





Joint Training School on Urban Food Production

COST actions TU1201 and TD1106

21-24 October 2014

Urban Planning Institute of the Republic of Slovenia, Ljubljana, Slovenia









COST Actions Urban Allotment Gardens TU1201 and Urban Agriculture Europe TD1106

Documentation of Joint Training School on Urban Food Production

Ljubljana, 21-24 October 2014

Partners of Joint Training School on Urban Food Production:

COST Action TU 1201 chaired by **Runrid Fox-Kaemper**, Dipl.-Ing. Architect, Head of Research Group "Built Environment", **ILS Research Institute for Regional and Urban Development gGmbH**, Office Aachen, Germany – Grant holder of the JTS.

COST Action TD 1106 Urban Agriculture Europe, chaired by Prof. Dr.-Ing. **Frank Lohrberg**, RWTH Aachen University, Aachen, Germany

Urban Planning Institute of the Republic of Slovenia represented by **Ina Šuklje Erjavec**, M.Sc of landscape architecture as Local organizer of the Joint Traning School.

Report prepared by

Mag. Ina Šuklje Erjavec Jana Kozamernik

Photography

Jana Kozamernik Andrej Erjavec Maja Simoneti

Illustrations used are from different resources (individual authors – tutors and participants - workshops groups).

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December 2014







Report on Joint Training School on Urban Food Production

Ljubljana Joint Training School on Urban Food Production was organized by Urban Planning Institute of the Republic of Slovenia together with the COST Actions TU1201 (Urban Allotment Gardens) and TD1106 (Urban Agriculture Europe). It was arranged for Students (at master or PhD level) and early stage researchers (who are in the early phase of their career with at least PhD degree and not more than 8 year work experience after graduation). The joint training school has linked knowledge, work and experience gathered from two COST Actions considering urban food production.

All participants actively participated in 9 workshops on different research areas (planning and policy, sociology, ecology, urban design): Walk Through Urban Gardens, Understanding Ecological Food Growing, Understanding the Site, Environmental Aspects of Urban Food Production, Social Aspects of Urban Food Production, Economic Aspects of Urban Food Production, Comprehensive Development of Urban Food Production, Designing Urban Food Production?, Designing Planning Processes for Urban Food Production, Different Levels of Governance Regimes and Policies.

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Tutors and participants of Joint Training School on Urban Food Production

a. Tutors and speakers

1. Mag. Ina Šuklje Erjavec

Landscape architect, Urban Planning Institute of the Republic of Slovenia, Ljubljana, Slovenia; as tutor, speaker and organizer of JTS in Ljubljana
Workshop 7: DESIGNING URBAN FOOD PRODUCTION?

2. Dr. Andrew Adam-Bradford

Geographer, Horn of Africa Unit - Human Relief Foundation, United Kingdom; as tutor and speaker - Workshop 9: DIFFERENT LEVELS OF GOVERNANCE REGIMES AND POLICIES

3. Dr. Luke Beesly

The Hutton Institute, United Kingdom; as tutor and speaker - Workshop 3: ENVIRONMENTAL ASPECTS OF URBAN FOOD PRODUCTION (soil survey and evaluation)

4. Dr. Paulo Brito da Luz

National Institute of Agrarian and Veterinary Research, Lisbon, Portugal; as tutor and speaker - Workshop 3: ENVIRONMENTAL ASPECTS OF URBAN FOOD PRODUCTION (irrigation, agro-environmental indicators)

5. Nataša Bučar Draksler

Landscape architect, private allotment gardens organizer, NGO/associations supporting urban gardening in Slovenia MULE http://www.srce-me-povezuje.si/drustvo-mule and PRIDELAJ.SI http://pridelaj.si/, Slovenia; as tutor and speaker - Workshop 2: UNDERSTANDING ECOLOGICAL FOOD GROWING

6. Dr. Majda Čerič Istenič

Professor of rural sociology at Biotechnical faculty, University of Ljubljana, Slovenia; as speaker - Workshop 4: SOCIAL ASPECTS OF URBAN FOOD PRODUCTION

7. Andrej Erjavec

Institute of quality of life, Ljubljana, Slovenia; as tutor and speaker - Workshop 7: DESIGNING URBAN FOOD PRODUCTION?







8. Dr. Darja Fišer

Organizer of the national crops2swap movement and gardening festival Chelsea Fringe Ljubljana, Slovenia; as tutor and speaker - Workshop 1: WALK THROUGH URBAN GARDENS

9. Dr. Matjaž Glavan

Assistant Professor for GIS systems in agriculture at the Biotechnical Faculty,
University of Ljubljana, Slovenia; as speaker - Workshop 5: ECONOMIC ASPECTS OF
URBAN FOOD PRODUCTION

10. Dr. Maria Partalidou

Lecturer in Rural Sociology, Aristotle University of Thessaloniki, School of Agriculture, Department of Agricultural Economics, Thessaloniki, Greece; as tutor and speaker - Workshop 4: SOCIAL ASPECTS OF URBAN FOOD PRODUCTION

11. Dr. Marina Pintar

Professor of agricultural land use planning at the Biotechnical Faculty, University of Ljubljana, Slovenia; as speaker - Workshop 5: ECONOMIC ASPECTS OF URBAN FOOD PRODUCTION

12. Mag. Maja Simoneti

Landscape architect, urban planning policies, Institute for Spatial Policies/Ljubljana Urban Planning Institute, Ljubljana, Slovenia; as tutor and speaker - Workshop 1: WALK THROUGH URBAN GARDENS

13. Martin Sondermann

Geographer, Leibniz University Hannover, Institute of Environmental Planning,
Germany; as tutor and speaker - Workshop 8: DESIGNING PLANNING PROCESSES FOR
URBAN FOOD PRODUCTION

Dr. Rozalija Cvejić

Research Assistant in environmental planning, Department of agronomy, Biotechnical faculty, University of Ljubljana, Slovenia; *as participant and tutor* - Workshop 6: COMPREHENSIVE DEVELOPMENT OF URBAN FOOD PRODUCTION

Mojca Nastran

Research Assistant at the Forestry Department of the Biotechnical Faculty, University of Ljubljana, Slovenia; *as participant and tutor* - *Workshop 6: COMPREHENSIVE DEVELOPMENT OF URBAN FOOD PRODUCTION*







b. Participants

1. Ivana Blagojević, Serbia

Faculty of Agriculture, Department for Fruit sciences, Viticulture, Horticulture and Landscape Architecture, University in Novi Sad

2. Rozalija Cvejić, Slovenia

Department of agronomy, Biotechnical faculty, University of Ljubljana; also as tutor

3. **Lea Egloff**, Switzerland /Germany

Zurich University of Applied Sciences in Wädenswil

4. **Sonja Fahr**, Germany

RWTH Aachen University

5. Vasiliki Giatsidou, Greece

School of Agriculture, Aristotle University of Thessaloniki

6. **Carsten Alexander Heinrich**, Germany

Department of History of Architecture and Conservation at RWTH Aachen University

7. Amparo Herrera-Dueñas, Spain

Vertebrate Biology and Conservation, Complutense University of Madrid

8. Zoe Heuschkel, Germany

University of Applied Science in Osnabrück

9. **Snežana Jovičić**, Serbia

Faculty of Sciences, Department of Biology and Ecology, University of Novi Sad

10. **Sarah Liebing**, Germany

Research Institute for Regional and Urban Development in Aachen; ILS in UAG

11. Petra Matijevič, UK/Slovenia

Department of Anthropology and Sociology SOAS, University of London

12. **Zorica Međo**, Serbia/Germany

Technical University of Berlin

13. Mojca Nastran, Slovenia

Forestry Department of the Biotechnical Faculty, University of Ljubljana; also as tutor

14. Andreea Oarga, Romania

Slovene Human Resources Development and Scholarship Fund

15. Valentina Palermo, Italy

Department of Civil Engineering & Architecture, University of Catania







16. Kristina Piškur, Slovenia

Faculty of Social Sciences, University of Ljubljana

17. Xavier Recasens, Spain

Universitat Politècnica de Catalunya, Barcelona; Agronomist in Badalona City Council

18. Veronika Reven, Slovenia

Municipality of Ljubljana, Urban Planning Department, Office for development and renovation of public spaces, Ljubljana

19. Zala Schmautz, Switzerland/Slovenia

Sanitary Engineering, Faculty of Health Sciences, University of Ljubljana

20. Sean Shanagher, Ireland

Ballyfermot College of Further Education

21. Mari Shioya, Slovakia

Institute of Forestry Ecology, Slovak Academy of Sciences & Institute of Management, Slovak University of Technology

22. Giorgia Silvestri, Italy

Science in Environmental Science at Pisa University

23. **Jenny Sjöblom**, Sweden

Swedish University of Agricultural Sciences, Alnarp

24. Lucie Sovová, Czech Republic

Faculty of Social Studies – Environmental Studies, Masaryk University in Brno

25. Andrew Speak, UK/Poland

Adam Mickiewicz University, Poznan; University of Manchester

26. Rebecca St. Clair, UK

University of Salford

27. Basak Tanulku, Turkey

Camlica Cad. Muhurdar Cikmazi Beylerbeyi Istanbul

28. **Dimitra Theochari**, Greece/Germany

National Technical University of Athens

29. Attila Tóth, Slovakia

Department of Garden and Landscape Architecture, FHLE, SUA Nitra

30. Pedro António de Matos Parente Vasconcelos, Portugal

City Hall of Vila Pouca de Aguiar, Portugal







- 31. **Zala Velkavrh**, Slovenia, ProstoRož
- 32. **Krista Maria Willman**, Finland School of Management, University of Tampere, Finland
- 33. **Žana Mehić**, Slovenia/Germany
- 34. **Nils Kreynhop**, Germany

c. Additional – invited participants

- 1. Jana Kozamernik, Landscape architect, external coworker at UIRS, Ljubljana, Slovenia
- 2. Jurij Kobe, department for Environmental Protection, Municipality of Ljubljana, Slovenia
- 3. Katja Rakovec, Zavod BOB, Slovenia; as stakeholder
- 4. Anja Manja Segulin, Zavod BOB, Ljubljana, Slovenia; as stakeholder
- 5. Nežka Agnes Vodeb, Zavod BOB, Ljubljana, Slovenia; as stakeholder
- 6. Janja Merkač, Zavod BOB, Ljubljana, Slovenia; as stakeholder
- 7. Jan Hočevar, Zavod BOB, Ljubljana, Slovenia; as stakeholder
- 8. Borut Melik, Zavod BOB, Ljubljana, Slovenia; as stakeholder







Joint Training School on Urban Food Production

COST actions TU1201 and TD1106

21-24 October 2014, Urban Planning Institute of the Republic of Slovenia, Ljubljana, Slovenia

Program

October 21th, Tuesday

	Morning session		
09:00 - 09:15	Registration and coffee Library lecture room of UIRS (ground floor – entrance from the passage)		
09:15 - 10:15	Introduction		
	Short presentation of the Municipality of Ljubljana		
	• Introduction to WORKSHOP 1 with an overview of different urban garden types and initiatives in Ljubljana (Mag. Maja Simoneti and Dr. Darja Fišer)		
10:15 – 12:30	WORKSHOP 1	Tutors:	
	Site visit workshop with comprehensive on-site assessment and discussion of 3 different types of Urban food production in	Mag. Maja Simoneti, landscape architect, urban planning policies, IPoP/LUZ, Ljubljana, Slovenia	
	the vicinity of UIRS: traditional Gardens of Krakovo, an urban farm of Andrej Peršin and guerrilla gardens near Gradaščica.	Dr. Darja Fišer , organizer of the national crops2swap movement and gardening festival Chelsea Fringe Ljubljana, Slovenia	
12:30 – 13:30	Lunch break restaurant Spirit of Ljubljana, Grudnovo nabrežje (pre-paid by participants)		
	Afternoon session		
13:30 – 16:30	Site visit by bus to Savlje area URBAN FOOD PRODUCTION IN LJUBLJANA Bus starts after lunch from Grudnovo nabrež	ie.	
16:30 – 18:30	WORKSHOP 2	Tutor:	
(19:00)	seminar room UIRS (2 nd floor)	Nataša Bučar Draksler, landscape	
	UNDERSTANDING ECOLOGICAL FOOD GROWING	architect, private allotment gardens organizer, NGO/associations supporting urban gardening in	
	Group work on 5 scenarios of ecological gardening according to the "Garden Cards" Methodology.	Slovenia: MULE http://www.srce-me-povezuje.si/drustvo-mule and PRIDELAJ.SI http://pridelaj.si/	







October 22th, Wednesday

	Morning session		•	
09:00 - 10:30	 Introductory presentations of the workshop Library lecture room of UIRS (ground floor – e) Dr. Rozalija Cvejić and Mojca Nastran: Live Dr. Paulo Brito da Luz Dr. Luke Beesley Dr. Maria Partalidou Stakeholders – for new Community gards specializing in project learning of young a http://www.zavod-bob.si/aboutus.php 	entrance from passage) vada case study area ens; Zavod BOB (NGO	coffee available in between presentations	
10:30 - 12:30	JOINT WORKSHOP Transfer by taxi vans to Livada area			
	UNDERSTANDING THE SITE – Livada case area Field work with tutors of days 2 and 3 Site analyses will be performed in 5 groups, taking into account aspects, such as location, soil, water and users. Discussion with stakeholders "Zavod BOB". In case of bad weather we will go to Gostilna Livada earlier to continue with work there.			
12:30 – 13:30	Lunch break			
	Gostilna Livada (pre-paid by participants)			
	Afternoon session			
13:30 - 16:00	WORKSHOP 3 ENVIRONMENTAL ASPECTS OF URBAN FOOD PRODUCTION Gostilna Livada seminar room	Dr. Paulo Brito da Luz, Institute of Agrarian ar Research, Lisbon, Porti	nd Veterinary	
	Workshop on optimizing the water situation, making use of local soils and waste resources and adding value to urban food plots (carbon storage, waste water treatments etc.). Planning for inclusion of soils, waters and waste conservation into new urban food-producing plots.	Irrigation (design and r Agro-environmental In Dr. Luke Beesly, The H Institute, United Kingd Soil survey and evaluate	ign and management), nental Indicators y, The Hutton ed Kingdom	
16:00 – 18:30 (19:00)	WORKSHOP 4 SOCIAL ASPECTS OF URBAN FOOD PRODUCTION Gostilna Livada seminar room	Dr. Maria Partalidou , I Rural Sociology, Aristo of Thessaloniki, School	tle University	
	Workshop on defining needs, values and motivations for urban food production. additional participants: zavod BOB	Agriculture, Dep. Of Ag Economics, Thessaloni	gricultural ki, Greece	
	Presentation Dr. Majda Čerič Istenič: SOCIAL VIEWS ON FOOD PRODUCTION AND URBAN GARDENER PROFILE (results from FOODMETERS project)	Dr. Majda Čerič Istenič rural sociology at Biote faculty, University of Li	echnical	







October 23th, Thursday

Mornina session			
09:00 - 11:00	ECONOMIC ASPECTS OF URBAN FOOD PRODUCTION seminar room UIRS (2 nd floor) What and where are the reasons that the majority of mainstream food production is organised in the way as we know it today? Why do we need Urban Food Production and where is the line between urban and rural? What are the economic advantages or disadvantages of urban food production? What are the examples (winter wheat, milk, salad,		coffee available in between
	LEARNING FROM FOODMETERS PROJECT Dr. Marina Pintar, Professor of agricultural land use planning at the Biotechnical Faculty, University of Ljubljana ECONOMIC BACKGROUNDS OF FOOD PRODUCTION Dr. Matjaž Glavan, Assistant Professor for GIS systems in agriculture at the Biotechnical Faculty, University of Ljubljana		
11:00 – 13:30	workshop 6 seminar room UIRS (2 nd floor) and UIRS meeting room (1 st floor) COMPREHENSIVE DEVELOPMENT OF URBAN FOOD PRODUCTION LEARNING FROM GREENSURGE PROJECT Group work on 5 scenarios of urban food production development for 2 case studies: a new community garden at Livada (3) and an urban agriculture area in Savlje (2)	Tutors: Dr. Rozalija Cvejić, Research Assistant in environmental planning, Department of agronomy, Biotechnical faculty, University of Ljubljana, Slovenia Mojca Nastran, Research Assistant at the Forestry Department of the Biotechnical Faculty, University of Ljubljana, Slovenia	
13:30 – 14:30	Lunch break (lunch in a restaurant of your choice near Ul	RS)	
	Afternoon session		
14:30 - 18:00	WORKSHOP 7 DESIGNING URBAN FOOD PRODUCTION? seminar room UIRS (2 nd floor) and UIRS meeting room (1 st floor) Group work on 5 proposals of spatial organization and design interventions for the scenarios developed in the previous workshop: the new community garden at Livada (3) and the urban agriculture area in Savlje (2)	Andrej Erjavec, archite of quality of life (In.Ka Slovenia, together wit Mag. Ina Šuklje Erjave Slovenia, and other tur	.Bi.), Ljubljana, h ec , UIRS,
19:30 –	Common evening in Club Daktari		







October 24th, Friday

Morning session			
09:00 – 10:00	Presentations from representatives from the City of Ljubljana Open questions of planning, design and governance of urban food production in Ljubljana seminar room UIRS (2 nd floor)		coffee available in between
10:00 - 12:30	WORKSHOP 8 DESIGNING PLANNING PROCESSES FOR URBAN FOOD PRODUCTION seminar room UIRS (2 nd floor) The central aim of the workshop is the design of the "ideal" planning processes encompassing four stages: spatial analysis, zoning, site design and implementation.	Tutor: Martin Sondermann, g Leibniz University Han Institute of Environme Germany	nover,
12:30 – 13:30	Lunch break (lunch in a restaurant of your choice near UIRS)		
	Afternoon session		
13:30 – 16:00	WORKSHOP 9 DIFFERENT LEVELS OF GOVERNANCE REGIMES AND POLICIES seminar room UIRS (2 nd floor) Understanding urban agriculture governance and different policy models and regimes with step by step learning about the RUAF policy formation tool: Multi-stakeholder Policy Formulation and Action Planning for Sustainable Urban Agriculture Development.	Tutor: Dr. Andrew Adam-Bradford, geographer, Horn of Africa Unit - Human Relief Foundation - governance and policies, United Kingdom	
16:00 – 16:30	Coffee break		
16:30 – 18:00	Wrap up and presentations of the result seminar room UIRS (2 nd floor)	ts	







Documentation of Joint Training School on Urban Food Production

October 21th, Tuesday

1. Introduction

Welcome speech by organizer of JTS in LJubljana, Mag. Ina Šuklje Erjavec (general information, about Joint training school, COST projects, schedule and all tutors of Joint training school, distributions of participants in groups for workshops and information about planned fieldtrips).

