvair spinach were grown at the Kansas State University Olathe Horticulture Research and Extension Center during 2013-2015. In the high tunnel system, fabric mulch was used for weed control and drip irrigation was utilized. An equivalent open-field plot was planted at the same time using typical commercial open-field production practices. Tomatoes were harvested at the pink maturity stage based on the USDA color/maturity classification map and stored at 12.5oC and 25oC for 21 days. Fruit respiration rate was measured every 24 hours during storage. Additionally, color (CIE L*a*b*) as well as incidence and severity of decay were evaluated daily. Fruit samples were evaluated at days 0, 5 and 10 for physical and nutritional quality. Fully mature spinach leaves was harvested and stored at 3oC and 13oC for 6 days. Overall appearance, color and respiration were monitored at day of harvest and through storage. Tomatoes grown in the high tunnel had significantly lower respiration rates compared to open field (6.75 and 7.93 mg CO2 per kg-h, respectively). Furthermore, high tunnel tomatoes showed reduced incidence and severity of postharvest disease, and the mean values of the area under the disease progress curve (AUDPC) were significantly lower ($P<0.05$) for the fruit grown in the high tunnel. Fruit grown in the high tunnel fruit remained marketable (severity rating <3) for the entire 14-day time period while fruit grown in the open-field were not marketable after 10 days in storage. The tomatoes grown in the open-field had significantly higher total antioxidant activity than tomatoes grown under high tunnel conditions throughout storage. The utilization of high tunnels for vegetable production by local growers could lead to the reduction of food losses by extension of postharvest shelf life.

16:15 *Francisca Aba Ansah*, *Mulugheta Tesfamichael Solomon*, *Maria Luisa Amodio* and *Giancarlo Colelli*

Minor Horticultural crop diffusion through minimal processing

SPEAKER: *Francisca Aba Ansah*

ABSTRACT. Minor horticultural crops, which were fading out of the food supply chain, are now being re-considered due to their high nutritional properties and emerging consumer interest. Minimal processing and modified atmosphere packaging present techniques to add value to these crops for enhanced transport, distribution and consumption; hence the competitiveness of local growers. This was revealed through an evaluation on zucchini male flowers, fennel, broccoli raab and purslane leaves stored at 5^oC. In zucchini flowers, a comparison of four different atmospheres ($3\%O_2+97\%N_2$, $3\%O_2+10\%CO_2$ in nitrogen, $10\%CO_2$ in air and air) showed that an atmosphere condition of $3\%O_2$ preserved all quality and marketable characteristics even after 9 days. Similarly, modified atmosphere storage of $5\%O_2+10\%CO_2$ with 0.5% ethanol treatment provided the best anti-browning effect on cut surface of fennels. Optimum sensorial and flavor scores were attained in broccoli raab, stored in polypropylene/polyamide micro-perforated bags with 5g of CO_2 absorbers for 8 days. Regarding purslane leaves, physiological assessment of the presence of ethylene showed that leaves were marketable after 10 days and even 13days at 0^oC . This work adds to the efforts towards developing strategies to enhance the utilisation and consumption of fresh minor crops.

16:30 *Stavriani Koutsou* and *Panagiota Sergaki*

Cooperative products in local urban food supply chains: the case study of milk in Greece

ABSTRACT. The numerous alimentary scandals of the last decades, the social inequalities among players in the global food market as well as the strong environmental concerns of a significant percentage of citizens result in the emergence of alternative supply chains worldwide. In this frame, several social movements like short food supply chains, community supported agriculture (CSA), fair trade etc aim not only to moderate consumers concerns about food safety but also to smooth economic and social inequalities. In developed countries local food supply chains are present as an alternative to the conventional food systems mainly because they contribute to food and nutrition security in urban centers as well as to the overall growth of city-region economies.

While in Europe and in the USA alternative forms of organization of food chain were developed for at least two decades, in Greece only recently have emerged such organizational systems. However, their development is rapid due to the severe economic crisis. In this frame, it is very interesting to investigate the role of agricultural cooperatives in these new forms of supply chain.

A characteristic and innovative form of local food supply chain in Greece is the distribution of fresh cow milk via automatic sale machines in northern Greece. The idea belongs to a newly established agricultural cooperative (in 2010) of local pasteurized cow milk which consists of 102 dairy cattle farmers. The pilot installation of small number of sales-machines in 2014 caused the vivid interest of consumers resulting in rapid proliferation of the number of automatic instruments in several urban centers of northern Greece.

The main aim of this work is the investigation of the phenomenon. The research was realized with the help of a structured questionnaire in a large number of consumers during the 2015 and focused on the profile of consumers as well as the economic and social motives for cooperative products. There are also examined the consumers' opinions about whether this distribution channel contributes to the food safety as well as the benefits of the existence of competitive short supply chains.

16:45 *Golib Sanaev*, *Kyung Ryang Kim*, *Shavkat Hasanov* and *Ibragim Ganiev*

Review of postharvest aspects of fruits and vegetables subsector in Uzbekistan

ABSTRACT. Uzbekistan has very conducive and very fertile land for growing fruits and vegetables which makes it one the main producers in CIS countries by creating an easy access to the growing Central Asian and Russian consumer markets. Since its independence, there have been a number of agricultural policies implemented aimed at development of agricultural sector such as institutional and structural reforms; agricultural policy has been focused on cotton and wheat production, and less attention was paid to fruits and vegetables subsector. On the other hand, recently policy in agriculture of Uzbekistan is weighing more on diversification of agricultural production, which in turn is resulting on increasing of high-value agricultural products such as fruits and vegetables. Several legislative bases therefore have been recently issued by the government in order to increase production of fruits and vegetables throughout the country. However, some estimates suggest that in Uzbekistan about 30–40% of fruit and

vegetables are lost or abandoned after leaving the farm gate. Main findings from review of postharvest state in Uzbekistan suggest that combination of interventions and innovations such as: capacity building to farmers and other stakeholders through training and extension services; expansion of public investment in infrastructural development; promotion of private sector participation in infrastructural development; and expansion of R&D for the generation of appropriate postharvest technologies and quality assurance system; are required. In this paper, study reports, empirical analysis and theories have been explored and multidimensional analysis methodology has been implemented to review postharvest aspects of fruits and vegetables subsector of Uzbekistan.

19:30-22:00 Conference Dinner

PROGRAM FOR WEDNESDAY, SEPTEMBER 16TH

09:00-10:30 Session 9: Plenary keynotes lectures (3)

LOCATION: Aula Magna (Great Hall 1)

09:00 *Pierre Rabhi*

Agroecology an ethics of life

SPEAKER: *Pierre Rabhi*

10:30-11:00 Coffee Break

11:00-12:30 Session 10A: Parallel Working Group sessions (6)

11:00-12:30 Session 10B: WG6 - Transition approaches

Actors oriented papers
CHAIRS: *Pieter de Wolf* and *Myriam Sánchez*

LOCATION: Aula 18

11:00 *Karel de Greef* and *Pieter de Wolf*

Animal welfare driven systems innovation in the pork chain

ABSTRACT. Animal welfare of production animals is a key issue in the societal debate concerning Dutch agriculture. From about the year 2000, the Dutch government made the choice to stimulate systems innovation in animal production chains. This implied supporting a series of projects in which long term ambitions were combined with interactivity and stakeholder participation. From this, the RIO-approach (Reflective Interactive Design, Bos et al., 2012) was developed. The RIO-approach comprises a structured series of stakeholder analyses, systems analyses and systems design, targeting new/niche or radically improved production systems. Project activities are performed in the midst of the stakeholder context, either interactive or with strong participation of actors from chain, government and NGO's. RIO-project activities address not only design of physical systems (such as animal housing) but also market arrangements and/or alliances between stakeholder groups.

As a casus study, Pigs in Comfort Class, an early RIO project (2001-2009) on animal welfare, was re-analysed against the background of four theoretical frameworks on collaboration among stakeholder groups. Theories and guidelines from 1) Strategic Niche Management, 2) Boundary work, 3) Stakeholder management and 4) Strong and Weak Ties were projected on the Comfort Class initiative. Key conclusion from the analysis is that the specific combination of stakeholders (having 'weak ties'), the joint product (their joint 'boundary object') and the creation of clear cut small initiatives (practical farmers testing in 'niches') provided a context where non conventional research results were readily accepted and used as a part of practical initiatives and farmers experimentation.

The implication of the analysis is that combining 'classical' animal science activities with stakeholder involvement in a well planned innovation program is effective. The project reframed animal welfare from a legal obligation towards a value laden market ambition and opened up the practical acceptance of changed husbandry practices for a NGO-

labelled market product, currently comprising about 1 million pigs/year.

