



Second International Conference on

AGRICULTURE IN AN URBANIZING SOCIETY

Reconnecting Agriculture and Food Chains to Societal Needs

14 - 17 SEPTEMBER 2015 | ROME | ITALY

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Contents

Contents	2
Conference theme.....	11
Conference Chair opening speech.....	12
Conference Programme	13
Proceedings collected by Working group	16
WG1 - Connecting local and global food systems and reducing footprint in food provisioning and use.....	17
Connecting local and global food for sustainable solutions in public procurement.....	18
Resources uses objectives and the constitutional processes in SPGs	20
Sustainable food supply chains: A social-ecological analysis of the food supply in Viennese Schools.....	22
An education project to promote healthy and sustainable food consumption. Barilla's "Si.Mediterraneo" Project	24
Assessing the degree of localness of food value chains	26
The irresistible rise of craft breweries in Italy: the case of agricultural craft breweries	28
Global, Regional and Local food chains: an assessment of sustainability performance of wheat-to-bread chains across Italy and the UK	30
Promoting sustainable durum wheat production in Italy: the Barilla Sustainable Farming project.....	32
The comparative analysis of social performance of global and local berry supply chains	34
WG2 - Short food supply chains (regional products; farmers' markets; collective farmers' marketing initiatives; alternative food networks; CSA)	37
Short supply chain and shared value models in agriculture.....	38
Sustainable food systems: Community Supported Agriculture a social-ecological analysis.....	40
The mis-interconnection: when peasant farming encounters modernized consumption culture	42
East Asian 'model' of local food?: key features and implications	44
The tendencies on the Brazilian local food movements: an analysis of the Collaborative Purchasing Systems.....	46
Solidarity Purchase Groups, the aggregation model for local food distribution. First results of a direct study in Marche.....	48
An urban CSA in Ireland: model description, relationship with the agri-food industry and introductory exploration of its impact on the community	50
How to find producers and consumers interested in Community Supported Agriculture in Sweden	52
WG3 - Economic impact at the farm level	55
Comparison of UA business models – empiric study on Italian and German case studies	56
Short chain approach and family farms: from acknowledgement to capacity building. The case of Alessandria Province.....	58
Explaining direct sale as a prevailing marketing strategy: data from Tuscany farmers.....	60
An evaluation of investment in Agritourism: a case study of Puglia Region	62
Options for promoting farm cooperation in water use and its economic impact.....	64
Urban Agriculture in Metropolis Ruhr characteristic business models.....	66
Does the multifunctional agriculture contribute to the farm family income? An analysis based on FADN survey.....	68
Study of Farmers Adaptation to Urbanization and Their Capability to Develop Multifunctional Peri-urban Agriculture	70
Agriculture multifunctionality: rhetoric or tool analysis of rural development?	72
WG4 - New business models for multiple value creation	75



Conceptualising an adaptive cycle methodology for entrepreneurial ecosystems: rural reinvention in the Tamar Valley	76
Urban farms adaptation to citizens – The case of Alella wine region within Barcelona Metropolitan Region	78
Rural development and new business models: Production Chain Integrated Plans Calabria Region cases.....	80
Bridging the gap – education and farming in specialised kindergarten farms.....	82
Business models in Urban Agriculture - answering cost pressures and societal needs.....	84
New entrepreneurial skills in the peri-urban agriculture of Italy	86
Urban Agriculture – it is a business! Business models in Urban Agriculture	88
The social farmer as a shared value creator: creating new business models with the Impact Driven Business Modelling tool	90
WG5 – WG16 Entrepreneurial skills and competences with Focus on Gender aspects.....	93
Between individual and collective entrepreneurship: how to puzzle out rural entrepreneurship?	95
The LEADER Initiative in Apulia Region: a way for smarting the rural-urban relationships?	97
Relationships between Regional Agricultural Innovation Systems and Entrepreneurial Ecosystems: An Empirical Analysis.....	99
Local cultures and global discourses in emerging rurality	101
Barriers and opportunities for entrepreneurial wetland farmers in Zambia	103
Feminization of farming in the Himalayas – Are women to become the new farm managers or just exhausted agricultural laborers?	105
Women Empowerment in Agricultural Extension, Victoria, Laguna, Philippines	107
WG6 - Transition approaches.....	110
Dynamics of transitions: differentiated analysis and interventions for different institutional frameworks	111
Transition: enhancing collective action over diverse stakeholder communities.....	113
Chilean Agricultural Entrepreneurs and Free Trade Agreements (FTA)	115
The social construction of space in urban agriculture	117
Importance of action labs to transform the agri-food system towards sustainability.....	119
Regional Open Innovation Roadmapping (ROIR) - Application and evaluation of a participatory approach that integrates stakeholders into the development of regional innovations.....	121
Animal welfare driven systems innovation in the pork chain	123
Transition pathways in participatory plant breeding programs: a farm-level network analysis	125
WG7 - Regional branding and local agrifood systems: strategies, governance, and impacts.....	128
The branding process as opportunity to trigger integrated strategies for rural development: the experimentation of "Paesaggi italiani - ITEM" in northeast Italy	129
Vetrina Toscana: from regional trade brand to regional umbrella brand	131
Multi-scaled, layered agri-food branding	133
A comparison between different types of Regional Branding Initiatives	135
Impact of Regional Collective Trademarks on Farms: Japanese Experiences	137
PAT (Traditional Food Products) which future?.....	139
Behind local cheese: comparing Slow Food Presidia and GIs governance systems	141
Conciliating public and private initiatives, local and international market development. The case of Ziama-Macenta Robusta Coffee in Guinea	143
Territorial impact assessment on local products from a socio-economic-cultural point of view. The Provola of Madonie case	145
The 'Piadina Romagnola' mess. A new legal case for an old question: what is a GI?.....	147
Lessons learned on GI vs territorial label: the case of Kopaonik ajvar, Serbia	149