Short presentation of the Municipality of Ljubljana – LOCAL AGRICULTURAL SELF SUPPLY IN THE MUNICIPALITY OF LJUBLJANA (urban structure of the city, self-supply, agriculture and allotment gardens in Ljubljana)

Speaker: Jurij Kobe (Department for Environmental Protection)



Ljubljana JTS Urban Food Production 2014, Day 1: morning presentations at UIRS

Annex 1: Presentation: Local Agricultural Self Supply in the Municipality of Ljubljana (Jurij Kobe, MOL)







2. WORKSHOP 1

a. **Introduction:** overview of different urban garden types and initiatives in Ljubljana Speakers: Mag. Maja Simoneti and Dr. Darja Fišer

b. Walk throung urban gardens - Site visit

Tutors: Mag. Maja Simoneti, Dr. Darja Fišer Photo: Maja Simoneti, Jana Kozamernik



Ljubljana JTS Urban Food Production 2014, Day 1 Workshop: WALK THROUGH THE GARDENS

Site visit was made by foot to the different, bottom up gardening areas in the vicinity of UIRS, exploring their characteristics and discussion with tutors about . Participants had also the possibility to speak with the gardeners on site, as in the picture above where Irena Woelle a designer of visual communications and an urban food production and many other important points of life and nature activist and coordinator of many community gardening sites. She explained very interesting aspect of the Community garden "Velika čolnarska" – it is a temporary garden on a private site that is not in use at the moment (waiting for new developers) in the middle of the city, between the private houses. The idea was born within the group of participants of the workshop on permaculture workshop. The garden site itself as well as gardening and harvesting is not divided among members into plots and individual activities but they do everything together









Ljubljana JTS Urban Food Production 2014, Day 1: Walk through the gardens - More traditional allotment gardens near along Gradaščica river

Annex 2:

- **Presentation: Urban Gardening** (Mag. Maja Simoneti, Dr. Darja Fišer)
- **Presentation: Typology of Urban Gardens in Ljubljana** (Dr. Darja Fišer)







3. Urban food production in Ljubjana - site visit to Savlje area

(North part of Ljubljana city)

Tutors: Dr. Marina Pintar, Nataša Bučar Draksler, Andrej Erjavec, Rozalija Cvejič and Mojca Nastran

Annex 3: Basic information about Savlje area (location, soil, land use and irrigation)

(Dr. Marina Pintar)

The site visit of urban food production area Savlje in Ljubljana was organized by tutors as well as by local organizers UIRS, providing the bus and other support for the visit. The site visit was supported by documents and information presented on the way there and enabled participants of the JTS to experience and discusses the contrast between both of the urban agriculture areas and urban garden sites of different origins and ways of management.

The Savlje site visit was also an introduction to the Workshops 6 and 7 dealing with comprehensive development, planning and design of urban food production and case study visit for the case studies 2 groups of participants were working latter within those workshops.



Ljubljana JTS Urban Food Production 2014, Day 1: aerophoto of the Savlje area within nothernen part of the City of Ljubljana







The participants visited 2 different types of professional farms, both located within the city municipality of Ljubljana and supplying its local markets as well as providing sales of their harvest and products on site. The first one was more vegetable production oriented, using also greenhouses for growing and the other a cattle ecological farm with diary production. Both farms are part of the village, captured into the city quite long ago already, now closely linked to the city with the urban public transport as well as big densely populated urban neighborhoods nearby .

The situation is very interesting not only from spatial but also from sociological points of view because people living very nearby, are perceiving themselves very differently as urban inhabitants and as villagers.

Participants had the opportunity to see both farms and discuss with farmers about their experiences, attitudes and needs for better development;



Ljubljana JTS Urban Food Production 2014, Day 1: site visit of Ljubljana urban agriculture area Savlje; Case study area for urban agriculture. Discussion with the farmer on the farming area.











Ljubljana JTS Urban Food Production 2014, Day 1: site visit of Ljubljana urban agriculture area Savlje; Case study area for urban agriculture. Visit of vegetable farm: green hous and private store on site.











Ljubljana JTS Urban Food Production 2014, Day 1: site visit of Ljubljana urban agriculture area Savlje; Case study area for urban agriculture. Visit of one of the farmers in the area (eco - farm, small private store).







Besides farms, participants visited also some allotment gardening sites, one owned and managed by Municipality of Ljubljana within an abandoned area of military waste across the neighborhood as well as private ecological urban gardens for rent (Pridelaj.si), developed and managed by private investor Nataša Bučar Draksler who was also the JTS tutor and explained in detail development and management issues of her allotment gardens.





Ljubljana JTS Urban Food Production 2014, Day 1: site visit of Ljubljana urban agriculture area Savlje; Allotment gardens Pridelaj.si , Savlje near high-density area – discussion with Nataša.







4. WORKSHOP 2 - Understanding ecological food growing

Tutor: Nataša Bučar Draksler





Ljubljana JTS Urban Food Production 2014, Day 1: Workshop 2 – Ecological gardening with use of "Garden Cards" Methodology.

Annex 4:

- **Presentation: Understanding Ecological Food Growing with Garden Cards** (Nataša Bučar Draksler)
- Instructions for Garden Cards (Nataša Bučar Draksler)







October 22th, Wednesday

1. Introductory presentations of the workshops and field work

Speakers: Dr. Luke Beesley, Dr. Paulo Brito da Luz, Dr. Maria Partalidou, Dr. Rozalija Cvejić and Mojca Nastran: Livada case study area



Ljubljana JTS Urban Food Production 2014, Day 2: Introductionary presentations of the Workshops and fieldwork.

Annex 5:

- Presentation: Urban Food Production: Environmental Challenges introduction (Dr. Paulo Brito da Luz)
- **Presentation: Farming urban soils** (Dr. Luke Beesley)
- **Presentation: Social aspects of Urban Food Production** (Dr. Maria Partalidou)
- **Presentation: Livada case study** (Dr. Rozalija Cvejić and Mojca Nastran)







2. Joint workshop Understanding the site – Livada case area

Field work, site analysis – location, soil, water, users Additional participants: stakeholders Zavod BOB, Ljubljana





Ljubljana JTS Urban Food Production 2014, Day 2: Joint workshop: UNDERSTANDING THE SITE; Soil analysis on case study area for community garden, Ljubljana.









Ljubljana JTS Urban Food Production 2014, Day 2: Joint workshop: Understanding the site; Presenting of group of stakeholders – future users of allotment garden site – Zavod BOB.







3. Workshop 4 – Social aspects of urban food production

Tutor: Dr. Maria Partalidou

Social views on food production and urban gardener profile

Speaker: Dr. Majda Čerič Istenič















Ljubljana JTS Urban Food Production 2014, Day 2: Workshop 4: SOCIAL ASPECTS OF URBAN FOOD PRODUCTION.







From Workshop report (Dr. Maria Partalidou):

Agriculture and the city have been going hand- in- hand for centuries. Nowadays, Urban Food Production is of great importance in contemporary societies; as urbanization is growing, food prices are still going up and food travels from all over the world in order to reach urban dwellers. Amidst the current economic crisis, with alarming phenomena of neopoverty and malnutrition, UA takes yet another crucial role in supporting vulnerable groups in cities and creating new jobs for unemployed. The module focused on two main points: how did we get to that chaos in food provisioning, the motives and other socioeconomic characteristics of urban farmers (either for hobby, or professionals) and the strengths, weaknesses and difficulties of these initiatives concerning both social and economic aspects.

The workshop was divided into three parts. The goal of the first part was to test an image — based methodology for the Social construction of the rural and the urban. Students were asked to identify the leading images of the rural and the urban within a set of 50 different given photos. During the second part of the workshop students were introduced to another binary "local or global" food systems. The aim of this task was to identify the actors in the food system, what are the emerging issues, how do we feed the city, what small farmers, in the peri-urban can do etc. The third part of the workshop was devoted to urban garden allotments. The students got familiar to emerging food provisioning practices such as urban agriculture and how it contributes to social inclusion.

Annex 6:

- Workshop report (Dr. Maria Partalidou)
- Presentation: Who are the gardeners and what motivate them to grow their own food? Results from FOODMETRES (Dr. Majda Čerič Istenič)







4. Workshop 3 – Environmental aspects of urban food production

Irrigation and Agro-environmental indicators

Tutor: Dr. Paulo Brito da Luz

Soil survey and evaluation - Farming urban soils

Tutor: Dr. Luke Beesly

Annex 7:

- Presentation: Urban Food Production: Environmental Challenges Field Work (Dr. Paulo Brito da Luz)
- Presentation: Urban Food Production: Environmental Challenges Workshop 3 (Dr. Paulo Brito da Luz)
- **Presentation: Urban Food Production: Environmental Challenges Annexes** (Dr. Paulo Brito da Luz)
- Workshop Exercises: Pressurized Irrigation Sprinkler (Dr. Paulo Brito da Luz)
- **Presentation: Farming urban soils** (Dr. Luke Beesly)
- **Article: Harmony Park A Decision Case on Gardening on a Brownfield Site** (Dr. Luke Beesly)







October 23th, Thursday

Aditional participants: Stakeholders Zavod BOB, Ljubljana

1. Workshop 5 – Economic aspects of urban food production

Learning from Foodmeters project

Speaker: Dr. Marina Pintar

Economic backgrounds of food production

Speaker: Dr. Matjaž Glavan











Annex 8:

- **Presentation: Learning from Foodmeters project** (Dr. Marina Pintar)
- Presentation: Economic backgrounds of food production (Dr. Matjaž Glavan)

2. Workshop 6 (parallel workshop):

Comprehensive development of urban food production – learning from Greensurge project

Livada case area – allotment garden and youth place

Tutors: Dr. Rozalija Cvejić, Mojca Nastran, Mag. Ina Šuklje Erjavec Aditional active participants: Stakeholders Zavod BOB, Ljubljana















Ljubljana JTS Urban Food Production 2014, Day 3: Workshop 6: Comprehensive development of urban food production (Livada case area) – work in groups and presentation of results







3. Workshop 7 (parallel workshop): Designing of urban food production?

Savlje village development – urban agriculture area

Tutors: Andrej Erjavec, Mag. Ina Šuklje Erjavec

Annnex 12: Presentation: designing urban Food Production?





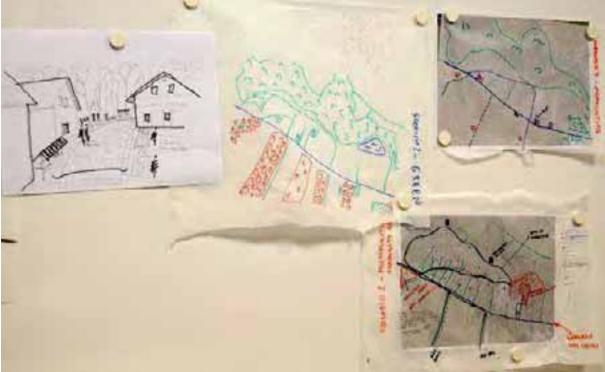












Ljubljana JTS Urban Food Production 2014, Day 3: Workshop 7: Designing urban food production? – working in groups, presenting results







October 24th, Friday

Aditional participants: Stakeholders Zavod BOB, Ljubljana

1. Presentation of representatives from City of Ljubljana

Speakers from Municipality of Ljubljana: Jurij Kobe, Veronika Reven

Annex 9:

- Presentation: Rural development in Ljubljana municipality (Jurij Kobe, Municipality of Ljubljana)
- **Presentation: Allotment gardens in the Municipality of Ljubljana** (Veronika Reven and Mateja Doležal, Municipality of Ljubljana)

2. Workshop 8 – Designing planning process for urban food production

Tutor: Martin Sondermann













Ljubljana JTS Urban Food Production 2014, Day 4: Workshop 8: Designing planning process for urban food production

Annex 10: Presentation: Designing planning process for urban food production (Martin Sondermann)







3. Workshop 9 – Different levels of governance regimes and policies

Tutor: Dr. Andrew Adam-Bradford





Ljubljana JTS Urban Food Production 2014, Day 4: Workshop 9: Different levels of governance regimes and policies

Annex 11: Presentation: Different Levels of Governance Regimes and Policies
(Dr. Andrew Adam-Bradford)







4. Conclusion of JTS



Ljubljana JTS Urban Food Production 2014, Day 4: Conclusions with representatives from both COST Actions and Zavod BOB.



Ljubljana JTS Urban Food Production 2014: a gift from Municipality of Ljubljana: T –Shirts for all









Participants and tutors (almost all) of Ljubljana JTS Urban Food Production 2014







Presentations, reports and other material (Annexes 1 - 11)

Annex 1: Presentation: Local Agricultural Self Supply in the Municipality of Ljubljana

(Jurij Kobe, MOL)

Annex 2: Presentation: Urban Gardening (Mag. Maja Simoneti, Dr. Darja Fišer)

Presentation: Typology of Urban Gardens in Ljubljana (Dr. Darja Fišer)

Annex 3: Basic information about Savlje area (location, soil, land use and irrigation)

(Dr. Marina Pintar)

Annex 4: Presentation: Understanding Ecological Food Growing with Garden Cards

(Nataša Bučar Draksler)

Instructions for Garden Cards (Nataša Bučar Draksler)

Annex 5: Presentation: Urban Food Production: Environmental Challenges –

introduction (Dr. Paulo Brito da Luz)

Presentation: Farming urban soils (Dr. Luke Beesley)

Presentation: Social aspects of Urban Food Production (Dr. Maria Partalidou)

Presentation: Livada case study (Dr. Rozalija Cvejić and Mojca Nastran)

Annex 6: Workshop report (Dr. Maria Partalidou)

Presentation: Who are the gardeners and what motivate them to grow their

own food? Results from FOODMETRES (Dr. Majda Čerič Istenič)

Annex 7: Presentation: Urban Food Production: Environmental Challenges – Field

Work (Dr. Paulo Brito da Luz)

Presentation: Urban Food Production: Environmental Challenges -

Workshop 3 (Dr. Paulo Brito da Luz)

Presentation: Urban Food Production: Environmental Challenges – Annexes

(Dr. Paulo Brito da Luz)

Workshop Exercises: Pressurized Irrigation – Sprinkler (Dr. Paulo Brito da Luz)

Presentation: Farming urban soils (Dr. Luke Beesly)

Article: Harmony Park - A Decision Case on Gardening on a Brownfield Site

Annex 8: Presentation: Learning from Foodmeters project (Dr. Marina Pintar)

Presentation: Economic backgrounds of food production (Dr. Matjaž Glavan)







Annex 9: Presentation: Rural development in Ljubljana municipality (Jurij Kobe,

Municipality of Ljubljana)

Presentation: Allotment gardens in the Municipality of Ljubljana (Veronika

Reven and Mateja Doležal, Municipality of Ljubljana)

Annex 10: Presentation: Designing planning process for urban food production

(Martin Sondermann)

Annex 11: Presentation: Different Levels of Governance Regimes and Policies

(Dr. Andrew Adam-Bradford)

Annex 12 Presentation: designing urban Food Production

(Andrej Erjavec and mag. Ina Šuklje Erjavec)

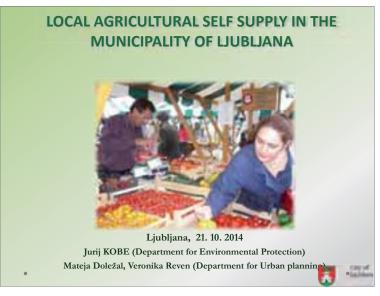






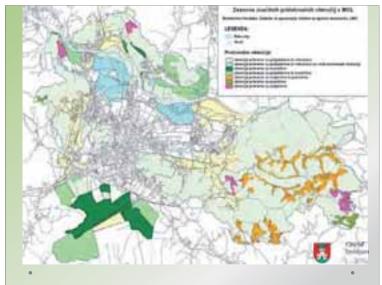
Reports of working groups (Annexes 12 - 16)

Annex 12: Report from Working Group 1
Annex 13: Report from Working Group 2
Annex 14: Report from Working Group 3
Annex 15: Report from Working Group 4
Annex 16: Report from Working Group 5

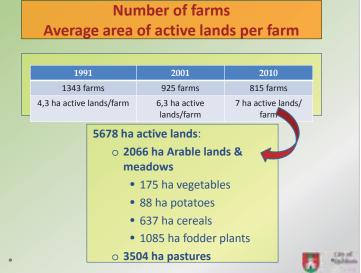


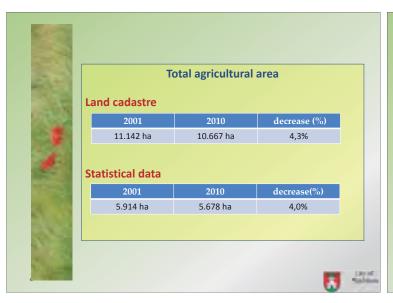




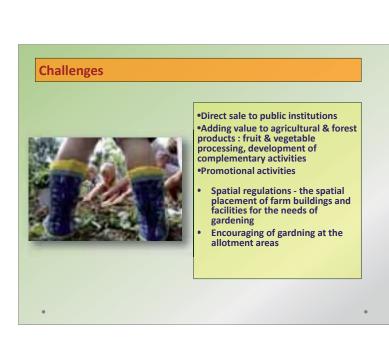




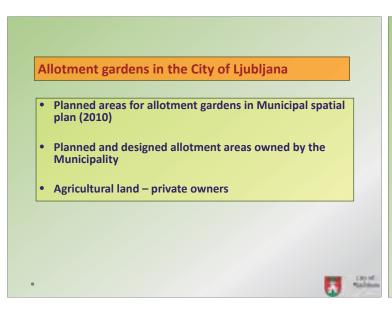














Stepanja vas •14 allotment plots • equipped with sheds, children's playground, parking places, water supply connector to the distribution network, composters, mobile toilets and waste containers Dravlje • 51 allotment plots • the same equipped as at Štepanja vas, but without connection to the water distribution network Savlje – former military dumpsite • 50 allotment plots









Urban gardening

Mag. Maja Simoneti, Institute for Spatial Policies and

Dr. **Darja Fišer**, crops2swap (or Zelemenjava in Slovene) working together in urban gardening group within Network: Mreža za prostor

Joint Trainig School on Urban Food Production COST actions TU1201 and TD1106

21-24 October 2014, Ljubljana, Slovenia Urban Planning Institute of the Republic of Slovenia

Why urban gardening?

- · it is a geuine and rewarding activity
- growing food knowing food
- · enjoying results of your work
- socialising
- · contact with nature
- freedome of outdoors
- relaxation
- community building



new urban practices and economies: urban revitalisation, crop swapping, outdoor education, cooking, tourism, ...)

Urban gardening in Ljubljana

- food garden as a cultural phenomenon the majority of house & garden owners in Slovenia keeps a kitchen garden in their backyard
- · planned and self organised
- urban gardening gardening on borrowed or occupied land, either with or without the owner's permission and rent
- gardening is for everyone
- · gardens are everywhere
- gardening is both traditional and trendy







Recent history of urban gardening in Ljubljana

- 1955: gardens for the new citizens are organised in the growing industrial town and national capital
- 1985: the new master plan tends to move gardening to the outskirts
- 1995: guerilla gardening has expanded along with lost land use and control, the municipality starts comprehensive research activity
- 2007: removal of illegal gardens in front of the central cemetery
- 2010: a new master plan defines gardening as permanent land use, new gardening rules are set, the first new sample allotments are organised
- 2014: interest for gardening is growing, guerilla gardening is expanding again





New urban gardening policy, 2007

- special / important location was chosen
- gardens were radically erased
- to stop illegal gardening
- to demonstrate the political will for change
- new public space a park as a substitute for the former exclusive land use





Urban gardening, 2010



New master plan, 2010

- a new master plan gardening as permanent land use as well as allowed on specific areas
- new gardening rules and ordinance
- · follows research findings and environmental acceptability
- pushes gardening out of the city centre
- aims to organise and control gardening practices in the city



Urban gardening ordinance



What happens?