11:15 *Livia Ortolani*, *Ivan Cucco* and *Maria Fonte*

Transition pathways in participatory plant breeding programs: a farm-level analysis

ABSTRACT. According to the literature on regime transition, niches are sources of innovation that may lead to the transformation of the dominant regime, if processes at other level of the system – the landscape and the mainstream regime - are supportive (Loorbach and Rotmans, 2006). A focus on actors involved in the transition process and the analysis of their specific role in knowledge networks can help assessing the robustness of a specific niche and its growth potential (Hoogma et al. 2002). Knowledge systems, and in particular the dynamics of local and expert knowledge, have in fact a key role in innovation models. Different trajectories characterize the transition process, leading to different results: from co-optation and gain in efficiency of the mainstream regime to its radical transformation.

In this paper we utilize tools drawn from Social Network Analysis to investigate the knowledge networks of six innovative organic farms involved in participatory plant breeding programmes in Italy, Portugal and France. Relational data were collected thorugh participative methods, then analyzed in order to understand how the six farms' transition trajectories can be defined and characterized from a multilevel perspective.

Our assumption is that leading actors in the farms' knowledge networks will influence a specific transition trajectory, shaping its direction and transformative potential. Three main trajectories were identified on the basis of the analysis of farms' knowledge networks, and the position of each farm was analysed taking into account the dynamic nature of the transition process.

11:00-12:30 Session 10C: WG3 - Economic impact at the farm level

Adaptation and diversification strategies
CHAIR: *Francesco Vanni*

LOCATION: Aula 22

11:00 *Bernd Pölling*

Characteristic business models of urban agriculture – contextualizing a literature review with statistic-based findings from Metropolis Ruhr, Germany

SPEAKER: *Bernd Pölling*

ABSTRACT. Urban environments influence commercial farming in and around cities and agglomerations resulting in characteristic business models of urban agriculture caused by advantageous as well as disadvantageous urban influences. Either farms give up resp. turn to part-time farming or farms adapt their businesses to maintain competitive. These latter farms adjust their enterprises to the urban conditions for profitability on the farm level. Characteristic farming business models in urban regions named in literature are especially high-value production, diversification, and service provision. Within this study, these general characteristics of commercial urban agriculture are contextualized with statistic-

based findings from Germany's largest agglomeration Metropolis Ruhr. 3,600 farms in this polycentric city region cultivate nearly 40 % of the metropolitan area, mainly in the peri-urban fringe, but to considerable amounts also within the central zone. Agricultural characteristics in Metropolis Ruhr differ from other regions due to its urban and polycentric structure. Horticulture, direct marketing concepts and a long list of different services offered to the population are building important components of urban agriculture here. The services offered range from social, education, health, leisure, and recreation ones to landscape management. The eleven urban municipalities of Metropolis Ruhr, where more than three million people (Metropolis Ruhr: 5.1 million inhabitants) are living, have a population density of nearly 2,000 inhabitants per square kilometer. These very densely populated urban municipalities are specially emphasized because urban influence here is the strongest. Not only is the urban influence most pronounced, but also the adjustment of agriculture to characteristic urban business models is intensified. Since a few years new business ideas have been emerging addressing the growing interest of cities and their population in gardening and food topics. An example of this is the strongly rising emergence of rental plots for seasonal use. Farmers rent small plots of plants, mainly vegetables, herbs and flowers, to people interested in cultivation and harvesting. This is especially interesting for farms selling also products in a farm shop. In Metropolis Ruhr several farms have started to offer these rental plots, either on their own or via companies specialized in this field. Additionally to the detection of characteristic business models of urban agriculture and the analysis of farming in Metropolis Ruhr based on a literature review and publicly available statistics, the assessments of some farmers are used to explain specific developments of urban agriculture within the case study region.

11:15 *Concetta Cardillo* and *Orlando Cimino*

Does the multifunctional agriculture contribute to the farm family income? An analysis based on FADN survey.

ABSTRACT. For nearly two decades, Italian and European agriculture shows the features of a new way of interpreting and understanding the agricultural activity. In its most classic meaning, agriculture is seen as the primary sector that produces and provides food and fiber, the new model of agriculture (multifunctional), however, is based on a farm able to produce a variety of goods and services of the most disparate nature, that aims to the integration of farm income, but also to the welfare of the entire community. The work aims to analyze the contribution of multifunctional agriculture to farm family income of Italian farms in order to integrate the knowledge about the differences in terms of structure, organization and expectations. The methodology that we propose uses the concept of "representative farms", that is essentially empirical, in fact, it represents that farm whose characteristics are typical of a population of farms, in particular the structural features of the multifunctional farms, such as product differentiation (quality products, organic farming), and diversification (agri-tourism, social farming, recreational activities and so on). In other words, the representative farm has the average characteristics of a group substantially homogeneous of farms but not necessarily that farm is a real farm (De Benedictis and Cosentino, 1979). In order to identify this "representative farm" we will use data from different sources, in particular, the data from the sixth Italian agricultural census (farm universe) will be utilized to estimate the potential groups of multifunctional farms, through the analysis of structural aspects. While the Farm Accountancy Data Network (FADN) data, of the most recent year, will be used to calculate the contribution

of multifunctional agriculture to farm family income values, through the analysis of economic aspects and results linked to the adoption of a multifunctional agriculture. In this way it will be possible to investigate how and how much the multifunctionality could influence the farm family income in the different "representative farms" identified.

11:30 *Didit Okta Pribadi*

Study of farmers adaptation to urbanization and their capability to develop multifunctional peri-urban agriculture

SPEAKER: *Didit Okta Pribadi*

ABSTRACT. Urbanization in Asia is characterized by growing and sprawling megacities that encroaches densely populated agricultural land in the periurban zone. It has created a specific feature called "Desakota" where urban and rural systems are intermingled to form a seemingly chaotic urban-rural land use. It has been proposed that this area can provide ecosystem services, food supply, and job opportunities, thus developing multifunctional agriculture in peri-urban landscape is required. However, transforming rural agriculture into multifunctional agriculture is a critical issue due to lack of understanding of farming characteristic in an urbanizing area. This research aims to study farmer's adaptation to urbanization and analyze their capability to develop multifunctional agriculture. It was done based on field survey and interviewing 100 farmers in the Ciliwung upstream area which is located in the peri-urban zone of Jabodetabek Metropolitan Area (JMA) with Indonesia's capital Jakarta as its core. This area plays an important role in water management, has beautiful scenery for recreational activities, supplies agricultural products, and provides income for numbers of farmers that tend to increase as they are pushed from the downstream area by the urban growth. The results showed that most of the farmers do not work on their own land as most of the land has been owned by the rich-urban people. The farmers can use the land by rent, sharing their harvest, work for land owner as a property guard, or give some money as a guarantee. Simultaneously, the land owners also need their land to be cultivated in order to secure their property. The farmers who rent a land usually are highly-skilled farmers from outside of JMA with high business motive and capital intensive, thus they tend to exploit the land. Conversely, the farmers who become a property guard have more environmental concern as they are paid to maintain the quality of land owner's property. Meanwhile, other farmers who have lack of capital can be persisted by work in non-agricultural jobs. Although agricultural landscape in this area is often visited by tourists, school kids, etc., the farmers cannot take a benefit as it is not their property. Furthermore, lack of education has made the farmers incapable to manage the potency of agro-tourism activities. These findings imply that the form of relationship between farmers and land owner, different motives and strategies of farmer's adaptation to urbanization, and individual capacity of the farmers should be considered to develop multifunctional peri-urban agriculture.

11:45 *Edgard Malagodi* and *Arilde Alves*

Agriculture multifunctionality: rhetoric or tool analysis of rural development ?

ABSTRACT. In the sense of contribute to the W3 - Economic impact at the farm level -

the Second International Conference on Agriculture in an Urbanization Society, presents the conceptual framework of agricultural multifunctionality, based in the understanding of what the same, in addition to producing food and fiber, performs many other functions of essential importance in the dynamics of rural development. This understanding extends the field of socio-economic functions attributed to agriculture, no longer understood only as a producer of agricultural goods. Therefore, based on the premise that the productive dynamics and socio-cultural result of social relations themselves of agriculture, marked by numerous representations related to territorial characteristics, was used as an analytical tool the notion of multifunctionality, to demonstrate the sociological importance of the multiple functions of peasant family agriculture in the context of the Brazilian semiarid region. Methodologically the research was focused on the farming families in Curimataú Ocidental – the Agreste Paraibano and its territories, based on secondary information and interviews with 'social actors' local places, rather to point out that this diversity of agricultural activities is 'producer' externalities positive environmental sustainability. These results confirm previous research that agriculture loses the exclusivity of its production and economic, played an increasingly the character of a living space, 'producer' of externalities and public goods.