Geographical Indications and Trademarks in Vietnam: confusion or real difference?	151
Geographical indications economic impacts: a methodology to assess "well established GIs"	153
Geographical Indication as a tool to strengthen sociotechnical quality niches. The case of Corsican Clementine	155
Can Localised Agri-Food System be a relevant policy to cope with market liberalisation? Evidence from France dairy products market	157
Consumers' buying intention and willingness to pay for PDO and PGI products in large retail chains. Results from a direct survey in Italy	159
Impact of Spanish big retailers strategies on Protected Designations of Origin of extra virgin olive ...	161
Branding products initiatives in LDCs through GIs: the case of the Kampot Pepper in Cambodia and the Hareenna Coffe in Ethiopia.....	163
Essential Packaging for Appellations of Origin	165
Questioning on collective action to qualify a GI: the case of Picinisco PDO cheese	167
The public policies in favor of Geographical Indications in Morocco: Mental models, appropriation by the actors, and impact on innovation and local dynamics.....	169
Stages of innovation for adopting differential quality in olive-oil geographical indications	171
Collective action milieus for registering coffee GIs from Colombia and Thailand.....	173
WG8 - Food systems and spatial planning. Towards a reconnection?	176
Sustainable Productive Landscape in the Amsterdam Metropolitan Area. Towards analysis on different scales	177
Towards fundamental new urban planning for productive cities: the quest for space.....	179
Characterizing peri-urban farming spaces. A methodology for urban planning.....	181
Szentendre Eco Island in the Agglomeration of Budapest	183
Diagnosis and Strategies for Peri-Urban Agriculture in Beirut, Lebanon	185
Is a combination of crop and livestock production profitable and supporting sustainability at regional level?	187
Justice issues in farmland protection policies on the urban fringe	189
New forms of agricultures in the sprawl as vector of "productive landscape".....	191
Land use and balance between the cities and the country, the case of Lombardia.....	193
WG9 - Land-use transformations	196
The impoverishment of agriculture in the rural-urban fringe: an analysis through administrative data	197
Urban Spatial Scenario Design Model: The impact of urban growth on Peri-urban agriculture for the Surrounding Towns of Addis Ababa	199
Land use patterns and changes in periurban areas.....	201
Adapting Peri-urban Planning to a Post-Productivist Landscape	203
From subsistence to professional farming: the change of land use and cropping pattern in Northern China	205
Food is Territory. Traditions, Landscapes and Olive Economies in Lazio and Abruzzo.....	207
Globalization of Food and Land Changes: Re-thinking Food Security Strategies in an Inter-connected World	209
"Contesting climate change policies". Actors, climate change and land-use transformations in the south-coast region of Jalisco state in western Mexico	211
Assessing the effectiveness of alternative designs of greening measures. The case of Tuscany region.....	213
Territorial-dynamics information and assessment potential in addressing rural development and planning.....	215
Changing Landscapes and Lifescapes: The Transformation of Rural Communities, Talisay Batangas, Philippines	217