- new area preplanned for gardening is much smaller than the area of ther existing gardening practice
- on the outskirts of the city while people garden and wish to garden in the city centre as well
- the proposed design for the demonstration gardens proved to be too expensive
- the size, the location and budget are underestimated
- diverse range of practice
- organised by the municipality and private actors
- selforganised
- great majority of urban gradening is illegal

2013, Jane's Walk



Jane's Walk, 2013

Krakovo gardens, cultural heritage, private ownership Trnovo, guerilla gardening, public ownership Kolezija, guerilla gardening, private ownership Kolezija, gardening for the elderly, public ownership Trnovo, windowsill gardening



Findings

- garden proximity is crucial /young & old, on foot & by bike, on a daily basis/
- the temporary nature of gardening is not an issue /when made clear/
- silent agreement can result in a very stable arrangement /a decade or more/
- official consent of the owner and the municipality would be highly welcome /illicit gardens are stigmatised/





Ljubljana, 2014

- big public interest in gardening near your home, also in the centre
- new contexts of gardening are emerging: revitalisation of degraded areas, green space maintenance, temporary land use, cultural program, education
- offer of legal gardening areas is very limited
- expansion of guerilla gardening is on the rise again









in onkraj gradbišča vas vabimo na

v Cestrok, 25. S. 2014, od 18.00 do 18.00 Committee has interpreterant integral predictions of the Committee of the

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Ca invate fault of kalebro sadilar other? In
this products of common in his drugsga,
dictinodolls. Ca invate de sundre proteites, dur
politic de miselo proteites, tudi nadi mengama.















Lessons learned

- plot gardening is a part of a contemporary city
- gardeners are very persistent they easily migrate
- people wish to garden close to their homes
- temporary gardens are more desirable than dislocated permanent solutions
- equipment (shed, fence, playground, benches, litterboxes...) is not of key importance
- people tend to respect the measures taken by the municipality: they comply with the regulations and bans
- BUT much less so when the proposed planned are not put into effect

JOINT TRAINING SCHOOL ON URBAN FOOD PRODUCTION TYPOLOGY OF URBAN GARDENS IN LJUBLJANA DARJA FIŠER

JOINT TRAINING SCHOOL ON URBAN FOOD PRODUCTION

TOWARDS A TYPOLOGY

- ALLOTMENT COLONIES
 example: Litostroj Allotments
- 2. GARDENS WITH TRADITION

 example: Krakovo Gardens
- 3. TEMPORARY USE example: Beyond a Construction Site
- 4. MAINTENANCE

 example: On the railway embankment
- 5. NEIGHBOURHOOD GARDENS example: Allotments at Rimska cesta
- 6. BORROWED GARDENS example: Allotments in Murgle
- 7. GUERILLA GARDENS

 example: Allotments at Gradaščica
- 8. CONTAINER GARDENS

 example: Savsko naselje

ALLOTMENT COLONY LITOSTROJ

Initiative: Litostroj Gardening Society

<u>Duration</u>: 1955 – on-going

Location: behind the Litostroj factory complex

No. of allotments: about 50

<u>Land owners</u>: farmers, state institutions, private companies

Relationship between allotment holders and land owners: different arrangements (paying for rent and water, just for water or nothing at all)

<u>Characteristics</u>: a stable allotment colony dating to the construction of the neighbourhood









KRAKOVO GARDENS

<u>Initiative</u>: individuals

<u>Duration</u>: Middle Ages – on-going

<u>Location:</u> between Eipprova and Krakovska Street

No. of allotments: about 30

Land owners: private owners

Relationship between allotment holders and land owners: different arrangements (renting, borrowing, sharing)

<u>Characteristics</u>: transition from commercial food growing to hobby gardening









ONKRAJ GRADBIŠČA

Initiative: cultural and art society Obrat

<u>Duration</u>: 2010 – on-going

<u>Location:</u> Disused construction site between Resljeva and Kotnikova Street

No. of allotments: 40

Land owners: City of Ljubljana

Relationship between allotment holders and land owners: contract for free temporary use

Characteristics: temporary use of a disused construction site that started during a cultural festival and evolved into a community garden









ALLOTMENTS ON THE RAILWAY EMBANKMENT

Initiative: Botanic Gardens & national TV

<u>Duration</u>: 2013 – on-going

<u>Location:</u> railway embankment between Botanic Gardens and Dolenjska Street

No. of allotments: 7

<u>Land owners</u>: city of Ljubljana and Slovene Railways

Relationship between allotment holders and land owners: agreement for free temporary use

<u>Characteristics</u>: temporary use and maintenance of an infrastructure corridor









ALLOTMENTS AT RIMSKA CESTA

Initiative: individuals

<u>Duration</u>: 2060 – on-going

Location: between Rimska and Aškerčeva

No. of allotments: about 5

Land owners: private owner

Relationship between allotment holders and land owners: agreement for free use in exchange for maintenance of the hedge

<u>Characteristics</u>: very old neighbourhood allotments in the very centre of the city









ALLOTMENTS IN MURGLE

<u>Initiative</u>: individuals

<u>Duration</u>: 2010 – on-going

Location: Murgle

No. of allotments: 13

Land owners: private owner

Relationship between allotment holders and land owners: agreement for free use in exchange of mowing

<u>Characteristics</u>: beginner- and family-friendly community garden in a suburb









ALLOTMENTS AT GRADAŠČICA

nitiative: individuals

<u>Duration</u>: 2050 – on-going

<u>Location:</u> next to the bridge across Gradaščica river at Barjanska Street

No. of allotments: about 20

<u>Land owners</u>: City Museum of Ljubljana

Relationship between allotment holders and land owners: guerilla gardening

<u>Characteristics</u>: guerilla gardens with a long tradition, lots of recent expansion









VRTIČEK V SAVSKEM NASELJU

Initiative: Saprabolt Society

Duration: 2013 – on-going

<u>Location:</u> in a neighbourhood park at Savsko naselje

No. of allotments: gardens in raised beds and builders bags

Land owners: City of Ljubljana

Relationship between allotment holders and land owners: contract for temporary use

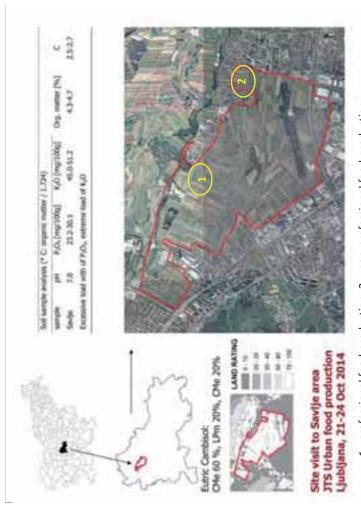
<u>Characteristics</u>: a social experiment in community gardening in a traditional neighbourhood



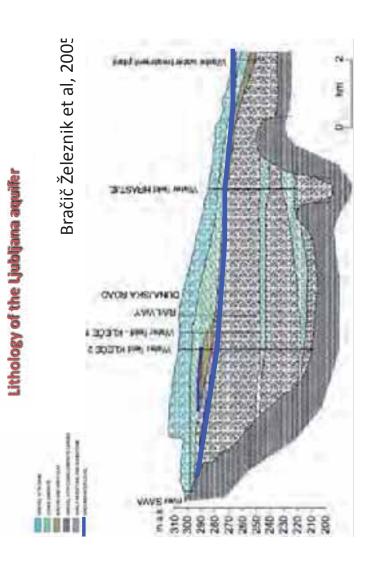


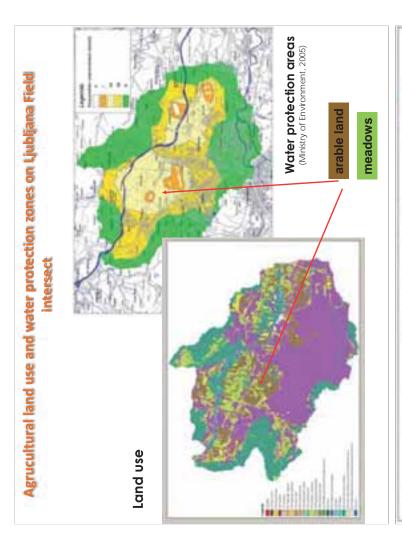


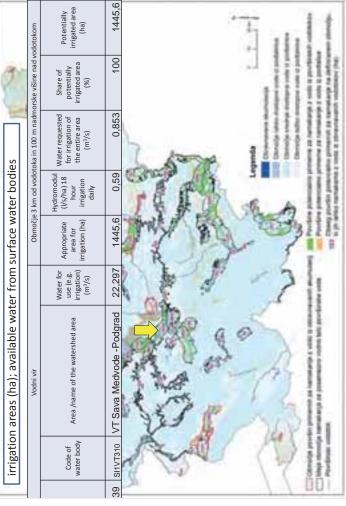


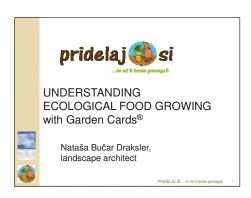


1= professional food production; 2 = non-professional food production







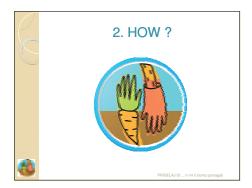




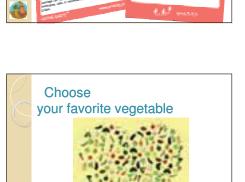


- How to draw a plan for organic gardening
- 3. Sorting vegetables according to nutrient availability
- 4. Crop rotation
- 5. Distribution at the patch
- 6. Timeline
- 7. Plant density, pH, sun

PRIDELATIST in mi ti bomo nomanali





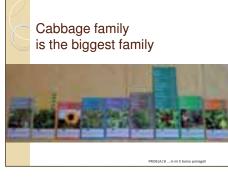


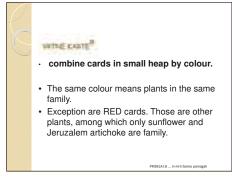


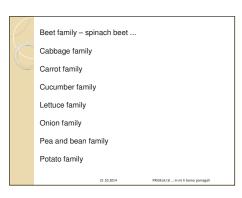




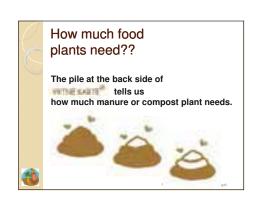












CROP ROTATION An agricultural technique in which, season after season, each field is sown with crop plants in a regular rotation, each crop being repeated at intervals of several years. PRIDELAJ SI ... in mi ti bomo pomagali

























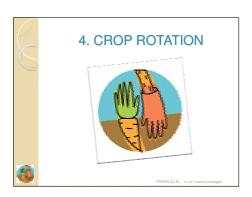


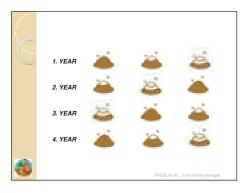


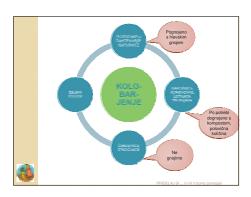












to change = to rest

 If crops from the same family are grown in the same place year after year, related pests and diseases may become established. Plants from the same family have equal nutrient requirements. They are not good neigbours and must not grow at the same place year after year.

PRIDELAJ SI ... in mi ti bomo pomagali



A - Distribute Garden cards® at the patch in drills. Take care not toput the same colour (same family) side by side.
But they may make a line longways.

 B - Distribute Garden cards® at the patch with equidistant spacing

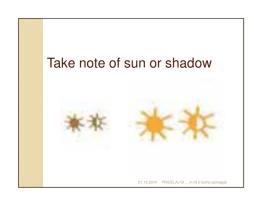
 Be aware of the effect of plant density

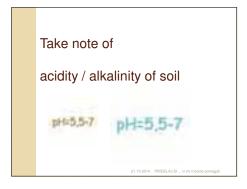




















INSTRUCTIONS FOR GARDEN CARDS®

CHOOSING WHAT TO GROW



(()

What do you like to eat? Divide Garden cards® in two parts. Stack the cards onto two piles. On the first shall be plants, which you like to eat ©. Add some new to learn something new. On the second just leave plants you will not grow ©. Put them back into the box.

GROUP VEGETABLES BY FAMILY & COLOURS 7

only sunflower and Jerusalem arthichoke are relatives. If crops from the same family are grown in the same place year after year, related pests and diseases may become established. Plants from the same family have equal nur-rient requirements. They are not good neigbours and must not grow at the same place year after year. Group Garden cards[®] from the first pile according to colour. Garden c<mark>ards[®] with the same</mark> colour represent vegetable from the same botanical family. Red cards are exception and they represent the rest of the crops. Among them

SORTING VEGETABLES ACCORDING TO NUTRIENT REQUIREMENTS ÷

Different crops have different nutrient requirements, so moving them around the growing area helps to prevent soil. There are drawings of manure at the back side up right of the cards. They symbolise the manure and remind us how much nutrients they need.

Collect Garden cards with on the first pile - 1. area.

Collect Garden cards with — on the second pile – 2. area.

Collect Garden cards with • on the third pile – 3. area.

Area is a surface with the same amount of nutrients, treated the same way. Najbolj pognojene so gredice v prvi poljini in naj-manj v tretji.

Grow crops with similar requirements together so you can apply the appropriate soil treatments for them.





DRAW A PLAN OF YOUR VEGETABLE GARDEN

Draw your garden and sign areas with numbers (1 or 2 or 3).

Garden cards[®] with the symbol — put on the patch, which was strong manured last year. This will be area no.2. Garden cards® with the symbol 🔷 put on the patch, that will be manured reach. This will be area no.1.

Garden cards® with the symbol 👄 put on the patch, which was not manured last two years This will be area no.3.









DISTRIBUTE THE VEGETABLES AT EACH PATCH

A - Distribute Garden cards[®] at the patch in drills. Take care not toput the same colour (same family) side by side. But they may make a line longways.

B - Distribute Garden cards $^{\mathrm{o}}$ at the patch with equidistant spacing $\,$ - cikcak

When you are satisfied with distribution, draw it onto a plan. Be aware of the effect of plant density. Distance is written at the bottom of the back side at each Garden card. Crops, which need a lot of space grow slowly. Intercropping is the sowing of fast-growing or small vegetable on unused ground between slower-growing main crops. Undercropping is the sowing of low plants under the taller.



PLANING THE PRODUCE YEAR 9

Distribute Garden cards[®] according to time of sowing or planting. Tim<mark>eline is at the top</mark> of the back side of each card. Card on the front shall cover one at their back just that much th<mark>at you can read the</mark> timeline. Double cropping is the sowing on spare ground between the clearance of one main crop and the planting of anot-her. Multi-sowing means sowing several seeds in the same place at around twice the normal spacing.



7. MANAGING SOIL

Soil treatment in a rotation.

1. area - compost or manure use for heavy feeders such as potatoes, cabbage family, tomato.

2. area – manure was added a year before or in the autumn before planting.

3. area - was manured two years ago. There bean and pea family will be growing.



SOWING VEGETABLES

Be ready to make compromises. Divide garden into equak-sized sections according to how many years rotation is

If possible set aside an area of perennial vegetables and herbs.

Latin names will help at shopping abroad or at purchasing at web.

Instructions for VRTNE KARTE®



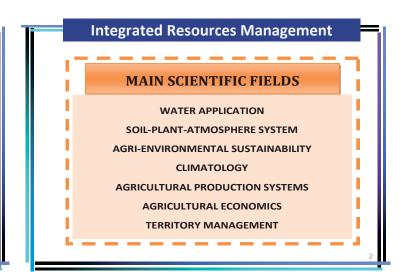
URBAN FOOD PRODUCTION: ENVIRONMENTAL CHALLENGES

Introduction

Paulo Brito da Luz – Senior Researcher

Instituto Nacional de Investigação Agrária e Veterinária, I.P. Av. da República, Quinta do Marquês, 2784-505 Oeiras paulo.luz@iniav.pt

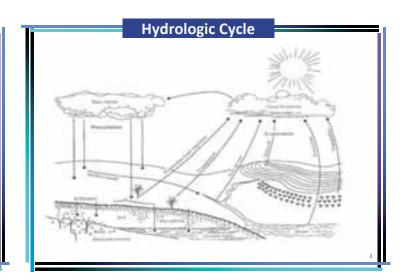
Joint Training School 21-24 October 2014 Ljubljana, Slovenia



Overview

<u>Sustainability of natural resources concerning urban food production.</u>
<u>Agro-environmental requirements and limitations.</u>

- In Europe climate change is expected to decrease precipitation and increase temperatures in the summer season. We face specific challenges in urban allotment gardens related to extreme events and water supply.
- 2) Considering drought periods, gardens will need irrigation solutions to assure crop water requirements. Precipitation extreme events and excessive irrigation tend to cause runoff and flooding damages. Inadequate irrigation design and management will lead to severe problems in water, soil and energy conservation.
- 3) Those negative impacts lead to the requirement for more sustainable and efficient land use practices, taking into account the interactions between water quantity, quality of soil and water and selected crops.
- Site-specific studies involving the water balance, regarding a soil-plantatmosphere system, are a key strategy guideline to ensure a reliable land use management.



Water in the Soil-Plant-Atmosphere System

Basic information to approach a water balance (with respect to water application or precipitation):

- •Soil texture classes
- Field capacity and water storage
- •Soil cover, slope and micro-relief
- •Rooting depth
- Infiltration capacity
- •Crop coefficient : Kc (curve and factors)
- Weather factors
- •Surface runoff
- •Drainage-Percolation
- •Evapotranspiration : Eto and Etc
- Water quality parameters

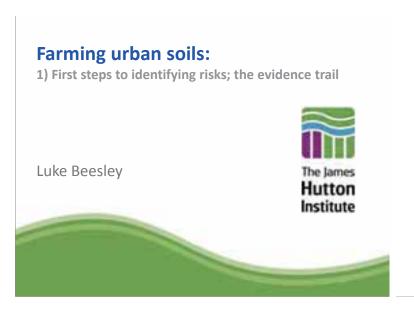
Irrigating with "best practices".

In Bullylan (many centuries again

At Neger Desert durast).

Observed Effect

Observed Effect



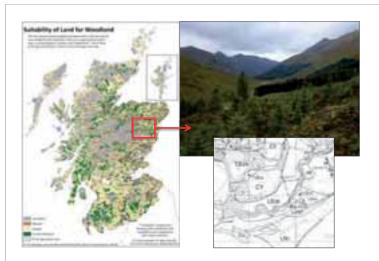
What are soils?

"Mineral and/or organic materials forming the substrate supporting biological life..."