11:00-12:30 Session 10D: WG7 - Regional branding and local agrifood systems: strategies, governance, and impacts

Geographical Indications and collective action
CHAIR: *Javier Sanz-Cañada*

LOCATION: Aula 3

11:00 *Marcello De Rosa*, *Luca Bartoli* and *Yari Vecchio*

Questioning on collective action and GI: the case of Picinisco PDO cheese

ABSTRACT. The capability to promote sustainable rural development through GIs is not an easy process, depending on actors involved in product qualification, on their qualification and on how code of practice in the qualification scheme is determined (Tregearet al., 2007; Vandecandelaere et al., 2010). Therefore, an effective collective action is required in order to boost the qualification and valorization of a GI. Collective action can be defined as voluntary action taken (directly or indirectly, through an organization) by a group of members to achieve common interests (Marshall, 1998).The collective action enable the local community to gain immaterial resources, like information, trust, networks aimed at innovation, etc. The paper sets against this background and aims at analyzing collective action behind the procedures for the recognition of a geographical indication. More precisely, by applying Ostrom's (2010) scheme of analysis to the collective action required to obtain a PDO mark, the paper focuses on a specific product in region Lazio (Italy): Pecorino di Picinisco PDO. The initiative of a GI mark has been launched by the regional association for agricultural innovation; however, after the initial enthusiasm, it seems becoming even weaker. Ostrom's approach is a relevant tool in order to analyze possible bottlenecks, by detailing various relational aspects behind a collective action. The applied methodology lets obstacles to implement the virtuous circle of collective action to emerge. Moreover, on the basis of our empirical analysis, possible actions aiming at consolidating the collective action behind a GI may be suggested.

11:15 *Jean-Paul Dubeuf*

The public policies in favor of Geographical Indications in Morocco: Mental models, appropriation by the actors, and impact on innovation and local dynamics

SPEAKER: *Jean-Paul Dubeuf*

ABSTRACT. The governance and efficiency of the public Policy in favour of the Geographical Indications (GI) in Morocco for creating value and fighting poverty in rural back countries are analyzed. From the certification projects in two Northern and South Western regions, the reports of several participative workshops and individual interviews, the GIs in Morocco appear to be more an official communication support of image than an operational tool of development. Considered as "modern" innovations by themselves and generally top – down administrative initiatives, the GI projects have difficulties to be understood by the professional actors and are little connected to specific and realistic economic local economic objectives and the changes in urban demand. Including the GIs in a broader discussion on the general governance of 2nd Pillar of the Green Moroccan project is one of the proposed suggestions.

11:30 *Javier Sanz-Cañada*, *Giovanni Belletti*, *José Manuel Rojo-Abuin* and *Claudia Bartolini*

Stages of innovation for adopting differential quality in olive-oil geographical indications

ABSTRACT. The paper aims to contribute to the design of methodological tools for typification and hierarchi-sation of enterprises that belong to olive-oil geo-graphical indications (GIs), according to their respec-tive trajectories in their process of adoption of inno-vations and knowledge in terms of quality. The GIs analysed are the Protected Designations of Origin (PDOs) of "Sierra de Segura", "Sierra Mágina" and "Estepa", in Andalusia, Spain, as well as the Protected Geographical Indication (PGI) "Olio Toscano", in Tuscany, Italy. The information was obtained by means of surveys to oil enterprises. Three synthetic indicators of quality, as well as a general quality indi-cator (IQ), were elaborated upon the basis of nine original variables : i) quality in processes and techno-logical innovation; ii) best practices in quality; iii) organisational and commercial quality and innovation. We applied cluster and factor analysis and then we tested the next hypothesis. First, it is confirmed that firms belonging to a GI reach significantly higher IQ than that the non-affiliated ones. Second, it is also verified that private firms score significantly higher IQ than cooperatives. Finally, the size of the firm does not provide significant differences in the scores of IQ.

11:45 *Xiomara F. Quinones Ruiz*, *Thilo Nigmann* and *Marianne Penker*

Collective action milieus for coffee growers in Colombia and Thailand

ABSTRACT. Third countries, specifically those located outside Europe have started to register Geographical Indications (GIs) in the EU since 2007. The registration of GIs in the EU requires collective efforts of organised producers as they shall define quality standards and defend their food products' reputation while highlighting their geographical

origin and value to consumers. The aim of this study is to evaluate the collective action of organised coffee producers in Colombia and in Thailand along the GI registration process. More specifically, we aim to understand to what extent the Ostrom's design principles* explain effective collective action in the GI process. We collected data using semi-structured interviews and document analysis, which we then processed in a qualitative text analysis. Preliminary results show that the design principles might be helpful for understanding the local collective action of coffee growers, however, the principles also show challenges concerning the social boundaries (e.g., interactions between coffee growers and roasters) or the collective choice arrangements (who defines the rules). A pure focus on the growers' collective action for establishing and managing the origin protection does not give a full picture, since in Colombia coffee beans are mainly roasted and commercialised abroad while in Thailand there is not a clear understanding of what GIs mean for coffee growers and local roasters located in the geographical GI boundary. It is crucial to understand the collective action by scrutinising the scope of: i) the formal and informal institutions surrounding the GI process (e.g., principle 3), ii) the types of actors leading the GI registration process (e.g., principle 1), and iii) the inclusion and participation of all potential actors (e.g., coffee growers, local and international roasters, government authorities, development organisations) (e.g., principles 1, 6). GIs are still new in developing countries and in some cases it is difficult to consider GIs as a long-term practise of linking traditions, territory, quality and human factors since GIs might be mainly considered as a commercial strategy to reach the common EU market of 28 nations.

*1) well-defined boundaries, 2) proportional equivalence between benefits and costs, 3) collective-choice arrangements, 4) monitoring, 5) graduated sanctions, 6) conflict-resolution mechanisms, 7) graduated sanctions, 8) nested organisations.

11:00-12:30 Session 10E: WG8 - Food systems and spatial planning. Towards a reconnection?

CHAIRS: *Sonia Callau* and *David Fanfani*

LOCATION: Aula 6

11:00 *Carine Lteif* and *Christophe Soulard*

Diagnosis and Strategies for Periurban Agriculture in Beirut

ABSTRACT. The United Nations predicts that by 2030 more than half of the world population will be living in cities. The shift in population is in part the result of high growth rates in cities but also because of the continuous outward flow from villages and the countryside. The prospect of a rapidly urbanizing world invariably raises concerns about food security. In fact, food security was a top of the Millennium Development Goals. Addressing this goal, planners and policy makers are reevaluating the potential for urban agriculture. Cultivation in and around cities is increasingly seen as an alternative for feeding the urban inhabitants and at the same time providing them with green environments. Thirty two percent of Lebanon's four million inhabitants, 1.3 million, live in Beirut and its suburbs. This research aims to investigate the landscape potential of urban agriculture located at the peripheries of Municipal Beirut and assess its prospective to contribute to urban food security while providing for urban green areas and other benefits like urban water management and environmental protection. What role can urban agriculture landscapes play in reducing pressure on land and enhancing local and global

food security? The methodology follows three broad lines of inquiry: the first is an archival research, looking back at agricultural activities that characterized Beirut and its peripheries between the 17th and 20th centuries. The second is a review of the literature available on urban agriculture in Lebanon. The third line of inquiry undertakes a field survey in three locations at the edge of municipal Beirut: Shweifat and the coastal and low foothill sections of the Nahr Beirut, respectively the Metropolitan hotel area and Daychuniyyeh Valley. Drawing on the experience of urban agriculture elsewhere, a policy framework is adopted to characterize the existing pattern of urban agriculture. As an outcome, we have identified the main limitations to urban agriculture in the area of study as resulting from land tenure, water quality, competition with imported crops and chemicals used in production. Future prospects include the current market demand, economic profit and the prevailing awareness among interviewees of the multiple benefits of urban agriculture. Recommendations call first for the adoption of a multi-stakeholder process for the protection and promotion of urban agriculture. Future planning strategies should encourage production on state and Municipality-owned lands, Wakf and lands awaiting development. In addition, the study recommends rainwater harvesting to combine food production and environmentally sustainable urban greening.

11:15 *Hein Korevaar*, *Marjoleine Hanegraaf* and *John Regan*

Is a combination of crop and livestock production profitable and supporting sustainability at regional level?

SPEAKER: *Hein Korevaar*

ABSTRACT. Nowadays, agriculture in many European regions is characterised by a high degree of specialisation. This specialisation results in areas dominated by intensive livestock farms which import all or at least a major part of the feed from outside the farm. As a consequence, these farms have an excessive animal manure surplus. On the other hand, in other regions crop farms rely mainly on chemical fertilizers for their nutrient inputs. In the European FP7 funded CANTOGETHER (Crops and ANimals TOGETHER) project improving agricultural sustainability through innovative mixed farming systems (MFS) is studied at farm level and at regional level. Innovations in MFS are targeted at improving nutrient use efficiency and reducing nutrient losses to the environment. For the design of new, innovative MFS at the regional level, a participatory method is used, followed by a case study approach in which cooperation between stakeholders and inclusion of regional characteristics were main components. We assessed crop-livestock integration strategies in four European regions: 1) Local exchange of manure for straw among farms in the Ebro Basin, Aragon, Spain; 2) Provision of high quality and protein rich forages for dairy cows through a forage dehydration facility in which coal is replaced by local produced Miscanthus and wood as fuel in Britany, France; 3) Land sharing between dairy and arable farms, combined with nature conservation areas to maintain an attractive landscape and improve water quality in Winterswijk, the Netherlands; and 4) Animal exchanges between a lowland region (Thurgau) and a mountainous region (Grisons) in Switzerland. Adopting a MFS at farm level is not popular among specialised farmers because of high investments, e.g. machinery costs, and labour pressure when combining crop and livestock activities on the same farm. Livestock and crop farms cooperating together could benefit from specialisation within their own farm and as well as from exchange (e.g. feed and manure) with another farm. Preliminary results showed that crop and livestock integration at regional level does not necessarily

lead to environmental benefits. Instead the cooperating farms have often more intensive farming practices than non-cooperating specialised farms. It is not yet clear whether cooperation helped farmers to intensify their system, or is required to sustain already intensive systems.