Analysis of spatial patterns and driving factors of farmland loss	219
WG10 - Urban agriculture I. Urban agriculture and Urban Food Strategies: Processes, Planning, Policies and Potential to Reconnect Society and Food	222
The Urban Agriculture Circle: A Methodology to Understand the Multi-functionality of Urban Agriculture	223
The economics of urban gardening in three EU cities - examples from London, Ljubljana and Milan	225
Urban Agriculture in Bangladesh: Current Scenario and Policy Options.....	227
There is no urban food policy. Frames of food in Swiss policies	229
Feeding spatial planning. Rethinking agriculture as an integral part of the (policies of) city/region....	231
Building local food governance: the case of the Food Plan of the Pisa province.....	233
WG11 - Urban agriculture II. Grass-root initiatives and community gardens	236
New urban gardening trends in Prague: community and ecosystem services on stage.....	237
How the rural is experienced in the city: the recent regulated urban agriculture-movement in Portugal	239
There is not such a thing as "an" urban garden: motivations and politics of gardening in Barcelona.....	241
Agroecology in the city: urban gardens for an agroecological transition.....	243
Finding spaces for Urban Agriculture to combat food challenges in Dhaka City	245
The contribution of community food gardens to food sovereignty in Johannesburg, South Africa: a look at access and empowerment	247
Sustainable management of green space in the city-region of Vigo, Galicia (Spain)	249
Grassroots versus business oriented short food chain models - competitors or partners? Evidences from Rome and Zurich.....	251
Bricolage, local food and sustainable urban development	253
Urban agriculture in Pune, India: Practice, spatial context and community interaction.....	255
What can university community gardens offer an 'alternative' food system?	257
Comparative study on urban community gardening in Central Eastern Europe	259
Garden as an edible place in city landscape.....	261
Introducing composting in a community	263
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	266
Europe-wide spotlights on Urban Agriculture's economic and other societal benefits	268
The Urban Agriculture, a New and Soft Solution for the Rurban Areas.....	270
Food self-provisioning between tradition and alternative - lessons from allotment gardens in Brno, Czech Republic	272
Healing garden or gardening? Data from the Perceived Restorativeness Scale	274
Sustainable urban agriculture in Quito, Ecuador.....	276
Non-market food provisioning via home gardens and communal sharing in <i>Satoyama</i> production landscapes, Japan	278
Motivations and environmental practices of urban gardeners - the cases of Ljubljana, London and Milan	280
Food Production in a highly urbanized environment: the case of Singapore	282
Turning urban waste into an economic asset for urban and peri-urban farming in Sri Lanka.....	284
Involvement in organic urban agriculture: enabling further steps towards sustainability	286
Urban gardens in the city in crisis. Insights from Sevilla (Spain)	288
Agricultural Waste Utilisation Strategies and Demand for Urban Waste Compost: Evidence from Smallholder Farmers in Ethiopia	290



WG13 - Care Farming/Social Farming in more resilient societies	293
Research-based evidence of gardening as a physical activity for health.....	294
Community resilience through urban agriculture: the role of volunteers in horticultural therapy	296
Social farming fostered by microcredit: the case of Italy	298
Social franchising and social farming, for promoting the co-production of knowledge and values: the IBF case	300
The social farmer as a shared value creator: creating new business models with the Impact Driven Business Modelling tool	302
A horticultural therapy program using hydroponics for improving work adjustment skills in students with mental retardation	304
Stagio...cando con Network Contacts. Stare bene insieme nelle diverse stagioni della vita. Can be resilience a key issue for care/social farming validation?	306
Building a typology for the Green Care services in Finland.....	308
Social farming and social innovation in the perspective of new rural policies	310
Social farming practices to promote social-ecological sustainability in rural areas	312
The right concept in the wrong place? The Interrelationship between Care Farming and Social Capital.....	314
Social Farming in Catalonia. Rural local development and social integration of people at risk of social exclusion	316
Effectiveness of social farming for people with special needs and mental health challenges: the case of the SoFAB Project in Ireland and Northern Ireland	318
The Social Farm Network for the Promotion of new Relationship Between Agriculture, Economy and Society	320
Social/care farming in the making – Hungarian experiences	322
The role of a territorial network in front of the economic pressures on the French social farming model	324
Social Farming and social protection in developing countries in the perspective of sustainable rural development	326
Analysing Social Farming Initiatives In Developing Countries: A Case Study From The Ivory Coast ...	328
Developing a social farming project in Suriname.....	330
WG14 - Rural tourism (agri-tourism) and changing urban demands	332
Consuming the rural idyll through food – analysis of the consumption of rural food-stuffs by urban populations in Portugal.....	333
New tourist experiences in the productive areas of PDO / PGI of rural Tuscany	335
Wine routes for regional tourism development in Italy. A research in Calabria and Friuli Venezia Giulia Regions.....	337
The difficult path of agri-tourism in Portugal	339
Consuming Landscape: an investigation of eco-economic development strategies in rural areas.....	341
Fincas agroturisticas de Nicaragua	343
Pedagogical rural tourism promoting the multifunctionality of agriculture: analysis of three experiences developed in Brazil.....	345
Agritourism and territorial framework in the northern Salento (Apulia region, Italy)	347
The demand for Italian Agritourism.....	349
WG15 - Local arrangements for agricultural ecosystem services: connecting urban populations to their peri-urban landscapes through the ecosystem services of agriculture...	352
Managing Ecosystem Services in the Peri-urban Landscape: An Emergent Paradox.....	353
Strategies for enhancement of ecosystem services of the periurban areas.....	355
Agroecological agriculture and water quality: Sustainable Guarapiranga Project.....	357