"Storage areas for carbon and vital nutrients"

"Buffers for toxic contaminants"



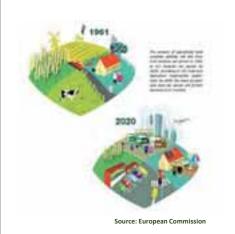


"Soils which are disturbed, influenced or added to by the action of humans..."

"and containing the presence of anthropogenic artefacts..."

"visible and invisible"





"soil sealing and the loss of productive land"

"concentrated and contaminated runoff waters"

"forced to use contaminated and poor quality soils"

Organic contaminants from inks etc

Invisible

Heavy metals, Cd, Ni, etc

Organic and metal contaminants from paints, preservatives

1) Source 2) Pathway

Key questions in the field:

```
PHASE 1 -> Dest -> Historic Mast ?

-> Site dula (chemid, hilly us) ?

-> Statement. I have flowed atte ?

-> Statement flowbashin ?

-> Statement flowbashin ?

-> Site gargaphy, there depost, hill

-> Satement flowbashing.

-> Satement flowbashing.
```

Sources of risk:

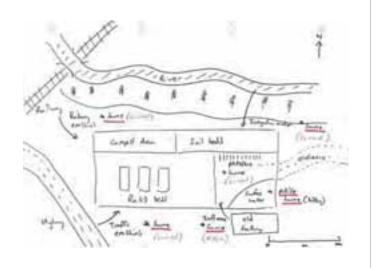
- -Point or diffuse
- -Historic or contemporary
- -Can you identify the visible and invisible ones?
- -What simple indicators can you use to help you?

Pathways:

- -Direct contact with source, soil etc
- -Through eating food grown in risk areas

Receptor:

- -Age/demographic
- -Exposure/consumption









Joint Training School of COST Actions TU1201 and TD1106

Workshop 4: Social aspects of Urban Food Production

needs - values - perceptions - motivations

Dr. Maria Partalidou Rural Sociologist



Lecturer, University of Thessaloniki, Greece
parmar@agro.auth.gr, 2310 998701
http://rural-lab.agro.auth.gr/staff3.htm

- The first images of the city that come to our minds are buildings, roads, cars, lights, supermarkets open all day, with colorfully packaged food
- In a city that keeps growing bigger and hungrier

We have No idea where our food comes from!

Future Challenges

- Population increases globally
- Until 2025 over 60% will be living in cities
- Changes in dietary choices (too much meat=too much energy)
- Unemployment in cities
- Food prices are still going up
- Food miles

Something is really wrong with our food- system

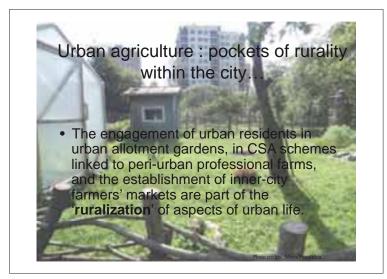
Chaos in food provisioning

We have not been able to cover the needs of a great

part of the world

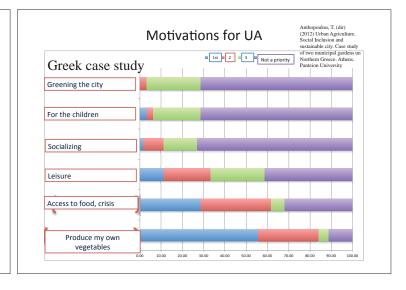
whereas in other parts (mainly in cities) people actually die due to food choices and their attitudes connected to contemporary life in the city

the future of FOOD is the future of HUMANITY



1. What is the current situation in your city: food provisioning in your homeland. Is it a food desert-food miles? (task for vegetables and fruits) [20' min] 2. Social construction of the rural and the urban: base on photos "sense of urban" and "sense of the rural" [20'min]

The rural is not a unified, discrete and unambiguous space







Notes from the field

- <u>Take photos</u> of "space configuration"boundaries "place making" and "personalization of plots"
- Take notes (talk to people!!)

"What need/s does the garden cover for you"?

"What was your motive?"

* Write down as much as you can about their personal characteristics (male, female, age, educational level, bonds to the rural, job etc)



How the workshop will work [16.30-18.30]

4. Results from the matrix of needs - notes from the ground [30 min]

Short report: how you would answer to the different needs (matrix) by proposing what activities? [30 min]







Introductory presentations: Livada case study

Mojca Nastran, Rozalija Cvejić Biotechnical Faculty, University of Ljubljana

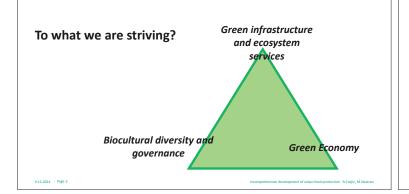
To what we are striving?

Urban Green Infrastructure can be used as a tool for integrated spatial planning and governance to deal with urban challenges, from climate change adaptation and biodiversity loss to enhancing human health and wellbeing, social cohesion and economic sustainability

The most important principles for UGI planning and governance: Multi-functionality, connectivity, multi-level, social inclusiveness and adoption of a communicative approach

strong relationship between UGI and objectives of social cohesion (as well as BD)

9.12.2014 - Page



ecosystem values and functions

 The concept of GI has gained prominence during recent years as a strategic approach to develop "an interconnected network of green space that conserves natural ecosystem values and functions, and that provides associated benefits to human populations"

9.12.2014 · Page 4

community participation

 local governments do not always need to act as initiators, implementers and managers, but can instead act as facilitators of initiatives to enhance UGI which are led by other actors. Such diversity in steering methods can boost local efforts to protect and enhance UGI's, broaden financial sustainability and enrich community particiaption

green economy

 UNEP (2011) defines a green economy as one that results in "improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities". In its simplest expression, a green economy is low-carbon, resource efficient, and socially inclusive. In a green economy, growth in income and employment are driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of BD and ESS.

9.12.2014 · Page !

incomprehensive development of urban food production - R.Cvejić, M.Nastran

- Page 6 Incomprehensive development of urban food production - R.Cvejić, M.Na

Livada case study







Livada, Ljubljanica, PRC, road ring

ng Livada case study

9.12.2014 · Page 7

Ljubljana

incomprehensive development of urban food production - R.Cvejić, M.Nastra

... we did some work at Livada on Monday 🛭











......

From field visit of Livada to Task of the workshop 6:

- Zone new urban green space implementing requirements of both GS and needs of Zavod Bob
- Our task is NOT to end up with a list of wishes and measures, but more!
- Our task is to create balanced set of measures, equally considering their direct and indirect impacts, that will sucesfully lead towards our goals.

9.12.2014 · Page 9

comprehensive development of urban food production - R.Cvejić, M.Nastra

workshop 6: incomprehensive development of urban food production

Rozalija Cvejić, Mojca Nastran, Biotechnical facutly, University of Ljubljana

Task of workshop 6:

- Zone new urban green space implementing requirements of both GS and needs of Zavod Bob
- Our task is NOT to end up with a list of wishes and measures, but more!
- Our task is to create balanced set of measures, equally considering their direct and indirect impacts, that will sucesfully lead towards our goals.

Incomprehensive development of urban food production - R.Cvejić, M.Nastran

Aspect	Ecosystem services		Bio-cultural	Green economy		
Impact						
			collective		social	
	heat wave	air quality		plant		green jobs
			social		entrepreneurship	
	reduction	improvement		cultivation		developmer
			action		development	

- Page 12 Incomprehensive develope

Social complexity: operational definition (Radej, 2014)

Ap	proach		simple	complicated	systemic	chaotic	complex
Fea	atures			X	À	A	9
•	triadic conceptualism horizontal intermediation		P	P + T	P + T	P + T + P +T	P + T + C
•			absent	punctual	relational	relational	complete
•	evaluation	primary	A, B, C	A, B, C	A, B, C	A, B, C	A, B, C
	domain	secondary	none	none	none	a ₁ ,a ₂ ,a ₃ ,	ac, ab, cb
•	constitution		pillars	intersections	triangle	Sierpinski triangle	Venn diagram
•	overlaps		none	point	vertex	vertex	area

To refresh: sites visited ----→ we will form groups

_3 groups



- 6000 m²
 Intended for community gardens by Municipality
- River LjubljanicaPath of Remembrance and Comradeship
- Slight waterlogging Outside strict center
- Vicinity of dwellings



Social learning mechanisms of multi-party collaboration to deliver social learning (van Herk, 2011):

- communities of practice
- learning and action alliance
- socially embedded institutions
- learning platforms or arenas
- learning networks for sustainable development
- learning organisation and networked organisations
- LEARNING ALLIANCE

"a group of individuals or organisations with a shared interest in innovation and the scaling-up of innovation, in a topic of mutual interest"

We will help ourselves: Learning alliance with Zavod Bob

- Institute Bob is NGO specialized in project learning of young adults
- the whole is more than the sum of the parts
- don't do everything at once
- programme "under construction"
- temporary use of space
- live space
- creative interaction with neighborhood
- mobility

Desiderata:

- motivation: public interest & window of opportunity
- needs: complex & multidisciplinary, all aspects of development must be met (environmental, social, economic)
- motto: the whole is more than the sum of the parts
- Imitations: low installation and maintenance costs
- content
- potential: tangible results in policy-making, design&planning, implementation
- do not forget: how to step out? afterlife?

references

van Herk, S., Zevenbergen, C., Ashley, R., Rijke, J. (2011). Learning and Action Alliances for the integration of flood risk management into urban planning: a new framework from empirical evidence from The Netherlands. Environmental Science & Policy, 14 (5), 543–554.







Joint Training School of COST Actions TU1201 and TD1106

Workshop 4: Social aspects of Urban Food Production

needs - values - perceptions - motivations

Dr. Maria Partalidou Rural Sociologist



Lecturer, University of Thessaloniki, Greece

parmar@agro.auth.gr, 2310 998701

http://rural-lab.agro.auth.gr/staff3.htm

Agriculture and the city have been going hand- in- hand for centuries. Nowadays, Urban Food Production is of great importance in contemporary societies; as urbanization is growing, food prices are still going up and food travels from all over the world in order to reach urban dwellers. Amidst the current economic crisis, with alarming phenomena of neopoverty and malnutrition, UA takes yet another crucial role in supporting vulnerable groups in cities and creating new jobs for unemployed. The module focused on two main points: how did we get to that chaos in food provisioning, the motives and other socioeconomic characteristics of urban farmers (either for hobby, or professionals) and the strengths, weaknesses and difficulties of these initiatives concerning both social and economic aspects.

The workshop was divided into three parts.

The goal of the **first part** was to test an image – based methodology (see Schmid and Patzel, 2010) for the Social construction of the rural and the urban. Students were asked to identify the leading images of the rural and the urban within a set of 50 different given photos.



Onwards students discussed and reflected upon the symbolic and guiding images and how these are constructed by the media or by everyday interaction; elaborating also on their own photos (that they were asked to bring prior to the school as task). Some overall points were that the distinction between 'urban' and 'rural', between the city and the country, is one of the oldest and most pervasive binaries (Woods, 2011) but students believe that today such kind of dichotomic relationships does not exist. Within cities one can find pockets of rurality (ruralisation of aspects of urban life) and vice versa. The point was that we have to see this relationship through the lens of a symbiosis: What the city can do for the rural and what the rural can do and how to take care of the city for the benefits of the society.

At this point students were also asked to identify "what is urban in urban agriculture". And some of their points are raised here.

- 1. the opportunity to organize meetings/ workshops/ events with different people from different backgrounds/ education. Urban Agriculture is really important for socialization into the city, to build social ties in the neighbourhood, for social integration of foreigners, to improve quality of deprived neighbourhoods. Urban Agriculture supports learning processes especially due to the practical activities (learning by doing) and the high sharing of ideas opinions in the garden. Urban Agriculture supports the improvement of civic duty, participation and action by the citizens. Through the "rural" practices, participants can improve the "urban" quality of life and wellbeing of their city.
- 2. "Urban" in Urban Agriculture is sense of place
- 3. Social: doing together
- 4. Its location within the urban area
- 5. Quantitative (% grey VS green)
- 6. Spontaneous and experimental gardening, not professional
- 7. if the garden is surrounded by contemporary buildings, it creates ambience of urban. In the opposite, if it is surrounded by houses in agricultural fields it is rural.
- 8. Its link and the ability access with/ to urban population
- 9. The limitations, demands and needs coming from "urbanity" of life and place
- 10. Purely spatial definition (land use) Agriculture= growing food & Urban= complex land use (Built up, Residence, Entertainment, Transport infrastructure, Industry)
- 11. More/ different infrastructure, facilities and opportunities through the proximity to the city and many people at one place (city).
- 12. Reduce food miles, could be agricultural activity between the concrete buildings.
- 13. The connection between farm activities with the city/ citizens. Farmers change their business model to connect with the costumers (direct sales, educational and leisure activities).
- 14. Urban people visiting the farm.
- 15. the actors, the air, immediate proximity of farm to central services and population centre, people and setting, the closest place portraits free
- 16. As landscape architect, I consider Urban Agriculture as a must and I believe Urban Agriculture is about multifunctionality and bringing together uses that do not naturally come together. For example, a park that is productive in a very dense urban area, centrally in the city. The park provides value for a farmer to live from; it is maintained only from the farmer and is a place for citizens to be in agriculture areas.
- 17. Urban is a "fancy" label nothing more, related (functionally or spatially) to or included in the urban area.
- 18. why does it matter???

During the **second part** of the workshop students were introduced to another binary "local or global" food systems. The aim of this task was to identify the actors in the food system, what are the emerging issues, how do we feed the city, what small farmers, in the periurban can do etc. Using the tables provided by the students (asked to develop prior to the school) students articulated the current situation in their city: food provisioning in their homeland and food miles (Lang, 2005)? Finally they discussed on what do they consider as «local» (Committe of the Regions, 2011) Some of the issues raised was that people,

especially in cities, do not really know where food comes from, as they are detached from the rural and the actual food production and this distance between the production and consumption is not only a geographical or economical one but it is also a social and political distance. People are disconnected from the political, environmental, economic and social impacts of their food choices.

The **third part** of the workshop was devoted to urban garden allotments. The students got familiar to emerging food provisioning practices such as urban agriculture and how it contributes to social inclusion. They were introduced to the results of FOODMETRES project (The 7th Framework Programme funded by European Commission) by Majda Černič Istenič with special focus on the identification of social groups to which gardeners belong, their motivations to grow their own food and their perception of ecological and social benefits of growing own food. They were divided into groups and one representative of the Zavod BOB network was appointed to them in order to elaborate on the needs and motivations of the group. Students were asked to make a list of needs and motives for the Zavod BOB case and propose tailored made actions for the urban garden. Each group gave an oral short presentation of the proposal.



References:

Lang, T. (2005). 'Food Control or Food Democracy?: re-engaging nutrition to civil society, the state and the food supply chain', Public Health Nutrition, 8, 6A: 730-737.

Schmid, O. and Patzel, N. (2010). Images becoming symbols for individual pathways in sustainable agriculture-practical testing of a methodology.

http://ifsa.boku.ac.at/cms/fileadmin/Proceeding2010/2010 WS2.4 Schmid.pdf

Woods, M. (2011). Key Ideas in Geography, Rural Series eds: Sarah Holloway, and Gill Valentine, Routledge.

Committee of the Regions (2011) on 'Local food systems' (outlook opinion) 2011/C 104/01 http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010AR0341&from=EN

Who are the gardeners and what motivate them to grow their own food? **Results from FOODMETRES**

Majda Černič Istenič **University Ljubljana Biotechnical Faculty**







Sample of the survey

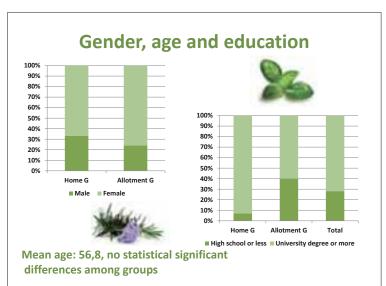
. Internet survey carried out during May - July 2014

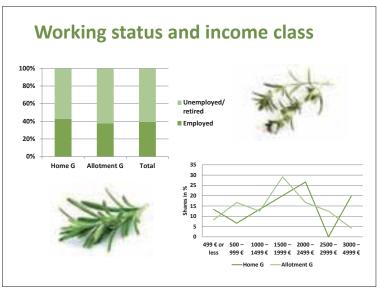
Sample:

	N	%
Home gardeners	36	53,7
Public and private allotment gardeners	31	46,3
Total	67	100,0









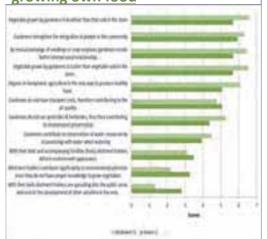




benefits (healthy and safe food, relaxation and exercise) than to environmental benefits, but significantly less to save money

Perception of ecological and social benefits of growing own food

- Organic food production is more valued by Allotment holders than Home gardeners
- Home gardeners are critical towards ecological impacts of Allotment holders' practices
- The awareness of the impact of urban gardening on "Zero carbon footprint" is not very high in both groups





What are your observations?