11:30 *Coline Perrin* and *Brigitte Nougarèdes*

Justice issues in farmland protection policies on the urban fringe: a barrier to a more efficient integration of food systems in urban planning?

ABSTRACT. Farmland preservation is probably the most common aspect of the integration of food systems in urban and spatial planning. At the regional scale, the need to protect agricultural land is being intensified by urban demands for food, but also for environmental, recreational and landscape-related services (Zasada, 2011). Urban agriculture is furthermore promoted for its contribution to education and to poverty alleviation. The preservation of agriculture is presented as a way to cope with resilience as well as fairness matters. However, as Tornaghi (2014) critically examined urban agriculture, we would like to show that justice issues have been overlooked in farmland protection policies. Such policies are mainly designed to preserve the economic potential of farmland and sometimes the landscape or the environment. Though they are not directly motivated by social goals, they have social consequences in so far as they affect the price and conditions of access to the land and to development rights. In some cases, they also confer exemptions to farmers or to specific types of farmers. Hence, they raise questions of justice in the access to land, housing and building rights, between farmers, between different social groups of inhabitants, and between owners and non-owners.

Our hypothesis is that this lack of consideration of justice issues in farmland protection constitutes a barrier to a more efficient integration of food systems in urban planning. Our contribution uses spatial justice as a lens to assess two innovative tools aimed at preserving farmland around Montpellier, France: i) a large agricultural estate bought by Montpellier Metropolis in order to create a periurban agricultural park and ii) the practice of spatial grouping of farm buildings in municipal binding zoning plans. Primary data were gathered through the consultation of public documents and in-depth interviews with key players (farmers, officials of metropolitan or municipal governments, farmers' organisations). Around Montpellier, the rationale of farmland preservation has become consensual at the metropolitan scale. However, policies and projects cause local controversy. The two above-mentioned initiatives have raised equity issues among farmers and with other inhabitants about the fairness of the process and its outcomes in terms of allocation of public money, public land and building rights. Integration of farmland preservation in urban planning thus requires not only the empowerment of farmers in participatory planning but also a public open debate on the type(s) of agriculture that desserve to be preserved or supported by public funding in urban areas.

11:45 *Fulvio Adobati* and *Maria Felicia Della Valle*

New forms of agricultures in the sprawl as vector of "productive landscape"

ABSTRACT. The main focus of the paper is the analysis of the opportunities for new

functions that sprawl may serve linked to agricultural net-work and food system. Its contribute to the growth and activation of the surrounding rural areas could be implemented. The condition of the urban sprawl, on one hand, can be characterized by fragmented space, invested by rapid changes and open boundaries; on other hand can be recognized as a context in which multiplicity and diversity are prominent. In this space a different form of spatial quality reigns and different rules are applicable. Moreover, this middle condition entails many side effects. For example, the mixture between city, countryside and nature provides a different view of the relationship between people and settlement. There are different experiences, already realized or currently still in progress, that show more coherent integrated ways of combining this kind of urbanization with the food self sufficiency (i.e. Milan urban region, London urban region, Sassex region, Yorkshire region). The recognition of new qualities in this productive landscape of proximity agriculture enables us to understand food system more dynamically as a component of living communities. Although from a planning-urbanism perspective often have the tendency only to consider the spatial dimension of sprawl the links of city and urban agriculture is not only a spatial fact, but also a social common.

12:00 *Roberto D'Autilia* and *Ilaria D'Ambrosi*

Land use and balance between the cities and the country, the case of Lombardia

SPEAKER: *Roberto D'Autilia*

ABSTRACT. In 2007-2008 for the first time the urban population exceeded the rural one, while the data on world population show a continuous growth. The growth of the urban population increases the anthropized soil, raising the need of a method to measure and control the urban growth and to make stable the balance between the urban land and agricultural soil. In recent works the hypothesis of a non-linear dependence of the urban soil size on the size of the urban population has been considered and a power law to describe this dependence was suggested. The data analysis of 3646 cities with a population exceeding 100,000 inhabitants, made possible to estimate the parameters of the model and to verify the consistency of the allometric hypothesis. Starting from this law, we model the urban population dynamics, taking into account the agricultural resource exploited for the development and the maintenance of the population and also for the expansion of the cities by urban sprawl. The urbanization of peri-urban areas involves the decrease of the agricultural land size and the reduction of food resources, thereby limiting the urban population growth. The phenomenon may seem small in size, but because of the non-linear dependence between soil and people, the growth of the city can quickly become uncontrollable. It is therefore necessary to set limits to the urban expansion by establishing a policy of balance between the city and the country. The balance of this process, namely the carrying capacity, depends on the allometric model between the size of the anthropized ground and the size of the population. In this paper we analyze the evolution of the land use in Lombardia (Italy) from 1954 to 2009 to identify the carrying capacity and the urban sprawl of each province. The results of the analysis show that, within the assumptions of the model, not all the provinces of Lombardy can support the nutritional needs of the population. In larger cities the population exceeds the number of persons to whom the surrounding agricultural areas can provide food, while for others the agricultural soil support the nutritional needs of the whole population. The method also allows the identification of the areas where the phenomenon of urban sprawl is stronger. Finally some planning strategies are suggested

to limit urban sprawl according to the predictions of the model.

11:00-12:30 Session 10F: WG12 - Urban agriculture III: Effects of UA. Urban agriculture: a potential tool for local and global food security, economic, social and environmental resilience, and community health and wellness

CHAIR: *Parwinder Grewal*

LOCATION: Aula 14

11:00 *Sudarshana Fernando*, *Pay Drechsel*, *Christina Semasinghe*, *Nilanthi Jayathilake Jayathilake* and *Iroda Amirova*

Turning urban waste into an economic asset for urban and peri-urban farming in Sri Lanka

ABSTRACT. To assess the current situation of municipal solid waste (MSW) composting opportunities and potential ac-ceptance of nutrient enriched pelletized compost in Sri Lanka, two field surveys were conducted nationwide and in Kurunegala (North-western) area, respectively. Due to the low nutrient content of MSW compost, it quali-fies mostly as a conditioner of the soil's physical proper-ties. As a result the compost so far produced across the country has received limited attention. The surveys indicated that if the nutrient levels are increased, 74% of the farmers surveyed are willing to use the compost. The percentage willing to use compost was similar among farmers of the three most common crops; coconut, pad-dy and vegetables, ranging from 72 to 77%. Using the land use pattern, the crop cultivation databases and the willingness to use (WTU) results, the potential demand for compost was estimated. As per the results, in the urban context of Kaluthara, a 160% larger capacity plant (present input capacity 38 t/day) would be needed to satisfy market demand within a 10 km radius of the plant. For the Attanagalla plant (present capacity 10 t/day) within a rural setting, all compost could be ab-sorbed within 2 km.

11:15 *Marian Simon Rojo*

Involvement in organic urban agriculture: enabling further steps towards sustainability

SPEAKER: *Marian Simon Rojo*

ABSTRACT. Food is becoming a powerful factor of social transformation and urban agriculture is increasingly being linked to the concept of resilient city-region food systems. In Spain concerned consumers engage in networks to buy directly to local farmers or to support them through CSA initiatives.

To understand these processes, it has to be noted that commonly these groups of consumers committed with new peri-urban farmers had previously been part of community gardens. This role of intra-urban agriculture is of special significance in Spain, a typical customer initiative case. It is not unusual either that unemployed people engaged in UA start new agricultural projects in peri-urban areas through direct selling and Participatory Guarantee Systems.

In sum, there are strong linkages between new organic local farmers, groups of consumers

and community gardens. It is a common place that after urbanites engage in these initiatives, their way of life, their patterns of consumption and their diet change. Little evidence is given to support this statement, it is mainly based in personal perceptions.

In 2015 a survey has been conducted between people engaged in agreoecological projects, networks of consumers and producers, community gardens and integral cooperatives from Madrid metropolitan area. It provides the necessary data to sustain or dismiss the previous claim on the positive impacts of these forms of UA.

These projects of urban agriculture are supported mainly by middle-class, high educated people (over 75% have an university degree) whose labour conditions are increasingly precarious.