Method for assessing environmental services in agricultural metropolitan areas and their degree of protection. The examples of Gallecs Protected Natural area (PNA), el Baix Llobregat Agrarian Park and la Granada-Sant Pere de Riudebitlles	359
Collaborative governance of a peri-urban enclave: how a farm became nature and citizen oriented	361
Towards an agroecological transition in peri-urban agrarian systems in Madrid (Spain)	363
Critical success factors for delivering farmer-managed public goods in Dutch rural areas.....	365
WG17 - Civic agriculture for an urbanizing society: production models, consumption practices and forms of governance	368
Food Self-Provisioning in Hungary	369
Civic Agriculture Experiences in Calabria Region	371
The social construction process of food quality: the case of organic certification in Brazil.....	372
Designing Resilient Citylands through Community Participation.....	374
Self-organisation of CSA in Austria: Transdisciplinarity in Action	376
Public policy for family farming in Brazil: the role of mediators in the reconnection between farmer, food, and community.....	378
Linking governance and embeddedness: a socio-spatial approach to food networks.....	380
Towards a network around civic agriculture in the Province of Pisa	382
Urban food gardening and urban farming: an analysis from a theoretical and empirical perspective.....	384
Peasant Economics in the Twenty-First Century: building a "polis" in the wild	386
Shared and relational activities in civic agriculture: towards a non-individualistic conception of well-being.....	388
WG18 - Society Oriented Farming – working on the balance between market and societal demands.....	391
Society Oriented Farming: Involving society in farm strategies	392
Marriage of convenience between farmer organizations and milk industry, for a more resilient local milk value chain in Niamey.....	394
Society oriented and sustainable agriculture: an emerging paradigm in Québec (Canada)?.....	396
From Good Agricultural and Environmental Condition to a shared responsibility learning platform.....	398
Good Food and Beyond: Food Supply Chains Outcomes and Societal Demands in the Italian Debate.....	400
Brazilian Community-Supported Agriculture initiatives: a preliminary review.....	402
The challenges emerging from the new modes of governance around food	404
WG19 - Food Security: Meanings, Practices and Policies	407
Discourse on food and nutrition security: media analyses in Flanders, Italy and UK	408
Quality, Technology, Sovereignty. Discourses on Food Security in Italy	410
Food security challenges and responses: A comparative analysis of Latvia and Lithuania.....	412
Corporate Food Governance, Financialisation and the Reproduction of Food Security Vulnerabilities	414
The Role Of Food Assistance In High Income Countries: A Critical Literature Review	416
Urban Agriculture in Tanzania and Sustainable Urban Food and Nutritional Security	418
Outlook for the Purchase Food Program (PAA) in one the county of the northeast of Brazil	420
Food and farming meanings: reconnection between producers and consumers in a Brazilian food security policy.....	422
Geographies of urban food commons & justice	424
Counteracting food deserts. The role of street food vending in reinvigorating previously underserved urban spaces	426