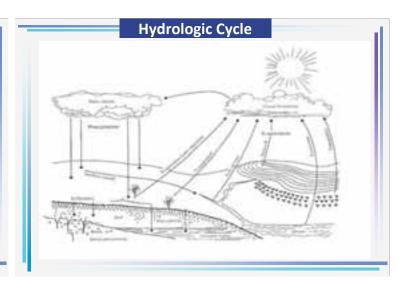
URBAN FOOD PRODUCTION: ENVIRONMENTAL CHALLENGE

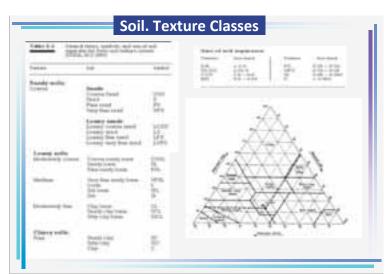
Field Work

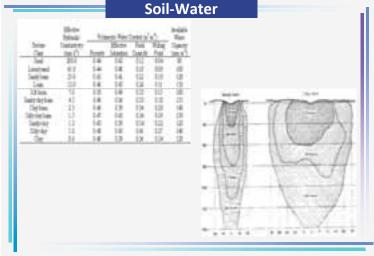
Paulo Brito da Luz – Senior Researcher

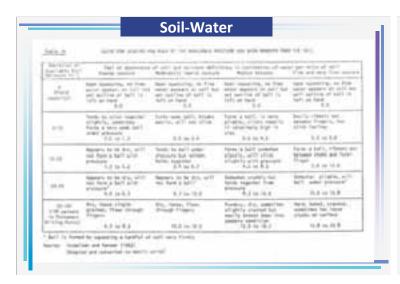
Instituto Nacional de Investigação Agrária e Veterinária, I.P. Av da República, Quinta do Marquês, 2784-505 Oeiras paulo.luz@iniav.pt Tel: 0 351 21 440 3566

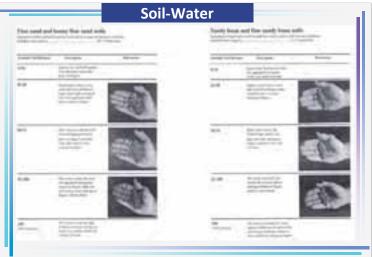
Joint Training School 21-24 October 2014 Ljubljana, Slovenia

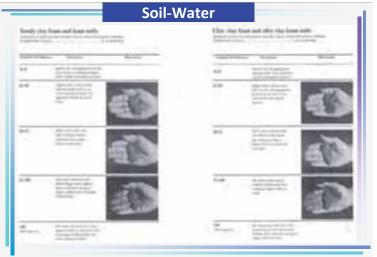


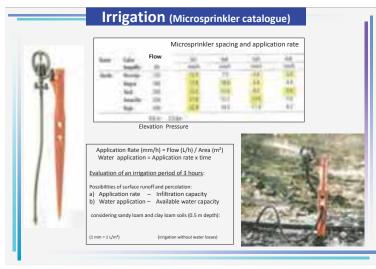


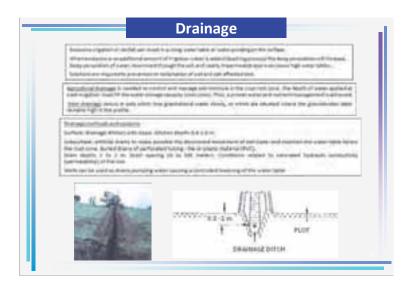


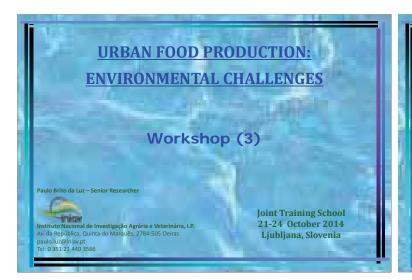








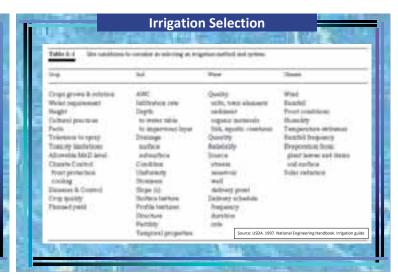


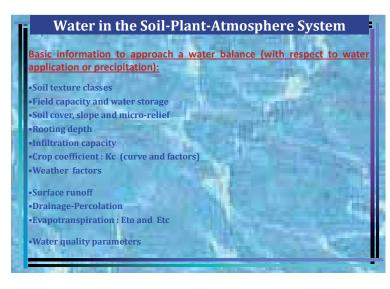


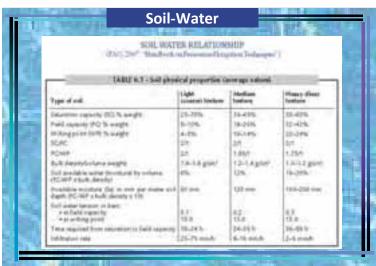
Introduction

- 1) The improvement of water governance must take into account the resources conservation (soil, water and energy) as well as the competitiveness of the agro-forestry management. Climate factors uncertainty determine the need for more suitable technologies on farm irrigation projects, adequate to each specific soil-plant-atmosphere system.
- Design and management solutions in the irrigation sector shall solve conflicts concerning technical, environmental and economic issues.
- 3) The implementation of political strategies promoting irrigation evaluation frameworks, to assure an integrated and appropriate water management since consistent criteria and indicators are selected (and generated by advanced research), may be an effective way to avoid practices with negative impact.

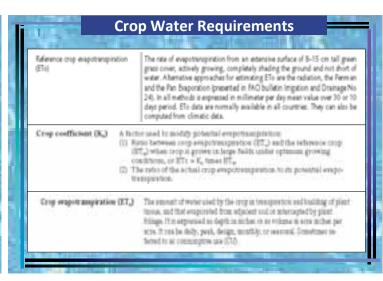
Agro-Environmental Indicators WATER USE Water use intensity (water amounts) Water stress (crop susceptibility to water deficit, evapotranspiration) Water use efficiency-uniformity (runoff, percolation) b) WATER QUALITY Water contamination (pollution, nutrients and pesticides) Salinity and Alcalinity c) SOIL QUALITY - LAND CONSERVATION Physical properties and conditions (depth, texture, structure, compaction, crust sealing) Hydro-dynamic parameters (Ks, water holding capacity) Soil erosion (erodibility) Fertility (organic matter) Salinity and Alcalinity (SAR) Topography (slope, relief) OTHER ECOLOGICAL ISSUES **Groundwater (level)** Energy conservation(pumping efficiency) Crops (rotation and adaptation)

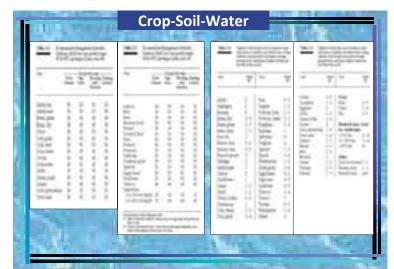


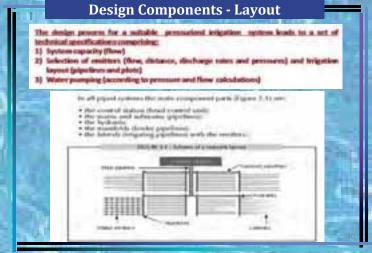


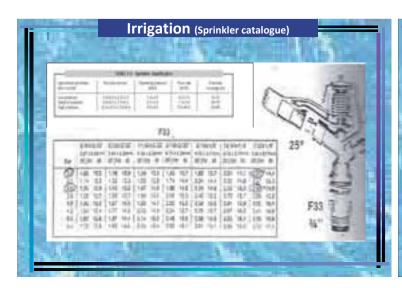


Soil-Water Soil-Water						
	Effective Hydrodic	Volu	netric Water	Contest (m²	n')	Avulable Water
Textus Class	Conductivity (mm h ⁴)	Parosity	Effective Setuption	Field Capacity	Wilting Foint	Capacity (nm.m ⁴)
Stad	200.0	0.44	0.0	0.12	0.04	80
Longuad	61.0	0.44	0.43	0.18	0.03	100
Sundyloum	25.0	0.45	0.41	0.22	0.10	120
Logn	13.0	0.46	0.43	0.26	0.11	150
Silt loss	7.0	0.50	0.49	0.33	0.13	110
Sendy day loan	4.5	0.40	0.36	0.33	0.10	155
Clayloan.	2.5	0.46	0.39	0.34	0.20	140
Silvydeyloun	1.5	0.47	0.43	0.34	0.19	150
Sundyclay	12	0.43	0.39	034	0.22	120
Silty day	1.0	0.48	0.43	0.41	0.27	140
Clay	9.6	0.48	0.39	0.36	0.24	120

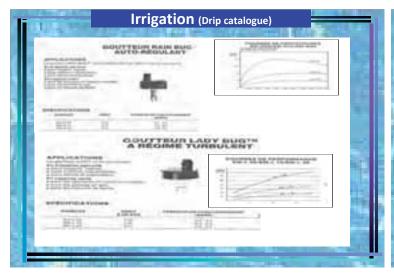


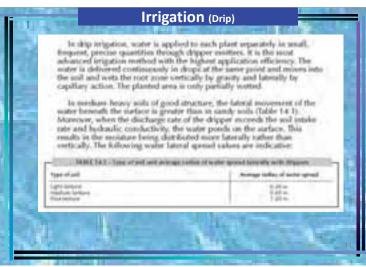


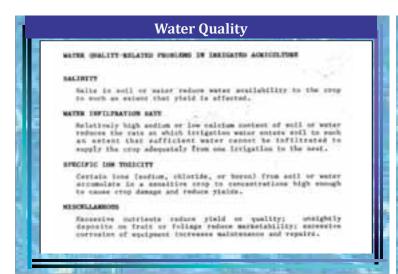


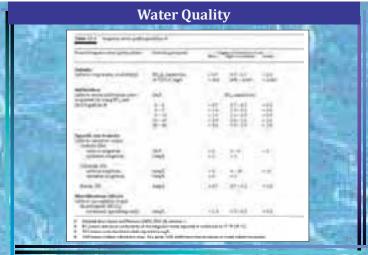


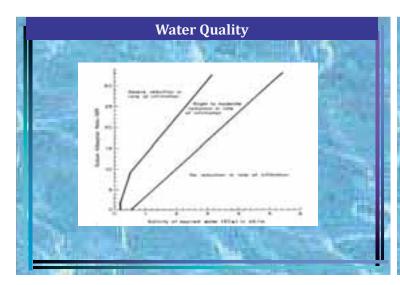


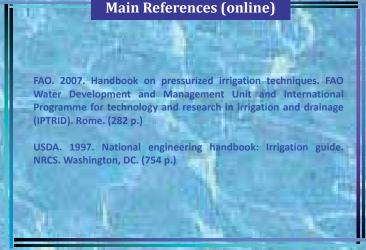












URBAN FOOD PRODUCTION: ENVIRONMENTAL CHALLENGES

Annexes

Paulo Brito da Luz – Senior Researcher

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Joint Training School 21-24 October 2014 Ljubljana, Slovenia

The "bit waste" paramage value in the soft is any data of containing to "material-waster" when excitated by the ori list opening. Travel is the containing to the desire of the containing the original containing the containing of the containing the containing

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(=Sa)

Sé polis

The whole energement of different layers thankered from top to licition, from and surface to mother mode. The top layer, called "A" homore, a normally cultivated for crips. The layer below is called homore "A" assally with higher day contest and further below is horizon "C". Horizons "W" and "B" can be defined so the soil.

Sols formed under different conditions have different profiles. Young sols formed by allural materials have moderate or no profile development and constinue glow a significant necessary in necessary within the light of the next zone.

An everyge depth of 70 cm and even less is suitable rearly for all kind of crops. Under noden origizion and nutrient supply methods (lengelion) soil deptic of 45 on are sufficient for most vegetables and shallow most trees.

blass of dry well per unit volume. Seteratored by drying to constant resight of 165 %, unasity explained as gmbs or bif91 Book Ingments 2 and or larger are unusity exciteded or currected for other measurement.

Spain exclude notice

(RAM)

The pair of ecospie in the coll, which present 40 to 70 parsent of the total multitle moreture (bi) worky storched by the prints. It is the product of the Tu rubpliedly Pfediat nations periodilensitus blot a digition if the Se in participa, heros. fieldy audition other Scott

Management allowed depletion (NAD)

The planned and nemotion distinct of the time of properties. It can be expressed as the percentage of evolutile and were expectly or as the depth of water that has been depicted from the root news illustrated under adventile and depicted.

 $RAM = Sa \times P$

(= P)

 $RAM = AWC \times MAD$

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This were notices and as colored and a selected and a

It is the malities with which the and conducts or beautiful water. It is partition of help hybrid Circlety Cod profy Spect or he of house of he party of he ingroments.

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The securit of union that must be agained to the soil to cause formigh. brief

Percision res-

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Main References (online)

FAO. 2007. Handbook on pressurized irrigation techniques. FAO Water Development and Management Unit and International Programme for technology and research in irrigation and drainage (IPTRID). Rome. (282 p.)

USDA. 1997. National engineering handbook: Irrigation guide. NRCS. Washington, DC. (754 p.)

PRESSURIZED IRRIGATION - SPRINKLER

SAMPLE CALCULATION (Excluding: System capacity, Total pressure, Pumping power and Layout with pipes and subunits/plots):

GIVEN:

Urban Allotment garden area (A): 0.5 ha

Crop Water Requirements:

Crop selection: Beans

 $Reference\ Crop\ Evapotranspiration\ -\ ETo\ (meteorological\ broadcast/historical\ series)\ -$ 5 mm/day

Crop Coefficient - Kc: 1.1

Crop Evapotranspiration – Etc = ET0 x Kc: 5.5 mm/day

Soil:

Soil Texture: Sandy loam

Water Application - Sprinkler System:

Spacing (sp x sp) – 12 x 12 m; Pressure – 2 Bar (Catalogue F33); Application Efficiency (AE) -80%; Irrigation duration (T) - 3 hours

Calculation:

Available Water Capacity – AWC=Sa (table)
Management Allowable Depletion - MAD (table 3.3)
Rooting Depth - Rd (table 3.4):
Water - Maximum Net Depth (mm) (AWC x MAD x Rd):
Sprinkler Irrigated Area (a = sp x sp):
Layout - Number of sprinklers (A/a):
Sprinkler Discharge - Dc (catalogue):
Application Rate - AR (precipitation) - (Dc/a):
Net Irrigation Depth - D - (AR x T x AE):
Irrigation Interval (D/ETc):

Evaluation of irrigation scheduling: Soil texture Irrigation duration 6 hours

Same D but Irrigation interval of 4 days

PRESSURIZED IRRIGATION - SPRINKLER

SAMPLE CALCULATION (Excluding: System capacity, Total pressure, Pumping power and Layout with pipes and subunits/plots):

GIVEN:

Urban Allotment garden area (A): 0.5 ha

Crop Water Requirements:

Crop selection: Beans

 $Reference\ Crop\ Evapotranspiration\ -\ ETo\ (meteorological\ broadcast/historical\ series)\ -$

5 mm/day

Crop Coefficient - Kc: 1.1

Crop Evapotranspiration – Etc = ET0 x Kc: 5.5 mm/day

Soil:

Soil Texture: Sandy loam

Water Application - Sprinkler System:

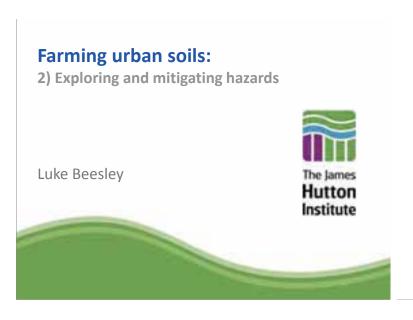
Spacing (sp x sp) - 12 x 12 m; Pressure - 2 Bar (Catalogue F33); Application Efficiency (AE) - 80%; Irrigation duration (T) - 3 hours

Calculation:

Available Water Capacity – AWC=Sa (table) 120 mm/m
$\label{eq:management} \textit{Management Allowable Depletion-MAD (table 3.3)} 40\%$
Rooting Depth – Rd (table 3.4): 0.6 m
Water - Maximum Net Depth (mm) (AWC x MAD x Rd): 29 mm
Irrigated Area (a = sp x sp): 144 m ²
Layout - Number of sprinklers (A/a): 35
Sprinkler Discharge - Dc (catalogue): 1020 L/h
Application Rate - AR (precipitation) - (Dc/a): 7.1 mm/h
Net Irrigation Depth - D - (AR x T x AE): 17.1 mm
Irrigation Interval (D/ETc): 3 days

Evaluation of irrigation scheduling.
Soil texture. Sandy Loam. Ks = 25 mm/h. Clay loam soil: Ks = 2.5 mm/h < 7.1 mm/h. Soil texture. Sandy Loam. Ks = 2.5 mm/h. Clay loam Soil: Ks = 2.5 mm/h < 7.1 mm/h. Thus, runoff/ponding problems (but first hour infiltration is above 2.5...)depending also on surface storage: slope (>5%) and residues (table "3") Irrigation duration 6 hours: 6 x 5.7 = 34.2 mm > 29. Thus, percolation problems Same D but Irrigation interval of 4 days: 5.5 x 4 = 22 mm of Etc > 17.1 mm. Thus, water deficits (Potential problems. Example: no soil water storage to compensate)

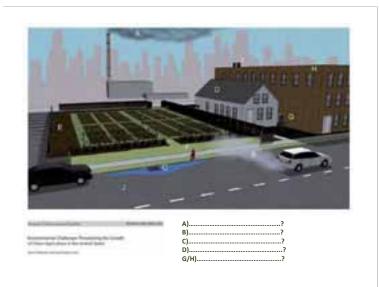
Obs: with drip irrigation systems, wetted or shade areas may influence application rates calculation and $\ensuremath{\mathsf{ETc}}$



Where's the risk?







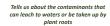
What do we measure?



The total amount of contaminant in the soil (%, or mg/kg). By X-ray scanning or acid digesting soils.



The soluble concentration of contaminant extracted from the water in soil pore spaces (mg/l). By vacuum extraction of soil pore water.



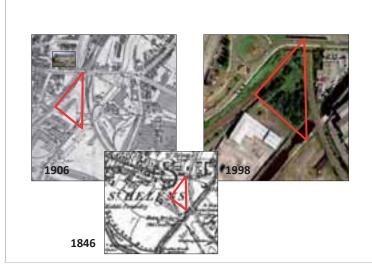
Case study; UK community garden

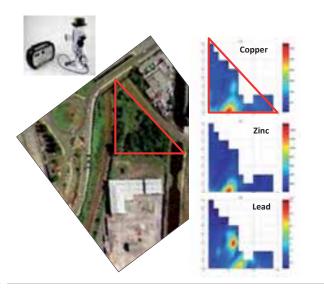




- -Rapid local industrialisation 1850-1950
- -Not disturbed soils, but aerial pollution
- -Previous investigations into contaminated lettuces etc













-		7	1
-	-	d	-
49		7	
511/3			++

- -Previous industrial activity reflected in soil composition
- -Measuring the 'total' and the 'plant available' concentrations
- -Measuring the concentration in plant matter

UK Soil guide values

mg kg ⁻¹	As	Cd
Residential 'direct contact with soil'	32	10
Allotments 'eating produce grown in soil'	43	1.8
Industrial	630	230
Industrial	630	230

Which land use?

Case study; central Madrid gardens



F. El Retiro



- -City central park
- -Local authority site, planned, managed, wastes and soils controlled
- -Education centre on site





D. Esta Es Una Plaza





- -Derelict land, previously industrial?
- -Use of local soils in beds and terraces
- -Community led projects



Soils

Site	Initial findings	Sources
D. Esta Es Una Plaza	Medium/high level Ag, Hg, Pb	Old metal plating industry
F. Retiro	Low level Pb	Traffic emissions

Crops

Site	Initial findings	Impacts
D. Esta Es Una Plaza	Tobacco with Ag, Cu, Hg, Pb	Direct intake of metals
F. Retiro	Low level Pb	Minimal intake of metals

What are your next steps...

- -More samples, more analysis?
- -Survey people on their intake of crops?
- -Restrict children playing in the soil?
- -Close the site down and remediate soils?

Discuss the options...

Farming urban soils:

3) Adding environmental value

Luke Beesley



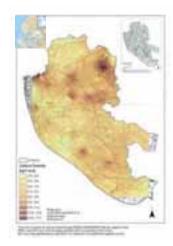
'Improving' soils?

- -Tillage & ground preparation
- -Adding organic fertilisers...