For them, the most common change after joining an UA initiative is related to patterns of consumption: participants are increasingly worried about the origin of the food their buy, they prefer seasonal products and local shops. There is also a considerably impact in the diet: most people engaged in these kind of initiatives do reduce the amount of meat, which results in a reduced pressure on natural resources (land, water, etc.)

Higher consciousness on the social problems derived from the global food agrosystems are also reflected in an increased awareness of social inequity: they are more concerned about labour conditions of farmers and workers in the food chain. They also participate more in local social activities, strengthening neighbourhood networks.

According to the answers, a relatively large proportion had previously some of these concerns in mind, but joining projects of UA has reinforced them and sharing experiences with others expand their "sustainable" behaviour towards new realms.

11:30 *Jeanne Pourias*, *Raúl Puente Asuero* and *Christine Aubry*

Urban gardens in the city in crisis. Insights from Sevilla (Spain)

ABSTRACT. In Spain, the financial crisis of 2008 has had various consequences on the Spanish economy and on Spanish citizens, affecting both their material and immaterial conditions of living. In this context, many consider that the development of urban gardens in southern European cities is a response to the crisis. However, the relation between the creation of urban gardens and the economic crisis has not been investigated. We used a mixed methodology, which included on-field observations, interviews with local stakeholders and archive exploration, to investigate the link between the creation of urban gardens in Sevilla and the context of economic crisis. We identify three different processes related to the economic crisis, which impact the dynamics of creation and functioning of urban gardens in Sevilla: (i) the varying implication of public institutions, (ii) an evolution in gardener's profile and motivations, (iii) a diversification of the types of initiatives. We detail and discuss each of these three processes.

11:45 *Ram Bhandari* and *Rob Roggema*

Designing Urban Organic Agriculture for Sustainable Food Systems in Kathmandu Valley, Nepal

ABSTRACT. Rich in biodiversity and home to nutritious crops, mountain ecosystems in Nepal are threatened by deforestation, soil degradation and erosion, as well as the melting and receding of glaciers. Plant biodiversity including wild and cultivated nutritious crops and related ecosystem services have benefits for all people and geographies worldwide.

The latest indication from the IPCC clearly point towards an even greater impact from climate change, while the demand for food from a growing population worsens the sustainability problem even further. Organic agricultural practices not only help to maximize carbon fixation while minimizing emissions, hence reversing the greenhouse effect, but also provide solutions to problems of health, nutrition, unemployment, poverty, loss of biodiversity, and water quality. Therefore, the added value of organic agriculture for sustainable urban development is evident but ill-researched and implemented to a very limited extent.

Our paper focuses on the design and implementation of Urban Organic Agriculture for sustainable food systems in the urbanizing society of Nepal. It describes the case study of Kathmandu Valley and highlights how organic agriculture can help tackle pressing issues of urban and peri-urban agricultural environment and their ecosystems for their livelihood, food and ecological securities. In the paper a model of urban organic agriculture for sustainable food systems is developed, which contains suggestions for market development that respects indigenous culture and provides local and global benefits.

12:00 *Abebe Nigussie Nigatu*

Agricultural Waste Utilization and Demand for Municipal Waste Compost: Evidences from Smallholder Urban Farmers in Ethiopia

SPEAKER: *Abebe Nigussie Nigatu*

ABSTRACT. The use of agricultural and municipal waste for soil amendments is limited in many developing countries. It is essential to understand the current use of agricultural waste in order to explain the insufficient application of organic amendments on cropland. The aims of this study were therefore (i) to investigate competitive uses of agricultural waste between different typologies of urban farmers and link this to nutrient balance, (ii) to identify farm characteristics that influence urban farmers' decisions about using agricultural waste for soil amendments, and (iii) to assess the demand for non-agricultural waste (i.e. urban waste) compost across different urban farmers. Four groups of urban farmers, namely (i) field crop farmers, (ii) vegetable producers, (iii) ornamental plant growers, and (iv) farmers practicing mixed farming, were identified using categorical principal component and two-step cluster analyses. The study demonstrated that shortage of land was one of the drivers of change in farming strategies from field crop farming mixed farming vegetable producer. The study also showed that the production and utilization of agricultural waste (i.e crop residue and manure) varied significantly between different farmer groups. Field crop farmers produced the greatest quantity of agricultural waste, but they mainly used the waste for fuel and animal feed. Field crop farmers utilized >80 % manure for fuel consumption, and only 5% for soil amendment. In contrast, vegetable and ornamental plant growers allocated >60 % of manure and crop residues for soil amendment. Urban farmers also sell their manure and crop residues to urban dwellers, and this generated 5-10 % of their annual income. Therefore, the nutrient

balances (Nitrogen, Phosphorus and Potassium) were negative in all urban farmers groups, but the balances were less negative in vegetable growers. Education, land size, land tenure and access to extension services were the variables that influence agricultural waste utilization. More than 60% of urban farmers were willing to contribute labor, money and/or both for urban waste compost. However, demand for urban waste compost varied between different urban farmers group. Landownership, experience with compost and access to extension services were the variables that explained variations in compost demand. The present study demonstrated that estimating municipal waste compost demand via a willingness to pay cash underestimated the actual demand. It was concluded that urban waste compost should be used as an alternative soil amendment and it is recommended that it should be supported by economic incentives or legislation.

11:00-12:30 Session 10G: WG19 - Food Security: Meanings, Practices and Policies

Food security practices: focusing on households and consumers
CHAIR: *Juliet Kiguli*

LOCATION: Aula 19

11:00 *Maureen Nanziri Mayanja*, *Juliet Kiguli* and *John David Kabasa*

Perception of household food insecurity among pastoral and agropastoral communities in the cattle corridor of Uganda

ABSTRACT. Food insecurity is applied to a wide range of phenomena and inclusion of more subjective perceptions of the problem has been suggested. This study intended to construct what constitutes food insecure households in the view of pastoralist and agropastoralist communities in the central part of the cattle corridor of Uganda. A questionnaire survey targeting a sample size of 2400 households that were randomly selected in Nakasongola and Nakaseke districts assessed what was perceived as characteristics of food insecure households. Subsequently, in each of 12 purposively selected villages one focus group was mobilised on a principle of gender and age homogeneity. Group discussions involved participants describing the food secure and what they perceived to be varying levels of food insecurity in a household. From the survey of 1683 agropastoralist and 228 pastoralist household respondents 55% and 53% were female respectively. The majority of respondents (47-50% depending on whether they were pastoralist / agropastoralist and male / female) perceived food insecure households as those with less than 1acre of land and / or low acreage of drought resistant food crops like cassava. Only 8-10% of the respondents perceived the food insecure as those whose household head and members were casual labourers. In tandem with household respondents, agropastoralists focus groups described the food secure as those who had at least 2-3 acres of drought resistant food crops, granaries of stored food and who could afford to sell off some food items. Pastoralists described the food secure as those who could afford to buy required food items often. Agropastoralists clearly distinguished between three levels of food insecurity i.e. extreme food insecurity which was twice as severe as moderate which in turn was three times as severe as mild food insecurity. However pastoralists perceived mainly two levels i.e. extreme and moderate food insecurity. Gender differences in the perception of some consumption coping strategies as food insecurity indicators included a pastoralist women group which found providing labour for income to buy food instead of attending to own fields / livestock as depicting extreme household food insecurity whereas pastoralists men and mixed youth

groups felt it indicated just moderate food insecurity There were some outright differences in perception of the food insecure between pastoral and agropastoral livelihood groups. Interventions targeting the food insecure should incorporate pastoral and agropastoral community differences in perceptions of food insecurity; consideration of the link between perceptions, coping and rural-urban migration is recommended.

11:15 *Sherry Marasigan*, *Victorino Bato* and *Nelita Lalican*

Food Security of Stakeholders from Upland and Lowland Communities

ABSTRACT. Food security cannot be answered by providing appropriate technologies needed in increasing production. Agriculture stakeholders usually cannot attain the increase in production as a result of a given technology because they cannot afford to buy the inputs needed. Agriculture stakeholders from upland and lowland communities were interviewed and compared on how they manage the shocks and stresses bought about by food insecurity. Also their nutrition status were compared. Farmers from upland communities were more resilient on shocks and stresses brought about by food insecurity than farmers from lowland areas. Farmers living in Barangays Abo and Bukal, the upland communities of Nagcarlan, Laguna, Philippines, owned the land they are working on and just planting rootcrops around will not make them hungry. While farmers from Barangays Lagawen and Buenavista of Nagcarlan, Laguna Philippines do not own the land they are farming and the presence of many food outlets in the lowland, they fill they are poor, because they do not have money to buy food. The nutrient status of upland farmers are much better than the lowland farmers, for some missed eating regular meals. The difference lies on eating own produced rootcrops compared to street foods in the lowland.