Food security and multidimensional linkage between poor urban consumers and nearby agriculture: towards a new definition of food justice.....	428
Les aliments dans la rue et la securite alimentaire des populations urbaines en Afrique sub-saharienne: le cas du Tchad.....	430
Threats for latent exposure to chemical food contaminants: a dilemma of urban agriculture in Uganda.....	432
The contribution of local food systems to healthy diets and sustainable consumption: a case study from the City of Rome	434
Urban-rural linkages and their future: impacts on agriculture, diets and food security.....	436
Good food improves citizens' health	438
New culture of the territory for food security in the Mediterranean region	440
Food insecure households: Perceptions of pastoral and agropastoral communities in the Ugandan cattle corridor	442
Food security of stakeholders from upland to lowland communities, Nagcarlan Laguna, Philippines...	444
Changes in food consumption of urban and rural populations in Poland.....	446
WG20 - Revolutionary solutions for local food systems	449
Short Food Chains as Revolutionary Solution.....	451
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	453
"Garden of Knowledge" - Strategic Project to Support Low Income Families, Braga, Pt.....	455
La Nuova Arca: a new model of community life and civic agriculture.....	457
Multifunctionality in a vegetable garden.....	459
Barikamà: resistance trough food	461
The Food Council of Pisa.....	463
Il Papavero: the butterfly laboratory and the financial strength of solidarity economy	465
Urban Fruit. Fruits and orchards as local practices for new forms of public participation and urban space. The experience in Rome	467
Food education at school "Add a seat at table"	469
The evolution of urban gardens in Puglia into a revolutionary and multifunctional context	471
Innovating lands access conditions to rescue a threatened heritage: the project "Adopt a terrace in the Brenta Valley".....	473
Agroforestry for increasing production, income generation and better environment	475
Enhancing direct access to food for favela residents: how the FoodRoof supports them to grow their own healthy food	477
Bridging "Agriculture Information gap" through ICT tools and use of Mobility, Analytics and Cloud in Agriculture even in the absence of internet.....	479
WG21 - Urban forestry, Green infrastructure.....	482
The importance of Urban Trees and Information Systems (UTIS) Approach	483
The Aniene River. A Greenway between Roma and Tivoli	485
Urban green and urban agriculture: a natural alliance	487
Urban Forests in Senigallia: a project from Green Masterplan	489
WG22 - Food System Transitions: Cities and the Strategic Management of Food Practices....	492
Potentialities of practice-oriented sustainable food planning	493
Urban strategies and practices for agriculture and food: six Mediterranean case studies.....	495
The transition towards sustainable diets. How can urban systems contribute to promoting more sustainable food practices?	497
City Food Policies – five levers of action to foster the necessary paradigm shift in our food system...	499
WG23 - Conceptualising and Assessing City Region Food Systems	502



New forms of agricultures in the sprawl as vector of "productive landscape"

Fulvio Adobati, Maria Felicia Della Valle¹

Abstract – The main focus of the paper is the analysis of the opportunities for new functions that sprawl may serve linked to agricultural network and food system. Urban agriculture in peri-urban zones is considered as one of the strategies to contribute to more resilient urban food system. The policy scientific debates consider its potential co-benefits and contribution to community organisation, city greening, waste management, food chain and food self sufficiency.

In this territorial zones 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 (landscape diversity).

An interesting challenge is defining rules about private back-yard, public green, capable to integrate the planning of urban agriculture as productive landscape of the sprawl.

Keywords – productive landscape, urban sprawl and self sufficiency, participative planning process

INTRODUCTION

The "urban sprawl" or "horizontal city" occupies a considerable part of the urban areas in many parts of the world. By the way, debates on the urban question continue to proliferate and intensify within the social sciences, the planning and design disciplines (Brenner N., Schmid C., 2015). Its contribute to the growth special related to 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.

The phenomenon of sprawl is one of the main drive of change in future scenario linked to a growing population and its food self-sufficiency in peri-urban zones. If we consider the sprawl as a distinctive element characteristic feature of the contemporary city, one of its most peculiar (Secchi, 2015), it should be primarily understood as a process of expansion of the urban way of life in agricultural areas, but not only as physical growth of cities (Lanzani, 2011). The positive effects of urban and peri-urban agriculture and its basic perspectives linked to food production can generally be observed and reflected primarily through the facts that this specific kind of agriculture provides safety and quality food, increases incomes and preserves natural resources and environment. Due to its significant economic, environmental and social impacts, the issue of periurban zones, the peri-urban

agriculture development (as an activity that implies a number of interaction in these areas) and landscape planning are the subject of discussions in many European forums and documents. In order to preserve the peri-urban agricultural zones from the city's constant need for land (for urban growth, industrial and territorial development and infrastructure), some guidelines should be followed: a) applying the instruments for land use and land tenure in peri-urban zones (which will be a result of the instruments of regional and urban planning in the European Union, at national and regional levels); b) reinforcing the principle of subsidiarity (the responsibility of local authorities) at the municipal level planning; c) introducing an obligatory study on the agricultural impact, which will consider all the planned land use changes in periurban zones (EESC, 2004;). In recent years, multifunctional agriculture, multifunctional landscape and multifunctional land use have been a common subject of scientific research and programmes (PURPLE 2012, SUBURBFOOD 2013) In most cases, researchers were focusing on developing strategies concerning the preservation of multifunctional urban agriculture and diversification activities on multifunctional farms, but less on the impacts of multifunctional use of agricultural land (Živanović Miljković, 2012).