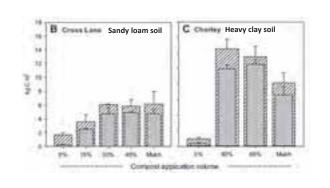


- ...composts, manures, ash waste etc
- ...can add C, N and other nutrients
- ...and can increase pH in

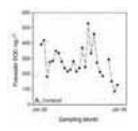


- -Urban green-spaces can store C...
- -especially when compost is applied
- -urban soils can be manufactured to store C

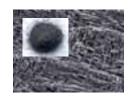








- -Adding compost changes soil chemistry
- -Carbon dissolved in water acts as a 'carrier' for contaminants
- -Thus, adding compost can cause contaminants to be more 'mobile' within the environment



- -Adding biochar adds lots of carbon, but negligible nitrogen
- -Large surface area can 'adsorb' contaminants
- -Plants may avoid it





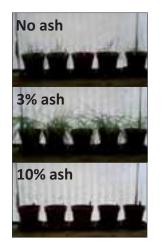
- -Some urban wastes may contain contaminants
- -Painted and preservative treated wood contains As, Cr, Cu and other metals
- -When burned the following ash is a concentrated source of metals

Wood ash experiment; farm example

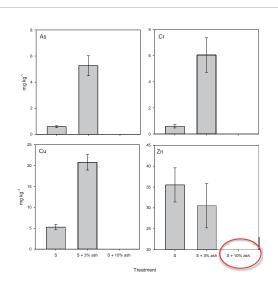




- -Wood ash from local biomass energy boiler
- -Mixed sources of wood, some 'virgin' other painted etc
- -Added ash to soils at 3 and 10% volumes and grew Ryegrass



- -Soil pH increased from 5 to 7.5
- -Low amounts of ash increased Ryegrass biomass
- -High amounts of ash; no plant growth
- -Contaminants in plants?



Results

- -Low amounts of ash increase pH, adds some useful nutrients and produce more biomass
- -Increases in contaminants found in Ryegrass; impacts for grazing animals, crop plants etc
- -Too much ash completely toxic; no plants will grow

Options

- -Be careful to burn non contaminated woods?
- -Add only small amounts of ash...how much?
- -What can you recommend?

Harmony Park: A Decision Case on Gardening on a Brownfield Site

Ashley Marie Raes Harms, DeAnn Ricks Presley,* Ganga M. Hettiarachchi, Chammi Attanayake, Sabine Martin, and Steven J. Thien

ABSTRACT In March of 2009, Mr. John Holloway and his neighbors in the Harmony Park district of Kansas City, MO, were excited to begin gardening on a vacant city lot in their neighborhood. The neighborhood, like many in urban areas, had once been residential interspersed with small establishments including restaurants, shops, and businesses such as auto body shops and gas stations. The under-utilized lot had once had multiple abandoned houses on it that had been torn down about two decades earlier, but since then the lot had been empty, overgrown with weeds, and a neighborhood eyesore. Mr. Holloway, a leader in his community, hoped that a community garden would not only improve the aesthetics of his neighborhood, but also provide a local, inexpensive source of fresh fruits and vegetables for his neighborhood, which is located in a food desert. When concerns arose about soil contaminants on the site, Mr. Holloway grew panicked that a community garden on a brownfield site would do more harm than good in his neighborhood. This case focuses on Mr. Holloway's decision of whether to continue gardening on the brownfield site in Harmony Park. The decision requires that students evaluate environmental, agronomic, human health, social, and economic issues related to the problem Mr. Holloway faces. Objectives of this case are for students to analyze and discuss data and concepts related to gardening on brownfield sites, urban soil contamination, urban food deserts, and human health.

In 2010, 83.7% of the United States population was living in urban areas, and that percentage is projected to increase in the future (U.S. Census Bureau, 2011); however, this population growth is not uniform throughout the various neighborhoods in cities. Many urban neighborhoods with higher poverty rates (30% or greater) have experienced a rapid decline in population since the 1980s. Nearly 15% of urban land in U.S. cities, or approximately 1,800 hectares per city, is vacant or abandoned (Pagano and Bowman, 2000). As urban populations transitioned to suburbs, inner-city businesses, houses, and parking lots were abandoned or razed, leaving open, vacant lots. Publicly and privately owned vacant lands and brownfields in many U.S. cities are quickly being converted to urban gardens and farms by individuals, families, neighborhoods, schools, nonprofit organizations, and many other groups or organizations. According to the Small Business Liability Relief and Brownfields Revitalization Act (U.S. Government Printing Office, 2002), brownfields are defined as "real property of which the expansion, redevelopment, or reuse

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may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant."

The United States has an estimated 450,000 to 1 million brownfields, many of which are often considered potential gardening sites due to their proximity to residential areas. This problem case is based on an actual situation faced by a neighborhood group that established a community garden on a brownfield site. Recommendation for best management practices (BMP) based on soil analyses for both agronomic and environmental parameters must be made to reduce any potential risk from gardening in the contaminated soil.

20 February 2008

John Holloway grew up in Harmony Park, and he built his life and career in this area of Kansas City. He saw first-hand that more and more of the neighborhood's houses were left empty, unkempt, and eventually boarded up or razed. Mr. Holloway knew that he had to do something to remedy this and improve his neighborhood, his lifelong home. He was concerned that if nothing was done, his neighborhood would become nothing but endless vacant, unused lots and unsafe structures. Mr. Holloway envisioned a more prosperous and vibrant future for his neighborhood and fellow neighbors.

Abbreviations: BMP, best management practice; DDE, dichlorodiphenyldichloroethane; DDT, dichlorodiphenyltrichloroethane; FDA, Food and Drug Administration; GPS, global positioning system; ICP-OES, inductively coupled plasma optical emission spectrometer; USDA-NRCS, United States Department of Agriculture Natural Resources Conservation Service; USEPA, United States Environmental Protection Agency; XRF, x-ray fluorescence spectrophotometer.

Neighborhood History

A great deal of Kansas City's African-American history took place in the area of the city that included Harmony Park, and many of the city's notable African-American leaders once resided here. In the last 50 years, the neighborhood experienced a population decline from 11,700 to 2,500. In 2008, nearly 38 hectares or approximately 25% of the land area in the Harmony Park neighborhood was vacant lots. After the decline in population, many historic buildings and residences fell into disrepair, and vacant lots turned into weedy sites or were used for illegal trash dumping. The sights of boarded-up homes and businesses and the demolition of condemned structures were not uncommon. A decline in the number of businesses throughout the Harmony Park neighborhood also forces current residents to travel farther from home for basic needs such as groceries, fresh produce, medicines, and clothing.

A Neighborhood in a Food Desert

Low-income, minority neighborhoods in many cities throughout the United States are often disproportionately located in food deserts (Chung and Myers, 1999; Powell et al., 2007; Zenk et al., 2005). A food desert, as defined by Cummins and Macintyre (2002) is a "poor urban area, where residents cannot buy affordable, healthy foods." The lack of access to healthy, fresh, affordable foods threatens the well-being of millions of Americans who live within food deserts, including the residents of Harmony Park.

Low-income urban residents face many obstacles to eating a healthy diet; one is a shortage of places to shop. Poorer neighborhoods throughout the United States have nearly 30% fewer supermarkets than the highest-income neighborhoods, so access to food is more often limited to smaller convenience stores (Chung and Myers, 1999; Giang et al., 2008; Morland et al., 2002a; Weinberg, 1995). Poor minority neighborhoods are even less likely to have access to a supermarket than poor white neighborhoods (Morland et al., 2002b; Powell et al., 2007; Zenk et al., 2005). The smaller convenience stores in these food deserts often offer a lower selection of higher priced, lower quality food items (Chung and Myers, 1999; Hendrickson et al., 2006; Zenk et al., 2005). Access to food is further limited for many low-income residents due to a lack of reliable transportation and the greater distance from home to store (Walker et al., 2010). The Harmony Park neighborhood does not have a local grocery store or supermarket, and gas station convenience stores are the only locations in the neighborhood where residents can purchase food items. Jackson County, MO, where Harmony Park is located, saw a 10 to 24.9% decrease in grocery stores from 2007 to 2008 (USDA-ERS, 2011).

The lack of affordable, healthy, and fresh foods decreases the ability of Harmony Park residents to maintain a healthy diet. Research has found that low-income populations, especially minorities, consume fewer fruits and vegetables than currently recommended by the Food and Drug Administration (FDA) (Kratt et al., 2000; Resnicow et al., 2001). A healthful, balanced diet contributes to a healthy body and decreased instance of dietrelated health issues (Ness and Powles, 1997; Van Duyn and Pivonka, 2000). Food desert neighborhoods are disproportionately affected by adverse diet-related health problems such as type 2 diabetes, cancer, obesity, heart



Fig. 1. Michigan Avenue vacant lot prior to garden establishment.

disease, and premature death (Deaton and Lubotsky, 2003; Hendrickson et al., 2006).

Mr. Holloway and other community members were aware of these economic, social, and health problems in their neighborhood and set out to make changes for themselves, their friends, and neighbors. Efforts began in 2008 to revitalize this historic neighborhood. The Harmony Park Neighborhood Improvement Association formed and worked in conjunction with the University of Missouri-Kansas City and governmental groups to implement historic preservation plans for many buildings in the neighborhood and to transform many vacant lots into usable green spaces. The Harmony Park Neighborhood Improvement Association wrote an action plan, and its first recommendation was to "enhance self-sufficiency and economic growth through the development of urban agriculture on vacant lots."

THE CASE

In early 2009, Mr. Holloway and his neighbors gathered to discuss what should be done with a vacant lot on Michigan Avenue. Mr. Holloway, president of the Harmony Park Neighborhood Improvement Association for 15 years and resident of the neighborhood, led the neighborhood gathering. As a prominent figure and friend to those in the neighborhood, Mr. Holloway is passionate about uplifting Harmony Park and reintroducing the neighborhood to the rest of the Kansas City metropolitan area as the historically and culturally rich community that it once was. His efforts already can be seen on many of the residential streets in Harmony Park. Houses that once were boarded up and abandoned are now hopeful reminders of the resilience of this neighborhood, standing strong with fresh paint and new windows, roofs, and residents. Although abundant strides have been made to revitalize the community, several vacant lots on each residential block are empty, weedy dumping grounds and remain eyesores. Mr. Holloway wanted to do something about the 38 hectares of unused, vacant lots throughout Harmony Park.

The Michigan Avenue Vacant Lot

An example is one of three vacant lots located on Michigan Avenue (Fig. 1). The 42 m by 37 m lot was situated within a residential area of the Harmony Park



Fig. 2. Michigan Avenue vacant lot and two boarded-up homes to the north and south of the lot

neighborhood. To the north and south edges of the lot were two uninhabited, boarded-up houses (Fig. 2). The lot had a westerly ascending slope of 2 to 9% to an elementary school yard that was once the site of an auto body shop. The east edge was bordered by Michigan Avenue, across which was a row of inhabited houses. Four houses once stood on the site, but they fell into disrepair and were razed and cleared away in the 1990s. Remnants of these former houses, such as broken glass, bricks, paint chips, wood, and cement remained in the soil. The site's soils were subjected to many anthropogenic impacts and were mapped by the U.S. Department of Agriculture-Natural Resource Conservation Service (USDA-NRCS) as an Urban land-Harvester complex, a soil formed in less than 40 inches of disturbed material over a truncated loess (Soil Survey Staff, 2001).

Mr. Holloway and neighbors wanted to craft something on the lot to improve the neighborhood. The group discussed many potential uses for the lot, including a park, a playground, a flower garden, and an orchard. In March 2009, Mr. Holloway and his fellow neighbors finally settled on the decision to establish a community garden. They envisioned a community gardening space with numerous plots to grow vegetables, fruits, herbs, and flowers. Each 28 squaremeter plot was to be assigned to an individual or family in the neighborhood, and gardeners could keep what they grew and give away extra to neighbors. The garden would provide a local source of fresh produce for Harmony Park community residents that they wouldn't have to venture far from home to get and that would improve the diets of these low-income individuals and families. Mr. Holloway thought a garden would be aesthetically pleasing as well, and a relaxing place for recreation and socializing.

By April 2009, the vacant lot on Michigan Avenue was cleared of weeds and loose debris and the soil was tilled in preparation for establishing a garden that spring and summer (Fig. 3). Even before the plots were delineated, all available plot spaces were claimed by Harmony Park residents. Elderly women, young men, and families with children were all excited to enjoy the recreation of gardening and to eat the fresh produce from their plots. The neighborhood was eager to move forward with plans for the community garden, and many gardeners began to plant early spring crops such as Swiss chard, lettuces, and spinach in anticipation of their first growing season on their new garden plots.

The Problem

One morning as Mr. Holloway was reading the paper and drinking his morning cup of coffee, he came across a newspaper article on President Obama's new garden (Burros,



Fig. 3. Community garden site cleared of all debris, weeds, and woody vegetation.

2009). The article read, "When the Obamas decided to turn some of the South Lawn at the White House into a kitchen garden, they did what many smart urban gardeners do: they had the soil tested for its nutrients and potential contaminants, like lead." Mr. Holloway felt alarmed; he had not thought to have the soils tested for potential contaminants. He wondered what types of contaminants could possibly be in a soil in his neighborhood. "Surely we have nothing to worry about," he thought. Mr. Holloway visited the garden that evening to pick his newest batch of ripe tomatoes and okra and saw the grandchildren of his elderly neighbor, Norma, playing in the soil of her garden plot as she weeded and watered her crops. He began to worry, thinking, "If our soil is contaminated, then are Norma's grandchildren at risk from playing in the soil?" And what about the tomatoes and okra he had planned to bring home to family for dinner—could they be contaminated, too? Although a garden was a beautiful addition to their neighborhood, Mr. Holloway did not want to put any of his friends or family at risk. He decided to add his new harvest of fresh veggies to the compost pile instead of taking them home for dinner. He needed more information before he could feel safe eating anything grown on the site.

The next day, Mr. Holloway called the extension service at the nearby land-grant university to request help with his problem. Mr. Holloway knew he needed to determine whether it was safe to garden on and eat food from the community garden lot; he especially wanted help figuring out how to better manage the urban soils to keep everyone healthy. What good is a beautiful community garden in a food desert if it could be hurting everyone he loves? The garden was supposed to improve his neighborhood's health and vitality, not threaten it.



Fig. 4. Field-portable x-ray fluorescence spectrophotometer sampling for preliminary total soil trace element concentrations.

Soil and Plant Tissue Sampling and Testing

Soil scientists from a nearby university came to help Mr. Holloway assess the soil quality, potential presence of contaminants, and any potential human health risks of the Michigan Avenue community garden site. Screening of the site for trace elements (specifically lead [Pb], cadmium [Cd], and arsenic [As]) was done using a field portable x-ray fluorescence spectrophotometer (XRF) analyzer (Thermo Scientific, Billerica, MA) (Fig. 4 and 5). Measurements were taken every 3 m across the site in a rough grid pattern. The XRF measurements were georeferenced using a global positioning systems (GPS) unit. Total soil lead concentration maps were created using this spatial data to determine areas of high or low total soil lead concentrations (Fig. 6). Eight soil samples were collected from the site for confirmation analysis of the total soil lead concentration by laboratory digestion using method 3051A (USEPA, 2007) followed by analysis using an inductively coupled plasma optical emission spectrometer (ICP-OES) (Table 1). Soil samples were collected from areas where compost had been added to garden plots where compost had not been added. Soils were digested as described before and the total soil lead concentration was also measured for these samples using the same ICP-OES method (Table 2).

The soil scientists told Mr. Holloway that the common sources of trace elements in urban environments included

Table 1. Total soil lead concentrations of the Michigan Avenue vacant lot in the spring of 2009.

vacant lot in the spring of 2009.	
Soil sample	Total lead
	mg/kg
1	288
2	254
3	335
4	173
5	252
6	141
7	183
8	185
Average	226



Fig. 5. Conducting preliminary soil tests for total soil trace element concentrations on the Michigan Avenue vacant lot using the field-portable x-ray fluorescence (XRF) spectrophotometer. A handheld GPS was used to record the position of the XRF measurement, and a field notebook was used to record the GPS waypoint and the XRF sampling point number. The data is downloaded from both devices and merged in a spreadsheet.

the past use of leaded paint and gasoline, historical pesticide use, and industrial and commercial activities. The potential sources of contamination of urban areas like the Michigan Avenue lot are shown in Table 3. Additional soil samples were collected to analyze for chlordane (C1-C3, Fig. 6), dichlorodiphenyltrichloroethane (DDT), and dichlorodiphenyldichloroethylene (DDE) (C4-C9, Fig. 6). Chlordane, a pesticide and common persistent urban organic contaminant, was used to treat house foundations for termites and is commonly found in soils around house foundations or where previous structures stood. Because houses border the lot and rubble from formerly razed houses was found on the site, the soil scientists told Mr. Holloway that additional soil tests would need to be conducted to determine if chlordane was present in the soil. The soil scientist also explained that DDT was a commonly used insecticide before it was banned in the United States

Table 2. Average total soil lead concentrations of the Michigan vacant lot before and after the addition of compost in the spring of 2009.

Before or after adding compost	
	mg/kg
Before adding compost	245 ± 21
After adding compost	145 ± 20

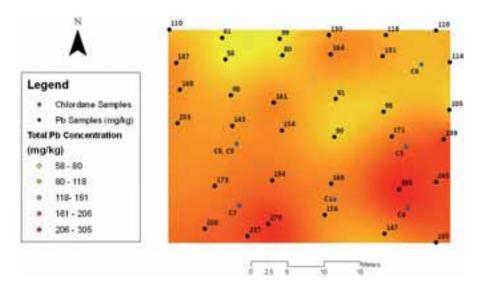


Fig. 6. Chlordane sample locations and field portable x-ray fluorescence sampling locations with preliminary total surface soil lead concentrations across the Michigan Avenue community garden site. The color gradient reflects an interpolation of the lead values, and was created by using the inverse-distance weighting method in a geographic information systems software package.

in 1972, and it is found in soils where pesticide spray was common, so tests would be done to determine its presence. DDE is an intermediate product of DDT degradation in the soils and can be found in the soils where DDT was applied. Chlordane, DDT, and DDE in the soil samples were extracted using the EPA 3540C, the Soxhlet extraction method, and were analyzed using gas chromatography following EPA 8081A method. The concentration of chlordane was below the minimum detection limits of the laboratory method (i.e., 0.05 mg/kg). Concentrations of DDT and DDE were low: the range of DDT concentration was 0.04 to 1.3 mg/kg, and maximum DDE concentration found was 0.04 mg/kg. Testing concluded that these pesticides were not a great concern at this site.

Background on Brownfields and Urban Soils

Natural and urban-derived soils vary considerably. Urban soils are often highly disturbed and/or contaminated due to human activities (Bullock and Gregory, 1991; Craul, 1999; Reimann and De Caritat, 2000). Urban soils are often more physically, chemically, and biologically heterogeneous than naturally derived soils, posing unique management issues. Previous land use and human activities on and around an urban site (e.g., industries, automobile emissions, leaded paint, mining, and use of man-made products) can lead to increased accumulation of trace elements and organic compounds or soil contamination (Boyd et al., 1999; Mielke et al., 1999; Mielke and Reagan, 1998; Nriagu, 1979, 1996). Lead, cadmium, and arsenic are the

Table 3. Common urban soil contaminants and their sources (modified from Angima and Sullivan, 2008; USEPA, 2012, 2013).