11:30 *Mariola Kwasek* and *Agnieszka Obiedzińska*

Changes in food consumption of urban and rural populations in Poland

ABSTRACT. The level of food consumption of Polish population depends on the physical and economic availability of food. Physical availability of food is determined by agricultural production, processing, import, export and stocks of agricultural commodities and food, whereas the economic availability of food is determined by incomes of the population and food prices. Domestic agriculture has a decisive influence on the food consumption of Polish population. Its production capacity is sufficient to produce agricultural commodities and food to ensure an appropriate food for Polish population. The purpose of this study was to analyze the changes in the level of food consumption in urban and rural households in total and by socio-economic groups (employees, farmers, self-employed, retirees and pensioners) from 2005 to 2012. As an empirical material the results of the Household Budget Surveys (HBS) prepared by the Central Statistical Office in Poland were used. The obtained results were compared with the current national and international dietary guidelines. The analysis of food consumption in urban and rural population groups allowed to determine how much the level of intake of milk, fish, fruits, vegetables, or products that have a significant impact on human health is different from the dietary guidelines recommended by the international organizations (FAO, WHO) and Polish specialists in the field of human nutrition. In all studied population groups the consumption of milk and dairy products was low. Deficiency of calcium in the diet is one of the main factors of osteoporosis. At the current situation of food consumption the

urban population has to take into account the serious health consequences which may result from too low intake of vegetables, fruits and fish. Reported irregularities in the food consumption of urban and rural populations in Poland confirm the need to take steps towards changing diet of Polish people. It must rely on increased consumption of food products that have a positive effect on human health and reduced consumption of products, which in excessive amounts contribute to an increased risk of chronic non-communicable diseases (sugar, sweetened juices and beverages, confectionery, pastry, salt, fatty meat, animal fats). National food policy must take action towards education of Polish population in terms of food, nutrition and health and interactions between them. Nutrition and health education is an essential tool in the development of healthy eating habits and maintaining in a good health. This is an important step towards ensuring food security.

11:00-12:30 Session 10H: WG20 - Revolutionary solutions for local food systems

Technical solutions
CHAIRS: *Francesco Di Iacovo* and *Paola Scarpellini*

LOCATION: Aula 20

11:00 *Maria Gonnella*, *Massimiliano Renna* and *Pietro Santamaria*

The evolution of urban gardens in Puglia into a revolutionary multifunctional context

SPEAKER: *Maria Gonnella*

ABSTRACT. Puglia is the first region in Italy for vegetable cultivation (Istat, 2011). However before the introduction of some important innovations allowing the increase in yielding and cultivated areas, horticultural production in Puglia was limited to the urban vegetable gardens (UVG). Up to the first half of the previous century, they were the first source of vegetables for local populations, that have traditionally high vegetable consumption due to both climatic reasons and innate food preference. Limitation of local horticulture to the UVGs during the first half of the last century was due to higher availability of water for irrigation and manure and organic wastes for fertilization and to the advantage of being close to the work place for farmers and their families and other labor units. After land reclamation and the diffusion of more extended and efficient irrigation methods, vegetable species became important crops in wide and suitable lands in Puglia. As a consequence in last decades UVGs have been progressively replaced by urban buildings for industrial and residential use and by infrastructure artifacts. At present very few UVGs are still surviving over the whole region, thanks to the untiring work of some ancient patriarch growers, who are carrying on, at the same time, an action of safeguard of old vegetable biodiversity. In the research project 'Biodiverso', funded by the Regional government of Puglia, a great work of recovery and valorization of old species susceptible to genetic erosion has being done. Through this action, researchers are carrying out a mapping of the regional territory also in term of presence, distribution, importance and functions of UVGs. Some of these are real examples of rural archaeology, perfectly preserved close to the urban centre. Nevertheless they are held by very old farmers and, in order to avoid that all this heritage of knowledge and biodiversity can be lost, we have the unique chance to turn the traditional UVGs into modern urban gardens incorporated within wider and multifunctional projects. From this aspect a new perspective can derive for UVGs. A combination of new functions: i) environment safeguard (preservation of genetic horticultural biodiversity, landscape governance, waste

composting), ii) education to new generations (promotion of knowledge and consumption of local varieties, teaching almost lost cultural techniques, hosting gardening classes and vegetable garden for children, promoting knowledge and identification of wild edible species), iii) governance (participated management of urban and peri-urban areas and common goods, food production planning).

11:15 *Sarah Stempfle*

Innovating land's access conditions to rescue a threatened heritage: the project "Adopt a terrace in the Brenta Valley"

SPEAKER: *Sarah Stempfle*

ABSTRACT. The contribution focuses on a bottom-up experience of landscape and environmental stewardship, interpreted as a process of both social innovation and local action mobilization. This experience is carried out through agricultural practices on the Brenta Valley's highlands, located in the italian region of Veneto. Its slopes are characterized by majestic terraced systems – made up of dry-stone walls, supporting little plots of land – which where heavily abandoned during the 20th century. In order to contrast the degradation processes due to human neglect together with messy renaturalization, in 2010 started the initiative "Adopt a terrace in the Brenta Valley". It experiments a social rescue of the threatened heritage, by re-enabling the conditions for a diffused land-care action, in a landscape perspective. Starting form the observation of some spontaneous practices of plots' re-appropriation occurred for horticultural purposes, the project was developed within an action-research, aiming to get a wider reproducible approach for social-driven territorial requalification. The project is centred on an adoption mechanism, which enables the interested subjects to recover the abandoned or maintenance-lacked terraces through agricultural practices, thanks to a "pact" between landowners and growers, in a context of urban-rural exchanges' intensification. Everyone can easily adopt and cultivate a terrace in return of taking care of it, through a free of charge leasing agreement. In this way, the individual needs of direct access to land, self-reliance in food production and agro-recreational activities meet the collective interests in preserving the cultural and environmental heritage. The adoption idea is a revolutionary solution because innovates the conditions of land's access and use (beyond the classic public-private dichotomy) and because endorses civic engagement in sustainably management of common goods. During the first 4 years of activity, more than 120 terraces have been recovered (for a total surface of over 5 ha), and many collateral projects are following-up, including some economic valorization tries, such as the creation of a young farmers' cooperative and a local market for km0 products. Positive impacts are recognizable on environment, social dimension and territory micro-management. Although representing a small experience on a very local scale, this initiative suggests a different conceptual and operational framework for collective action (valorizing user-oriented strategies responding to social demands). The multifuncional potentials of agricultural practices could be here framed in a governance perspective, while arises their civic role, which cannot prescind from human resources investments, neither from the drive of expertise advocacy and policy support.

11:30 *Md Abiar Rahman*, *Md. Giashuddin Miah* and *Mahbub Islam*

Agroforestry for increasing production, income generation and better environment

ABSTRACT. Bangladesh, an agro-based country, is one of the most densely populated countries in the world. Poor management, use of excessive agrochemicals and climate change are some key challenges for agricultural production. Besides, decreasing land-man ratio is big concern to feed the increasing population. Agroforestry is an integral part of the rural livelihood systems for centuries in Bangladesh and plays a key role in providing household food and energy securities, income and employment generation, investment opportunities and environmental protection. Various traditional and new agroforestry systems are practiced in different ecosystems of Bangladesh since time immemorial. However, the potential benefits of agroforestry are not being tapped due to lack of knowledge and technology. A model of multistoried agroforestry system has been developed for Terrace ecosystem in Bangladesh with the aim to improve productivity, income generation and farm environment through utilization of available resource, knowledge and technology. Sole Jackfruit orchards are widely found in Bangladesh, which yield poorly due to improper management. The orchard was transformed into multi-storied agroforestry system (MSAS), where Jackfruit trees were kept as upper-storied; Papaya, Lemon and Orange were at middle-storied; seasonal vegetables such as Brinjal and Bottle gourd were grown as lower-storied crops. The MSAS improved field environment in terms of soil moisture and temperature although light was the limiting factor for understory crops. Jackfruit yield was increased by 33% in agroforestry system due to benefits received from fertilizer and irrigation management used for the middle- and lower-storied crops. On the contrary, Papaya, Brinjal and Bottle gourd yields were reduced by 21, 24 and 38%, respectively, due to competition among the components for resources. The overall yield in multi-storied agroforestry system was increased remarkably, and the benefit cost ratio (BCR) and land equivalent ratio (LER) were more than 5 and 3, respectively. Farm environment was improved due to good combination of crops in various agroforestry systems. Soil moisture and temperature were conserved positively in agroforestry plots due to reduction of evaporation and transpiration losses. A large amount of biomass, diversified food, multiple products and shelters were obtained from different components of the system. It was observed that farm income was increased by 182% in MSAS compared to sole Jackfruit system. Farm productivity and profitability have been increased significantly that might have positive impacts on employment and income generation, improve livelihood and living environment and ensure food security of the resource poor farmers.