If new forms of farming are emerging and the systems left behind after the modernisation of agriculture are re-emerging, the agricultural development in peri-urban areas remains largely unknown. There are several peri-urban dynamics that are expressed at different organisational levels. The differentiation of peri-urban areas is an intrinsic quality that zoning statistics or sectorial developmental models do not fully explain. One of this lack is related to the food self-sufficiency potential of growing areas and mapping the food system at city and regional level.

The project presented here aimed to evaluate the productive potentiality of backyard gardens in the area of Great Bergamo and their connections with food system. The aim is to build a sustainable agro landscape evolution scenario in a peri-urban area using an integrated framework designed to combine social demands for multifunctionality in agriculture and define efficient as a function of market and nonmarket net benefits at the landscape level.

STUDY CASE AND METHODOLOGY

Bergamo, in Milan urban region, represents a relevant example for green infrastructure, linkage between urban and periurban area. On the other hand low density areas have similar characteristics to Milan urban region.

Significant and growing are the initiatives of urban horticulture, especially related to the schools as school gardens program "horticulture and gardens for schools that grow: grow projects and sow knowledge" which

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has received recognition for Expo 2015. With a view to developing a system of food the educational project "I think local, I eat global" active from 2011 connects the canteens-drainer tics associated with local producers Association in farmers Coldiretti. It also keeps track of capillary diffusion of fair trade groups, over seventy gathered in a provincial network. Despite the growing of multifunctional agriculture, there remain some critical factors: agricultural land can be used are limited, land consumption above average, fragmentation and lack of coloration in agriculture, lack of coordination rolement of local institutions.

The methodological framework consists of four main steps. In step one, we have identified low density fields such as codified in database land use DUSAF4-2012 (Lombardy Region). In step two we have calculated the media incidence of growing green areas through model zones only in dwellings backyard, (excluding other green areas). The result of analysis has given a percentage of growing green available of 42%. In step three we have extended the average to the Great Bergamo area (49 municipalities, 475,559 inhabitants, land area 34,150 ha, low density area 4,650 ha) for what concerne low density zones. Growing areas so calculated amounts to 1,953 hectares. The model-based exploration, involving allocation of the growing horticultural in the landscape, has given a large set of landscape scenario. We have different patterns that generate set of alternative landscapes, with productive and social/leisure activities integrated with existing green open spaces.

CONCLUSIONS

Peri-urban areas are often characterized by overlapping of different land uses as a result of competing interests. In Bergamo they need to be reconnected. The necessity to re-establish the balance between urban areas sometimes have problems to maintain sustainable multifunctional use of agricultural land and alternative food networks as desired by population. On other hand green spaces in peri-urban zones are environments with important recreational and leisure activities and that they thus provide beneficial goods for urban community (so called "ecosystem goods" or "quality of life" factors – biodiversity, air quality, water, health, recreation), represents a green social infrastructure development. Referring to the role of spatial planning interesting the recommendation proposed by the American Planning Association: "(...) *land use planners may use growth management strategies to preserve farm and ranch land, or recommend commercial districts where restaurants and grocery stores are located, or suggest policies to encourage community gardens and other ways of growing food in communities. Economic development planners may support the revitalization of main streets with traditional mom-and-pop grocery stores, or*

devise strategies to attract food processing plants to industrial zones. Transportation planners may create transit routes connecting low-income neighborhoods with supermarkets, and environmental planners may provide guidance to farmers to avoid adverse impacts on lakes and rivers. This policy guide seeks to strengthen connections between traditional planning and the emerging field of community and regional food planning (...) (APA, 2007, p. 2).

In this perspective agriculture and green spaces in peri-urban areas should have the goals which will make the whole zone sustainable; it is necessary to promote the concept of multifunctionality in the planning process of peri-urban zones, as the basic concept which supports the sustainable development of numerous interactions in these zones.

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