General source	Examples of previous site uses	Specific contaminants
Paint (before 1978)	old residential buildings; mining; leather tanning; landfill operations; aircraft component manufacturing	lead
High-traffic areas or near roadways	next to trafficked roadways or highways; near roadways built before leaded fuel was phased out	lead, zinc, polycyclic aromatic hydrocarbons (PAHs)
Treated lumber	lumber treatment facilities; structures built with treated lumber	arsenic, chromium, copper, creosote
Burning wastes	landfill operations	PAHs, dioxins
Contaminated manure	copper, zinc salts added to animal feed	copper, zinc
Coal ash	coal-fired power plants; landfills; homes with coal furnaces	arsenic, selenium, cadmium, sulfur
Biosolids	wastewater treatment plants; agriculture	cadmium, copper, zinc, lead, persistent bioaccumulative toxins (PBTs)
Petroleum spills	gas stations; residential/commercial/industrial uses (anywhere an aboveground or underground storage tank is or has been located)	PAHs, benzene, toluene, xylene, ethyl benzene
Pesticides	widespread pesticide use, such as in orchards; pesticide formulation, packaging, and shipping	lead, arsenic, mercury, dichlorodiphenyltrichloroethane (DDT), chlordane, and other chlorinated pesticides
Commercial or industrial site use		PAHs, petroleum products, solvents, lead, and other heavy metals (such as cadmium, arsenic, chromium, lead, mercury, and zinc)
Dry cleaners		stoddard solvent and tetrachloroethene
Metal finishing operations		metals and cyanides

Table 4. Recommended gardening practices based on results of soil test for lead, modified from Angima and Sullivan, 2008. The modification is the addition of the 250 to 400 category, which was added because of concerns specific to root crops (Ganga Hettiarachchi, personal communication, 25 Oct. 2013).

Amount of lead	Gardening practice
Less than 50 mg kg ⁻¹	Little or no lead contamination in soil. No special precautions needed.
50 to 250 mg kg ⁻¹	Some lead present from human activities. Grow any vegetable crops. Choose gardening practices that limit dust or soil consumption by children.
250 to 400 mg kg ⁻¹	Do not grow root crops. Choose gardening practices that limit dust or soil consumption by children.
400 to 1200 mg kg ⁻¹	Do not grow root crops and low-growing (difficult to clean) leafy vegetables. Choose gardening practices that limit dust or soil consumption by children.
Greater than 1200 mg kg ⁻¹	Not recommended for vegetable gardening. Mulch and plant perennial shrubs, groundcover, or grass. Use clean soil in raised beds or containers for vegetable gardening.

most common contaminants in urban environments. Trace elements occur in small quantities and are found naturally in many soils; however, urban soils often contain elevated concentrations of non-naturally occurring trace elements and compounds due to human activities (Finster et al., 2004). Soils are a sink for many trace element contaminants, and most of these urban soil contaminants are persistent, immobile, and non-biodegradable (Boyd et al., 1999; Finster et al., 2004; Mielke et al., 1999; Mielke and Reagan, 1998; Watt et al., 1993).

Contaminated urban soils require unique management techniques due to their heterogeneity and potential contamination to reduce exposure pathways and any human health risks. Past and forgotten sources of contamination, razing of aboveground materials, and mixing of urban soils can lead to sites with variably distributed contamination, making understanding and minimizing human health risks difficult.

Urban soils are an important pathway for human exposure to trace elements and organic contaminants (Boyd et al., 1999; Gallacher et al., 1984; Mielke et al., 1999; Mielke and Reagan, 1998; Watt et al., 1993). This is troublesome, because common urban soil contaminants (e.g., lead and arsenic) are toxic to humans, especially children (Boyd et al., 1999; Finster et al., 2004; Hettiarachchi and Pierzynski, 2004; Mielke et al., 1999; Mielke and Reagan, 1998). Gallacher et al. (1984) found that residents living in areas with highly lead-contaminated soils had higher blood lead levels than residents of areas with minimally contaminated or uncontaminated soils. Humans may be exposed to soil contaminants through three main pathways: ingestion, inhalation, and dermal exposure (Boyd et al., 1999; Mielke et al., 1999; Mielke and Reagan, 1998).

The two main exposure pathways affecting urban dwellers, especially gardeners and farmers, are ingestion of soil dust and ingestion of food grown in contaminated soil (Cambra et al., 1999; Hawley, 1985; Hettiarachchi and Pierzynski, 2004). Direct ingestion of soil dust may be from putting soil or dirty fingers in mouths, which is a typical occurrence for young children when playing outdoors, or from soil dust that adheres to produce, hands, and clothing. Root crops grown directly in the soil and crops that grow close to the soil, such as spinach, often have soil dust adhered to the tissue when harvested (Finster et al., 2004). Ingestion of food grown in contaminated soil also may pose a risk to human health if the bioavailability of the contaminant is high and if translocation of the contaminant from soil to the edible portion of the plant has occurred (Finster et al., 2004; Purves and Mackenzie, 1970). The bioavailability of an individual contaminant affects the plant uptake and translocation of the

contaminant from soil into the roots, from the roots to shoots, and shoots to fruiting bodies. Hettiarachchi and Pierzynski (2004) defined bioavailability as the proportion of a soil contaminant that is available for absorption into an organism. Some researchers have attempted to develop rules of thumb for managing soils based on the measured contaminant concentration (Table 4). Individuals in direct contact with urban soil should be aware of these issues so they can minimize the environmental and human health risks associated with soil contamination.

THE DECISION FOR STUDENTS

Mr. Holloway is frightened to make a decision about promoting community gardening on the Michigan Avenue site. He wants to improve his neighborhood with this beautiful garden, to give his neighbors the opportunity for recreation and socializing while gardening, and to provide everyone with fresh, healthy, and local produce. But what if their health is at risk from lead contamination, if not other chemicals or metals? He is alarmed, but he doesn't want to also alarm his friends. "We've put so much effort into this garden, and it has already become a bright spot in Harmony Park. What should I do?"

Case Objectives

Upon completion of this case, students should be able to:

- Discuss issues related to brownfields, food deserts, urban soil quality and contamination, and growing food on mildly contaminated soils.
- Discuss the common urban soil quality and contamination issues related to historical and current human impacts on urban lands.
- 3. Discuss how food deserts affect urban dwellers' ability to access healthy, fresh foods.
- Discuss the three pathways and the potential human health risks associated with exposure to contaminated soil.
- Uncover relevant scientific information and evaluate its validity.
- Analyze site-specific data on the contaminants tested and the potential risks associated with growing food crops on brownfields.
- Formulate a BMP recommendation for gardening on a brownfield given that the gardeners have already begun growing on the site.

Additional Reading for Teachers and Students

- Cornell Waste Management Institute. 2009. Soil contaminants and best practices for healthy gardens. http://cwmi.css.cornell.edu/Soil_Contaminants.pdf (accessed 4 Feb. 2014).
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TEACHING NOTES

Case Uses

This case could be used effectively by high school or undergraduate students interested in urban soil quality, soil contamination, urban soil sampling, food deserts, and urban agriculture. The case could help students investigate the complex environmental, human health, social, and economic issues of urban agriculture on brownfields. Students with varied academic and personal backgrounds could make use of this case to practice the following skills: uncover and assess validity of scientific information; interpret research data; analyze social, economic, environmental, and human health issues associated with a complex real-world problem; and formulate a BMP protocol to mitigate human health risk for urban growers and consumers. Instructors should emphasize that additional information from scientific literature and reference guides will be necessary to make a sound decision.

Students could be given the case several class periods before the scheduled discussion in class, as well as additional reading materials, and should be encouraged to research case topics independently. Instructors should separate teaching resources before making the case and list of resources available to students. Students should arrive to the discussion period prepared to discuss the case problem and topics with their peers and instructor.

Questions to Stimulate Discussion and to Examine the Issues of the Case

Review the evidence of contamination on the site as well as the social, economic, human health, and environmental issues of this case and answer the following questions:

1. What is the dilemma that Mr. Holloway faces? Should he and his fellow neighbors continue to garden on and eat produce grown on the brownfield site? Is it a good idea to convert the vacant city lots in this neighborhood into community garden spaces to grow fresh foods for neighborhood consumption?

- 2. Does Mr. Holloway have a legitimate reason to worry about the health of his neighbors, friends, and family who are gardening on the site? Who will Mr. Holloway's decision affect?
- 3. Should Mr. Holloway tell the gardeners on the site about the contamination?
- 4. What are the benefits of locating the community garden on a brownfields site?
- 5. What are the disadvantages of locating the community garden on a brownfields site?
- **6.** How are soils tested? Is it like the television show "CSI: Crime Scene Investigation," where you put a soil sample into an analytical machine and get a readout of all possible contaminants? Are there any university or private soil testing labs in your state? How much does it cost to test one soil for lead? Do the benefits of growing fresh produce for the neighborhood outweigh the disadvantages associated with the urban soils of the lot?
- 7. Based on the evidence, what BMPs would you recommend that Mr. Holloway and the other gardeners implement on the site? What, if anything, could be done on the site to ensure the health of growers and consumers?

Answers to Questions, and Ideas for Classroom Management

- 1. Mr. Holloway is a community leader.
- 2. The total soil lead concentrations are mildly elevated (Table 1, 2, and 4), indicating the past human impacts have raised lead concentration above the natural soil levels. Mr. Holloway and the other gardeners should be aware that the soils they are growing in contain elevated levels of lead; however, these concentrations should not provoke panic for these gardeners. The main risk from lead is through eating or inhaling soil. Lead is not a plant nutrient, so uptake into plant tissues is not a concern.
- 3. Mr. Holloway is a leader in the community, and many people are looking to him for guidance on whether or not they should continue to garden at the site. His family, neighbors, and any other consumers of produce from the site will be affected by his decision to continue or to stop gardening on the Michigan Avenue lot. If they continue gardening without taking the proper precautionary measures, then they may be endangering themselves; however, the soil total lead concentrations are not elevated enough to warrant the immediate termination of gardening on the site. Precautionary measures would include the following. First, collecting and submitting soil samples to a laboratory would help them to assess the overall risk of gardening on the site. Second, if the soil is only mildly contaminated and is thus still safe for gardening, then the gardeners should avoid inhaling dust while working. One solution is to cover walkways with fabric or mulch to keep the dust down. If they are doing an operation that is particularly dusty, such as tillage, they should consider wearing a dust mask. Gardeners should also avoid the transfer of soil into their mouths, for example, to wash their hands and produce with soap and water before eating. Consumers should be told to wash produce thoroughly, peel root crops, and discard the outer leaves of leafy crops.
- **4.** Mr. Holloway, as a leader in his neighborhood, has a responsibility to his neighbors and to the consumers of the produce from the garden to notify all who are involved of the mildly elevated concentrations of lead in the soil. Ask

the class: "How would your answer change if Mr. Holloway was the owner of this land?"

- **5.** The Harmony Park neighborhood is located in a food desert in which access to affordable, fresh, healthy foods is limited. The residents of Harmony Park could benefit from a local, free supply of healthy fruits and vegetables. Improved diets may help improve the health of these community members. Also, residents benefit from socializing at this community gathering spot, enjoying a beautiful piece of nature and green space in the middle of the city, and recreation and exercise while engaging in gardening activities. This brownfield site was an underutilized and convenient location in the neighborhood.
- **6.** The urban soils on the site are highly heterogeneous, making management of the site more difficult. The total soil lead concentrations are elevated, whereas the levels of both DDT and chlordane were below the detectable limits in the soils of this brownfield site. These issues can make management decisions complex and difficult for gardeners to make. Expensive soil tests and potentially expensive risk mitigation techniques may be too expensive for a community gardening group to shoulder. Outside technical assistance is often required to determine the safety of and the BMP of a specific brownfield site.
- 7. Students should contact and/or identify local soil testing laboratories and inquire about the availability, cost of testing, and turnaround time for total soil lead and for chlordane and DDT. (This question is posed so that students have an appreciation for the costs associated with testing for contaminants and why community gardens will likely not be able to afford extensive soil testing.) This question was designed to make students think about the potential positive and negative aspects of the proposed community garden. Many answers are possible. Students should identify that the addition of compost to soils on the site decreased the total soil lead concentration. How did it do this (dilution of the concentration and reduction of the bioavailability)? Gardeners could add compost to the entire site to reduce the total soil lead concentration in the surface soil. At the actual site, Mr. Holloway and the gardeners added compost to the entire Michigan Avenue community garden and incorporated it into the top 6 inches of soil. Mulch was also added to all walkways to reduce the amount of exposed soil and to minimize soil dust in the garden. Depending on the size of the community garden, the cost of bringing compost and/or mulch could be quite high. How would that be paid for? Raised beds created using imported topsoil would be another option, along with covered walkways. Gardeners should be advised to wear gloves while gardening or to wash hands after working in the soil. Children should be prohibited from putting soil in their mouths, and babies and toddlers must be closely monitored if they are going to be present in the garden. A fence would be a good measure to keep children and pets from passing through this mildly contaminated site. All produce should be thoroughly washed with soapy water to remove adhered soil particles prior to eating. Furthermore, urban soils are usually inherently poor and need to be improved by adding compost, testing for soil nutrients, and adding nutrients if needed. Adding compost will lead to increased productivity for food production. One important note is that commercial composting facilities are not permitted on contaminated sites. Therefore, the amount of contaminants present in the compost itself is usually very

low. Composting garden materials upon the contaminated soils at the community garden should be avoided, as composting is often done directly on the soil surface, and this would lead to enrichment of the compost in lead. On-site composting should be confined to low-lead parts of the property, if possible.

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LEARNING FROM FOODMETERS PROJECT

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> Joint Training School on Urban Food Production COST actions TU1201 and TD1106 21-24 October 2014, Ljubljana, Slovenia



FOODMETRES (FP 7) - international research project http://www.foodmetres.eu

October 2012 - September 2015

DLO Wageningen UR (Alterra-FBR-RIKILT)	NL
Leibniz-Centre for Agricultural Landscape Research (ZALF)	DE
Coventry University	UK
University of Milano	IT
University of Ljubljana	SI
African Studies Centre	NL
IFR Innovative Futures Research	UK
AGRIMERCATO Association (SME)	IT
MAPSUP (SME)	NL
SUSTAIN: the alliance for better food and farming (SME)	UK
Fördergemeinschaft Ökologischer Landbau Berlin Brandenburg (FöL) (SME)	DE
Boerenverstand Consultancy (SME)	NL
Dorén + Köster (SME)	DE
GEAPRODUKT (SME)	SI
Pro CONTUS (SME)	SI
Garden Organic (SME)	UK
Malzfabrik (SME)	DE



EU special interest:

- reducing the ecological footprint of urban food consumption and re-vitalizing urban-rural relations.

Coexistence and interaction of **two main and distinct components** (**urban- rural**) in the wider <u>metropolitan</u> area (*FAO, 2011*):

- a higher dense urban zone

- surrounding less dense areas, i.e. rural areas







http://www.mojvideo.com/uporabnik/poldek_tedy/slika/world-trade-center iubliana-sloveniia/289858

Aim of FOODMETRES project:

- to find sustainable food chain innovations for <u>metropolitan</u> regions (case studies: London, Rotterdam, Berlin, Milano, Ljubljana, Nairobi).

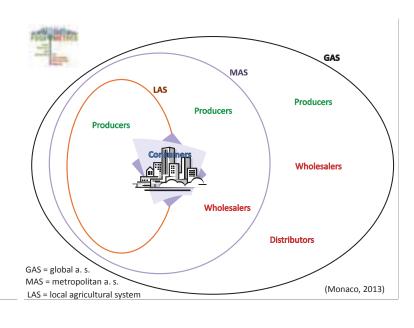
The main goals of FOODMETRES are:

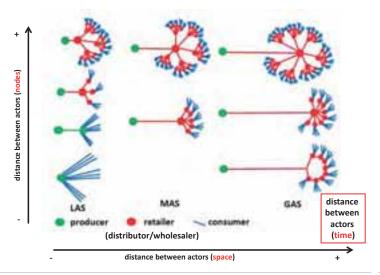
- Identify opportunities for food chain innovation at both the local-regional as well the large-scale metropolitan level;
- Assess the economic, environmental and social impacts of food chain systems by means of ecological footprint and product life cycle analysis;
- Study and compare technical, logistical, organisational and governance aspects of innovative food chain systems in selected case studies in Europe and Africa.
- Develop and provide scenario modeling and impact assessment tools supporting stakeholders and policy makers;
- Apply knowledge brokerage techniques to speed up innovation and innovation exchange within the case studies





The FOODMETRES Conceptual Design in relation the Food Triangle (Wascher, 2011 after Smeets 2009)







INNOVATION

The basic meaning of innovation is understood as something which is new or original in a way which improves upon the existing. Some definitions include:

- ☐ The implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relation. The minimum requirement for an innovation is that the product, process, marketing method or organisation/method must be new (or significantly improved) to the firm. (European Commission, 2009).
- The use of a new idea, social process or institutional arrangement, material, or technology to change an activity, development, good, or service or the way goods and services are produced, distributed, or disposed of. (International Assessment of Agricultural Knowledge, Science and technology for Development, McIntyre et al., 2009, p.285)





Figure: Agro-food system innovation domains to address global resource efficiency (Washer et all., 2014)

Product Innovation

Examples (Washer et all, 2014):

Innovation in urban farming by means of LED lights en hydro growing in empty office and factory spaces, still experimental

 ${\color{blue} \underline{http://www.vmt.nl/nieuws/vmt-nieuws/2012/telen-onder-led-licht-wordt-gangbare-manier-van.166679.lynkx}$

http://www.degroentenuitamsterdam.nl/

http://www.plantlab.nl/4.0/index.php/revolution-in-growing/?lang=nl

But also on straw balls:

 $\frac{http://www.earth-matters.nl/7/7291/duurzaam-20/meteen-en-overal-tuinierenbeplanten-met-strobalen.html}{}$



Products quality, safety and nutritional innovation

Examples (Washer et all, 2014):

City bees: http://www.ilovebeeing.nl/urban-beekeeping/video-blog/

I Union of insect breeders: http://www.venik.nl

Microalgae production: http://www.wageningenur.nl/en/Expertise-

Services/Facilities/AlgaePARC.htm

Vegetarian meat from lupine: http://www.devegetarischeslager.nl/over-ons/lupine

Process Innovation

Process Innovation

Transport duration and order system is leading for the growing cities

Examples (Washer et all, 2014):

using new transport other than trucks from the producer/retailer

http://www.informatie.binnenvaart.nl/vervoer/intermodaalvervoer.html
The innovation is the sharing of distribution system using also shared transport

for distribution inside the city (sustainable: electricity is favourable)

By ship (Amsterdam/Utrecht canals), Parijs

http://www.overmeer.com/PrimoSite/show.do?ctx=382584,424246,602217

, pdf stedelijke distributie in Amsterdam

By tram/train (Den Haag and Amsterdam)

http://www.logistiek.nl/Distributie/transport-management/2007/12/Nuon-stapt-in-stadsdistributie-per-tram-LOGNWS105877W/

By car (From Cargohopper, general electric car to ToekToek in Amsterdam)

http://www.evo.nl/site/peeters-vervoercentrale-transport

 $\frac{\text{http://www.logistiek.nl/Distributie/duurzaam-transport/2012/6/internationale-waardering-voor-Cargohopper--1032381W/?dossier=20047\&widgetid=0}{\text{model}}$

http://www.020stadsdistributie.nl/

By bike (old-fashioned bakkerfiets or bakfiets)

http://www.essers.com/nl/transport/stadsdistributie

Process Innovation

New ordering and delivering networks

Examples (Washer et all, 2014):

■ Using the network of vending machines in Slovenia:

for milk: http://www.mleko-mat.si/mlekomat/for meet: http://terra-gourmet.com/en-US/default

Delivery of ecological produced vegetable to a home in Slovenia: http://www.zeleni-zaboicek.si/

Online marketplace in Slovenia: http://www.zelenjava-pikapolonica.si/spletna-trznica.html

Online store for vegetable and fruits. Mark label: GoGeaGo: http://www.geaprodukt.si



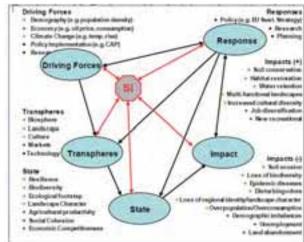


Figure: The role of System Innovation (SI) as part of the Driving Force – Transpheres – State – Impact – Response (DTSIR) - Concept

Agriculture in urban contexts

URBAN AGRICULTURE

the set of agricultural activities

"located within (intra-urban) or on the fringe (peri-urban) of a town, a
city or a metropolis" that "grows or raises, processes and distributes a
diversity of food and non-food products, (re-)uses largely human and
material resources, products and services found in and around that urban
area, and in turn supplies human and material resources, products and
services largely to that urban area"

(Mougeot, 2000)

14th EAAE Congress – Liubliana. August 26th-29th 2014

(Monaco, 2014)

Agriculture in urban contexts

(i) Professional agriculture

Traditionally located in peri-urban and rural areas, where a higher availability of land and other resources is concentrated

Farms may have different dimensions and economic sizes

Wide range of productions, of crop and/or animal origin

Productions mostly for processing and allocation to consumers via retailing

(ii) Non-professional agriculture

No need of extensive landholdings; can survive in contexts with limited inputs and resources (e.g. inner city)

Small-scale cultivations

Scarce productivity and variety of cultivable products

Urban gardening production of fresh food for private consumption

4th EAAE Congress – Ljubljana, August 26th-29th 2014

(Monaco, 2014)





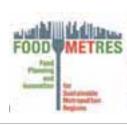
A traditional form of food production in Slovenia is also plot gardening, which is a very interesting activity due to its multiple functions and one of the shortest food supply chains.