11:45 *Rob Roggema*

Enhancing direct access to food for favela residents: how the FoodRoof supports them to grow their own healthy food

SPEAKER: *Rob Roggema*

ABSTRACT. At the scale of the entire globe it can be calculated that we produce enough food to feed nine billion people. Mathematically, this is possibly right. However, many (weak, poor) groups still do not have access to food. This paper reports a way to support these groups to gain access to healthy food. In Rio de Janeiro the residents in the favelas eat candy, potato chips, pre-wrapped cakes, and drink booze and soft-drinks: not the most healthy diet. The ‘FoodRoof’ is introduced to support local residents to grow their own healthy food. This FoodRoof is a design for an aquaponic food-system on the roof of an

individual house. The first FoodRoof has been realised in 2014 in Cantagalo favela and provides fish, vegetables and herbs for the residents of the house beneath. The system closes cycles of nutrients, water and energy and prevents waste to be dumped in the water system and Guanabara Bay, an additional advantage. To complete the environmental benefits in an experimental setting it has been build from garbage out of the bay. In the paper the design and implementation of the FoodRoof will be described and the benefits, conditions and potential future improvements will be discussed.

12:00 *Anand Babu*, *Shivaprakash L* and *Hareesh U*

Offline mobile apps for farmers in regional language

ABSTRACT. Ever since farmers growing crops, raising livestock and caught fish, they always sought for information. In past few decades several research and development initiatives in agriculture space put the farming in fast track. But those new agriculture inventions are not reaching the needy farmers due to information gap. Due to information gap, agriculture in developing country like India become "Input intensive" but NOT "knowledge intensive". As a result, agriculture becoming not profitable and farmers losing interest in farming and migrating to urban area in search of jobs. This polarization leading to several social problems. This problem remain persistent until agriculture become "Knowledge intensive" for which information is a key. The biggest conventional and historical barrier for agriculture information dissemination are “Illiteracy” and “Diversity” in developing country like India and other Asian and African countries. With the increased penetration of smartphones even in rural area, there is a huge potential to use their phones as primary tool of intervention to deliver the knowledge/information in constructive and simple manner. Jayalaxmi agrotech, a start-up impact first social entrepreneurship firm from rural India, developed several crop specific android mobile apps to address information gap. These application are built to break the literacy barrier and deliver the information in regional language with full of audio visuals. Suite of apps for agriculture, horticulture and animal husbandry are already been developed and released for farmers in multiple languages. Once installed, these apps can work offline without internet. These apps spread mainly through farmer to farmer multiplier effect without depending on internet. Within last few months since the launch, apps reached 15,000 individual farmers and impacted lives of at least 50,000 farmers. Its ability to provide end-to-end information in regional language with audio visuals without internet is key success factor. In south Indian states, today these apps are spreading and reaching one new farmer every 8 to 10 minutes and expected to reach one new farmer evey minute in near future. As a result, farmer adopted better “Package of practices” with the help of our mobile apps, which in turn reduced the excessive use of pesticides and fertilizers. As per the preliminary survey conducted on our app users, overall agri-input cost cut down by 14% and productivity increased by 17% due to adoption of mobile apps in agriculture.

Watch demo at: https://www.youtube.com/watch?v=UA4_xCK0mLY

11:00-12:30 Session 10I: WG21 - Urban forestry, Green infrastructure

CHAIR: *Michela Conigliaro*

LOCATION: Aula 21

11:00 *Atila Gul*, *Yilmaz Catal*, *Erkan Polat*, *Omer Faruk Uzun*, *Emine Keles* and *Omer Kamil Orucu*

The important of Urban Trees and Information Systems (UTIS) Model Approach

ABSTRACT. The urban open and green spaces may have a number of environmental, economic and socio-cultural values. Environmental values include; Reduction of air pollution and protection of water resources, reduction of harmful influence of sun, wind and temperature, increase in biodiversity. Economic values include; Production of food, fodder, timber and fuel wood, setting for new development, new businesses and jobs, increase in property values. Socio-cultural values; Improved health and possibilities for recreation, pleasant living environments and stages for social activities, keeping people in contact with nature, education and training. Trees in cities are widely regarded as an integral component of urban infrastructure. The urban green mosaic encompasses a wide range of habitats that may be natural, semi-natural and entirely artificial. In nowadays, as a result of multi-directional contributions and services of urban trees and forests in open and green spaces, the usage of urban trees is gradually increased in urban areas. For the sustainable of the trees in and around of city, it should require conscious and to holistic planning and management for urban trees. Therefore, the inventory and database of urban trees or forests should be made as scientific and technical. The existing trees within the city are regarded as most important natural data of urban information system. To determine to structural, functional and economic values of the urban trees are needed to reliable and a systematic database. In this paper, it will be explained a GIS-based Urban Trees Information Systems (UTIS) model about urban trees in Turkey–Isparta city. This model will be introduced about inventory record, storage, query processing and also online sharing of data of urban trees in the ArcGIS. This model can also be integrated into urban information systems through activities such as urban management.

11:15 *Anna Laura Palazzo* and *Biancamaria Rizzo*

The Aniene River. A Greenway between Roma and Tivoli

ABSTRACT. All over Europe, open spaces, varying in dimension and location, are perceived as unresolved places, expelled or excluded by institutional transformation rules. Notably, the condition of “urban fringe” involves ever larger parts of territory, where suburbs are melted with agricultural and natural landscapes. Yet, regardless of their current conditions, open spaces remain a major stake in urban ecology, in order to promote the continuity of the so-called “Green Infrastructures”, to enhance biodiversity and to cope with the negative effects of the climate change. Tivoli, a pre-roman settlement in the eastern hinterland of Rome, is well renowned for its sulphur mineral water springs and for the exploitation of water resources in the impressive sceneries for the gardens of Villa Adriana (II Century) and Villa d'Este (XVI Century). The City is currently on the UNESCO list of World Heritage Sites. The long history of mutual interdependencies between Roma and Tivoli is physically marked by the Tiburtina consular road and economically by a series of long lasting trade exchanges: Tivoli's hills have always been producing high quality olive’s oil, quarries along the Aniene River have been providing a particular white calcium-carbonate rock – the “travertino” - used in building most Roman monuments. The water power of the Aniene falls has been used since the early industrial period for paper mills and ironworks factories. From the Twentieth Century onwards, the river has partly provided for the Capital’s electricity needs. Nowadays, many plants along the Aniene River are abandoned, and brownfields

still holding landmarks of industrial archeology lie among illegal settlements, large retail boxes and warehouses. “Aniene as a Greenway” allows for an inclusive notion of landscape addressing the manifold dimensions of open space, on the backdrop of the new “Metropolitan City” that will be provided with extra powers to steer the inter-municipal strategic planning process. Several issues and scales are at stake in the River Park spatial strategy: urban agriculture, urban greening and afforestation tools, but also re-use and re-cycle schemes and small-scale solutions able to improve urban quality.

11:30 *Anna Chiesura*, *Marzia Mirabile* and *Silvia Brini*

URBAN GREEN AND URBAN AGRICULTURE: A NATURAL ALLIANCE

SPEAKER: *Anna Chiesura*

ABSTRACT. When speaking about green infrastructures of contemporary cities, reference is most commonly made to urban green areas in their diverse forms and typologies (parks, gardens, playgrounds, street trees, green walls etc.). Less frequent is to include in the green patchwork of urban and periurban open vegetated land also agricultural areas, despite their vital role as multifunctional resources for sustainable cities. ISPRA’s project “The Quality of Urban Environment” monitors since 2004 the state of urban green areas in major Italian cities through a series of indicators, with the aim to better understand the great diversity of natural and semi-natural areas present in cities so that their services and benefits to human societies can be better accounted for. The paper will present some of the data published in the Xth edition of the ISPRA Report where indicators on urban agricultural areas for 73 Italian cities are published for the first time, with the aim to better represent the biodiversity of urban green components. Data reveal - among other - that agricultural areas are a fundamental component of the urban green infrastructures and that, despite increasing urbanization, they still cover a significant part of municipal area in some cities, mainly in South Italy, where on the contrary green is often lacking. Moreover, they often appear to have high naturalist values: many of them are in fact included in natural protected areas and/or in the Natura 2000 network. It is therefore argued that when monitoring green infrastructure account should be taken also of agricultural areas and that urban/spatial planning should maintain vital landscape connections between them so that they can be mutually supportive resources and – as such – continue providing their valuable environmental and socio-economic services to an increasingly urbanized societies.

11:45 *Minelli Alberto* and *Pasini Ilaria*

Urban Forests in Senigallia: a project from Green Masterplan

ABSTRACT. The town of Senigallia in Marche region (Italy) has instructed Agricultural Department of Bologna to draft a Green Masterplan of the city to increase the value of green spaces, connect them each other and improve the quality of people life. The Green Masteplan has been approved in 2010 and after this year, many projects have been proposed. This article wants to describe the project of two urban forests that have been proposed to reduce the CO2 released from traffic after the extension of highway that cross the city and to give people two big green areas where spend the journey. The choice of species, the planting pattern and the breadth of surfaces want to optimize the

sequestration of CO2 and reduce the air and acoustic pollution.

11:00-12:30 Session 10J: WG25 - Postharvest Aspects of Local Food Supply Chains of Urban Centres

CHAIRS: *Jorge Fonseca*, *Allison Loconto* and *Tanya Stathers*

LOCATION: Aula 7

11:00 *Jorge Fonseca* and *Dalia Mattioni*

Scrutinizing Visual Quality Assessment of Fresh Produce as an Entry Point toward Strengthening Local Food Systems

ABSTRACT. Contribution of local fresh horticultural foodsystems to a sustainable society is vastly recognized. However, the activity continues to be limited to a niche market in many places, particularly in high-income economies, or it is challenged in lower income economies with the rise of high-quality standard market outlets (e.g. grocery stores). In this study we hypothesize one of the most significant steps toward promoting local food systems is through both analyzing consumer's demands and revisiting mandatory/ voluntary guidelines on cosmetic defects of food.The objective of this study is toprovide a holistic analysis to whether"blemished" fresh produce entering the food supply chains carry food safety risk or rather opportunities to promote local food systems.

This work was conducted studying various sources of information, including: i) quality standards (both voluntary and mandatory); ii) analysis of range of characteristics prevalent in assessing visual quality of selected fruit and vegetables along the supply chain; iii) policies and regulations of different food subsectors.The results demonstrated that standards for grades of fruit and vegetable (i.e. CODEX, USDA, private) indirectly exclude local food producers. For examples varieties (e.g. apples prone to high incidence of russeting) that are prevalent in local production are marginalized. Moreover, terminology used by current standards to describe physical defects is generally confusingwhich has influenced the way to assess produce by actors in the supply chain, as well as consumers. Furthermore, foodborne outbreaks associated to local production examined showed no clear evidence local produce carry different risk than those entering markets aiming at "un-blemished" product.

This work ends with a discussion of the implications of consumer demand for local food systems and how a better understanding of field -physical/pest damaged fruit and vegetables and the scientific validation of the relative food safety risk may become an important additional tool toward stimulating consumption of local produce.

11:15 *Allison Loconto* and *Marcello Vicovaro*

Constructing sustainable 'qualities' for local food systems in developing countries: The case of the Songhai Center in Benin.

SPEAKER: *Allison Loconto*

ABSTRACT. How to develop sustainable local food systems in developing countries is a question that is increasingly being asked by policy-makers, academics and practitioners alike. A number of approaches have been developed to understand how these systems can be analyzed as well as how they might be implemented (Allaire 2010; Goodman, DuPuis and Goodman 2012; Loconto 2010; Loconto, Poisot and Santacoloma Forthcoming 2015). What is clear is that post-harvest concerns, particularly in terms of quality (in its multiple forms), are both highly important and often down-played in the analysis of local food systems. Qualities, specifically safety and sustainability as semi-credence qualities, are often the key values that an emerging group of urban consumers are seeking. The ability of actors in local food systems to provide consistent quantities of food products that meet these quality standards has not been consistently analyzed in developing country contexts, nor has it been theorized sufficiently in terms of the institutions that are necessary for ensuring these qualities. This paper seeks to fill this gap. We do this by examining the construction of a sustainable local food system through a single case study of the Songhai Centre in Benin Republic. This center serves as a multi-actor innovation platform that organizes the training of farmers and agri-business entrepreneurs, the processing of their products, the logistics of sourcing from the network of ex-students, and the sales of sustainable inputs, food and agricultural products, agro-tourism services, appropriate technologies and by-products from the sustainable agriculture production. These diverse components of the system are organized and coordinated through the processing facilities and services that are located in the country's capital, Porto Novo. Between 2013 and 2015, the authors have been engaged in dialogue with the Songhai Centre and have been analyzing the value chains, the role of different types of actors and the construction of institutions (quality control systems, training and political support) that enable the Songhai Centre to effectively construct a diverse local food system that is based on the provision of food and other agricultural products and services that meet these two quality requirements. Following a descriptive analysis of these different components, we reflect upon the role of post-harvest aspects in contributing 'value' to local food systems in developing countries.

11:30 *Tanya Stathers*, *Richard Lamboll*, *Emma Liwenga*, *Miriam Joshua*, *Brown Gwambene*, *Elirehema Swai*, *Alphonce Katunzi*, *Lebai Nsemwa*,*Amos Majule* and *Felistus Chipungu*

Changing aspects of urban postharvest systems in Tanzania and Malawi

ABSTRACT. The Sub-Saharan Africa (SSA) population is projected to double to 2.1 billion by 2050, and more than half the people will be urban-based. Alongside this, are other context-specific and dynamic drivers of change such as climatic change, communication technologies, policies, markets, and globalisation. The food and agricultural systems supporting these urban communities are to varying degrees adapting to these changes.

Situation analyses revealed no official assessment of household food security in urban centres in Tanzania and Malawi. Many key stakeholders equated availability of food in markets with urban household food security. However, low income urban households are especially vulnerable to food insecurity because of their low purchasing power, dependency on rural production, and the loss of nearby farming land to urbanisation. Higher income households have greater opportunity to bulk buy foods when prices are

low, travel to source food, and produce food in urban fields.

Since the 1960s, in urban areas of Central Tanzania, changes in staple foods systems include a shift from women manually grinding pearl millet or sorghum to now taking maize or pearl millet to milling machines to produce flour to make a stiff porridge. Increasingly people purchase maize flour, often opting for the finest, whitest flour made from completely dehulled grain. The use of locally grown and processed sunflower oil has increased. As has the diversity of foods, with additions including plantains, Irish potatoes, fish, baobab fruits and soyabean. This was attributed to incoming tribes and their food cultures, nutrition education and improved incomes. Traditional sorghum and millet grains could be stored without insect damage for 2-3 years and easily bartered making them important in food security strategies. The increasingly popular maize, even if treated with pesticide, rarely stores beyond 9 months, but can be used to pay school fees etc. Food storage systems have also changed. In Malawi, processed cassava products are becoming more important for the urban poor.

SSA postharvest cereal losses are estimated at 13.5%, equivalent to the annual caloric requirement of 48 million people, or an annual loss of US$4 billion. As populations grow and climate change makes crop production increasingly difficult and variable, the need to reduce losses of this increasingly valuable harvest only intensifies. Key strategies for enabling agri-food innovation systems to support postharvest loss reduction are discussed. At national level, food reserves are back on the agendas of many African governments in response to these multi-faceted drivers of change.

12:30-14:00 Lunch

15:00-16:30 Session 11: Round table Food security in an urbanizing society

Moderator: Makiko Taguchi. Participants: * Walter Belik (Brasil) * Erik Mathijs (Belgium) * Roberta Sonnino (UK) * Juliet Kiguli (Uganda) * Ye Jingzhong (China) * Richard Le Heron (New Zealand)
CHAIR:

Gianluca Brunori

LOCATION: Aula Magna (Great Hall 1)

16:30-17:30 Session 12: Prizegiving speech: International Award "Revolutionary solutions for local food systems" (free admission)

Introductory speech: * Pierre Rabhi (France) on Research, civil society and policies, their role in promoting innovation and its (rapid) spread. * Paola Scarpellini (Italy) Innovation brokerage and new paths for change: spaces of actions and barriers. Prizegiving speech: * Winners AiCARE Award 2015
CHAIR: *Francesco Di Iacovo*

LOCATION: Aula Magna (Great Hall 1)

18:00-19:00 Aperitif and Prize for the best scientific papers

PROGRAM FOR THURSDAY, SEPTEMBER 17TH

09:00-12:00 Session 13A: Debat: Food in the city in the International context. Institutions, organizations and other protagonists (free admission)

* Maurizio Martina (Italian Minister of Agriculture) *to be confirmed.*

* Gianluca Brunori (Scientific Committee) The Rome's 2nd International Conference on Agriculture in an Urbanizing Society: emerging issues, questions and themes. Round table, participants: * Marta Leonori (Assessore Roma Produttiva e Città Metropolitana) * Andrea Calori (Milan Food Policy Team) * Luca Ruini (BCFN Food For Sustainable Growth) * Claudio Mazzini (Coop Italia) *to be confirmed* * Farmers' Associations (Vincenzo Vizioli - AIAB Associazione Italiana per l'Agricoltura Biologica, Francesca Rocchi - Slow Food Italia, Secondo Scanavino - CIA Confederazione Italiana Agricoltori *to be confirmed,* David Granieri - Coldiretti), * International experiences (Camilo Lozano Torres - Universitá di Rio Grande do Sul Brasil, Heidrun Moschitz - FIBL Switzerland, Wayne Roberts - Chair Toronto Food Policy Council from 2000-2010).

* Nicola Zingaretti (President of Lazio Region)

CHAIR: *Francesco Di Iacovo*

LOCATION: Aula Magna (Great Hall 1)

09:00-14:30 Session 13B: EXCURSIONS

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