The main research objective of the Slovene team in the FOODMETRES project.





Thanks!







Agenda

- What and where are the reasons that majority of mainstream food production is organised in the way as we know it today?
- 2. Why do we need Urban Food Production and where is the line between urban and rural?
- 3. Economic advantages or disadvantages of urban food production?
- 4. Examples (winter wheat, milk, salad, strawberries) of how food prices are calculated from production to consumer?
- Economic views of vegetable gardens in Slovenia and Ljubljana.

Economic Backgrounds of Food Production

1. What and where are the reasons that majority of mainstream food production is organised in the way as we know it today?



What defines where and what will be grown?

Environment

- altitude, slope

- soil

- climate
- water resources

• Cultural habits

- national /regional/local idetity

Social reality

• Social reality

- basic needs for food (poverty) vs. recreation/socialising

Legislation (regional/national/international)
- directives and laws (municipal, state, EU, WTO)

- Common Agricultural Policy (CAP)

Spatial plan

Space reserved for certain activities

CAN THIS FACTS OF OUR SYSTEM BE CHANGED?

YES

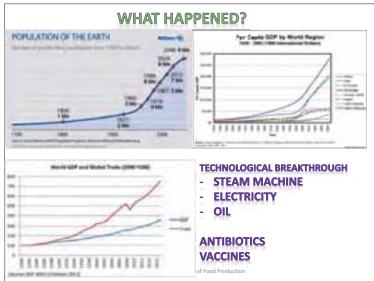
HOW OR WITH WHAT?

Economic Backgrounds of Food Production

WHAT IS DRIVING OUR ECONOMY? SUPPLY AND DEMAND DEMAND AND SUPPLY driver of the world/global Economy



Economic Backgrounds of Food Production



Do you know any examples of changes in the food system where economic reasons were the driving force?

are changed to meet the need of food producers and processors. (Milk Vending machines)

Environment

is tricked by production in controlled environment

(glasshouses, hydroponic, aquaponic, poultry/egg/pork production)

Cultural habits

can be changed (McDonalds, Pizza, Coca Cola) (sanitary requirements)

Economic Backgrounds of Food Production

Aim

Food Supply

Reasons

Public demands food. This will help to produce more, better quality, for less money.

2. Why do we need Urban Food Production?







Where should be the line between urban and rural food production?

Rural vs. Urban

The number of people living in cities in each country of the world in 2010, together with the percentage of the population in countries with large urban populations.

3. Economic advantages or disadvantages of urban food production?

Economic benefits

- Utilisation of space (rooftop, open development space) land availability (How to feed
- Food supply (cca. 10% of city needs)
- Food security (origin of food, technics of production)
- Less transport (less miles less CO₂)
- Economic base (employment, lower food costs) -
- Social benefits
- Reduce waste
- Educate community

Chalanges

- the whole city?)
- contaminants in urban soils
- water sources
- atmospheric and climate conditions in cities compared to rural areas can also be obstacles
- domination of the food market by large farms and supermarkets

Economic Backgrounds of Food Production

Branding the Urban Food/Trade mark?



Eat local, taste the freshness of your city





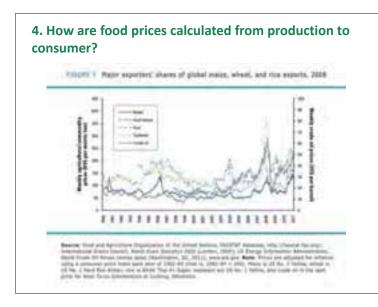
Eat organic, Bees are working for you

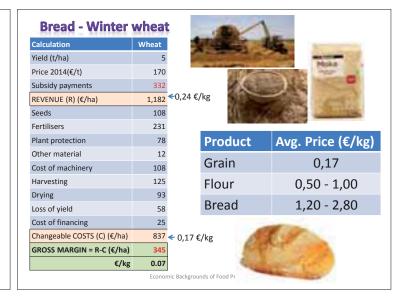


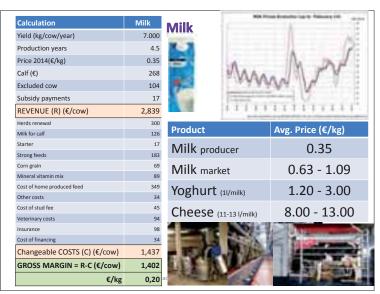


It is local, fresh and tasty. Would you buy/eat if you would know the origin?

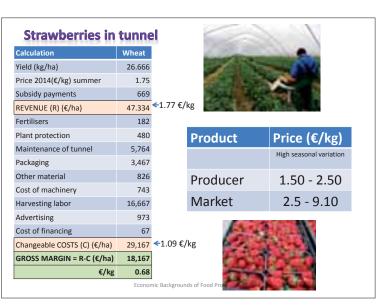
- as Private grower
- as Customer on the market or in the supermarket
- as Poor citizen/unemployed/social aid

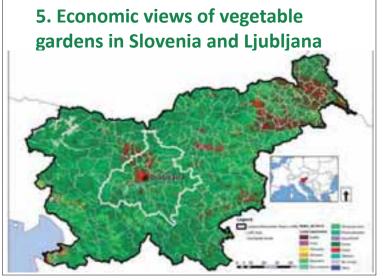








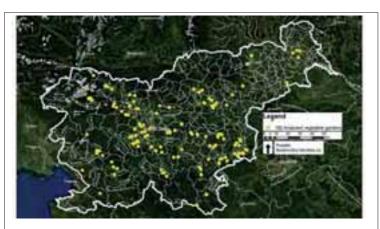








The amount of food and beverages consumed per household member.									
Annual average in 2010.									
Statistical Office of Republic of Slovenia	Consumed quantities								
	Total Bought From own production			% from own production					
Apples [kg]	18.2	11.2	7.0	38.5					
Pears [kg]	2.6	1.2	1.4	53.8					
Plums [kg]	1.4	0.4	1.0	71.4					
Lettuce [kg]	10.7	4.7	6.0	56.1					
Cabbage and kale [kg]	4.6	2.4	2.2	47.8					
Tomatoes [kg]	8.2	5.2	3.0	36.6					
Peas and green beans - fresh [kg]	1.7	0.3	1.4	82.4					
Paprika [kg]	3.8	2.9	0.9	23.7					
Carrots [kg]	3.5	2.3	1.2	34.3					
Garlic and Onion [kg]	7.4	5.4	1.9	25.7					
Beans, dry peas, beans and lentils [kg]	1.3	0.7	0.6	46.2					
Potatoes [kg]	30.4	14.7	15.7	51.6					



We interviewed 192 gardeners all over Ljubljana Metropolitan region.

Soil samples from each of the garden were collected.

Economic Backgrounds of Food Production

Methodology

Gardeners were asked to answer on 54 questions in 6 segments:

Description of location, type of garden plot and type of production
Behaviour of allotment holders
Existing skills and knowledge of allotment holders and resources of their acquisition

Existing skills and knowledge of allotment holders and resources of their acquisition Motivations for gardening

Perception of ecological, social and other effects of allotment gardening Socio-economic characteristics of allotment holders and their life style

For the economic part of the research they were asked to:

- 1. estimate annual yield/production per different plants/crops/vegetables;
- estimate yearly production costs (seeds, seedling plants, fertilisers, plant protection etc.).
- 3. Production was multiplied by **retail prices** to estimate hypothetical **revenue** (saved money).
- ${\it 4. Production cost were deducted from revenue to estimate average {\it {\it gross margin.}} \\$

With this analysis we were able to estimate the economic impact of gardening on the vegetable supply chain.

Economic Backgrounds of Food Production

Production yield

Percent of total area analysed (2.7 ha) covered with certain vegetable				
Vegetable	%			
Pumpkins	3.99			
Onions	3.41			
Green beans	1.59			
Kohlrabi	1.37			
Carrot	3.54			
Potatoes	29.71			
Cucumbers (salad)	3.04			
Paprika	3.37			
Tomatoes	18.40			
Beetroot	3.24			
Salad	8.98			
Cabbage	8.25			

Percent of gardens (192) that grow o	ertain
vegetable	
/alues	%
umpkins	9.74
Onions	61.04
Green beans	50.65
Ohlrabi	20.13
Carrot	86.36
Potatoes	61.04
Cucumbers (salad)	52.60
Paprika	75.97
Tomatoes Tomatoes	88.96
Beetroot	23.38
Salad	93.51
Cabbage	63.64

PRODUCTION	Area				
	h	a	m ²		
	2.7	1	100	1	
Vegetables (kg)	50,229	18,427	184	2	
Berries (kg)	648	238	2	0.024	
Herbs (kg)	77	28	0.28	0.0028	
Total (kg)	50,953 18,693 187				

Economic Backgrounds of Food Production

Revenue

RETAIL PRICE in the market (August 2014)		PRODUCTION	REVENUE		
	EUR/kg	kg/2.7ha	EUR		
Pumpkins	2	1,697	3,394		
Onions	1.75	1,448	2,534		
Green beans	2.5	677	1,691		
Kohlrabi	1.7	583	991		
Carrot	1.75	1,506	2,636		
Potatoes	0.9	12,628	11,365		
Cucumbers (salad)	1.75	1,294	2,265		
Paprika	2.75	1,433	3,941		
Tomatoes	2.75	7,819	21,502		
Beetroot	1.75	1,377	2,410		
Salad	2.5	3,816	9,539		
Cabbage	1.25	3,505	4,381		
TOTAL (vegetable, berries, herbs)		50,953	108,497		

Economic Backgrounds of Food Production

Gross margin (coverage)

Gross margin for 192 garde	ns (Slovenia/	Ljubljana Metrop	olitan Region)	– Area: 2.7258 ha
		REVENUE (€)	COSTS (€)	GROSS MARGIN (€)
Vegetable		96,574		
Berries		7,638		
Herbs		4,284		
Total (2,7 ha)		108,497	14,854	93,643
Recalculation		REVENUE	COSTS	GROSS MARGIN
1 ha		20.004	F 440	24 254

Recalculation	REVENUE	COSTS	GROSS MARGIN
1 ha	39,804	5,449	34,354
141 m ² (average garden in analysis)	561	77	484
100 m ²	398	55	344
1 m ²	4	0.5	3.44
45,89 ha (Ljubljana) (area dedicated for allotment gardens in the Ljubljana municipality Spatial Plan)	1,826,589	250,065	1,576,524

Economic Backgrounds of Food Production



	London	Ljubljana
Area of growing spaces (m ²)	43,137	27,260
Total weight of produced (kg)	21,236	50,953
Total finacial value of produce grown (€)	180,893	93,643
Average productivita per m² in weight (kg)	0.492	1.869
Average productivity per m^2 in financial value (\ref{eq})	4.12	3.43



Economic Backgrounds of Food Production



Rural development in Ljubljana municipality



Ljubljana, 24. oktober 2014 Jurij KOBE

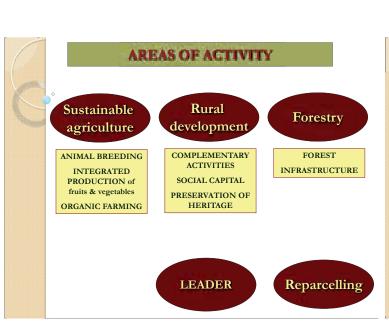
Preglednica 2: Velikostna struktura kmetij v MOL

Velikost	Popis preb	1991				tijskih tev v RS
Kmetije	Število	Delež (%)	Število	Delež (%)	Število	Delež (%)
do 2 ha KZU	435	32,4	144	15,6	170	20,8
2 do 5 ha KZU	542	40,3	336	36,3	254	31,2
nad 5 ha KZU	366	27,3	445	48,1	391	48,0
SKUPAJ	1.343	100,0	925	100,0	815	100,0

[1] Vir: SURS 1991, 2000 in 2010.

22 years of rural development in Ljubljana 2007 - 2013 LEADER Private/public partnership (5 municipalities: Grosuplje, Ig, Ivančna Gorica, Škofljica, MOL) 2003 Rural Development programe 2002 - 2006 COEXISTENCE between the CITY & the COUNTRYSIDE 1991 - 2001 Integrated Rural Development & Village Revival (CRPOV) R:Fruit route







ASSOCIATIONS/ events



EDUCATION technical support

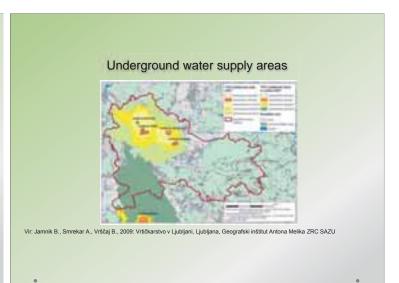




- In Ljubljana, in the process of urbanization and industrialisation, especially within the years from 1950 to 1980, when into Ljubljana have immigrated to lot of people from rural areas and other Yugoslav republics, grew. It also grow an interest in gardening.
- With planning of the residential settlements there were two large housing Colonies Litostroj and railway colony Fondovi blocks (y. 1931) were garden plots for the workers were planned. Every flat possessed its own garden.

The demand for gardens was high and garden-plot areas grew uncontrolled, as a temporary arrangements, especially at the outskirts of the city in less attractive locations unsuitable for construction (under power lines, by the roadsides, railway lines, at industrial facilities on degraded land, at the abounded public green areas within the neighbourhoods...).





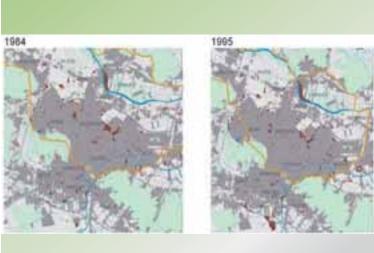
Their distribution was largely the result of **unplanned development**. Some land was leased from the farmers and some from the municipality, but still most of the land was occupied illegally. People in these areas were building brakes and shads made of different materials and building residues (asbestos roofing materials,...), and in some cases the barracks were transferred into the weekend houses.

1984	1995	2008	2010
289 areas	378 areas	218 areas	23 areas (spatial plan)
200 ha	267 ha	130 ha	45 ha



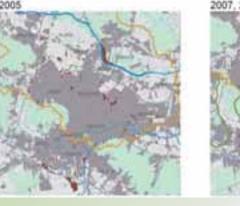


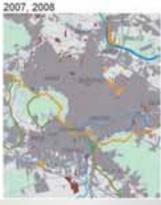




Municipal spatial plan 1986 – 2000

In the long-term plan the allotment areas were not defined as a specific form of land use. Gardens have been prohibited on protected areas but in certain morphological units in detailed implementing acts they were alowed.





Vir: Jamnik B., Smrekar A., Vrščaj B., 2009: Vrtičkarstvo v Ljubljani, Ljubljana, Geografski inštitut Antona Melika ZRC SAZU

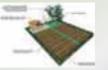


In 2007 and 2008, the city authorities decided to remove the gardens on the environmental and spetial unsuitable locations; in the visual area exposed areas (cultural monument) in the areas of groundwater protection, along the Sava River,...

In **2009** the new policy was addopted regulating design of the allotment gardens:







The criterias for renting a garden were:

- the age above 65 years
- the income per family

The rental price is: 1EUR/m2

Designed allotment gardens areas



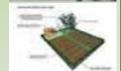
Štepanja vas (50-100 m2)

- 14 allotment plots
- equipped with sheds, children's playground, parking places, composters, mobile toilets and waste containers



Dravlje (50-100 m2)

- 51 allotment plots
- the same equipped as at Štepanja vas, but water supply connector to the distribution network,



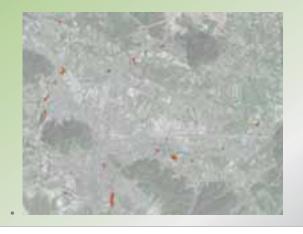
Savlje – former military dumpsite

• 50 allotment plots (50m2)



Ljubljana – Detailed Land Use Plan

Allotment gardens in Municipal spatial plan (2010)







Within the Municipal spatial plan there are 23 areas dedicated to allotment gardens. The plan defines the spatial conditions under which the allotments, as a permanent use on these surfaces can be carried out.

Gardening can be implemented, taking into account the detailed implementing conditions in some places in the urban fabric within some residential neighbourhoods, where there are already existing gardens as sustainable use, may also be implemented in areas other land uses.

As a **temporary use**, the gardens can be set up in areas where construction is scheduled within municipal detailed spatial plans. In these areas, land plots are permitted as a temporary use until the construction or redevelopment will start.

The Municipal spatial plan

The areas dedicated to allotment gardens (ZV)

Permitted facilities and activities:

- Wooden shed for storing tools and lawn equipment,
- Wooden crates for storage of tools,
- Fencing: greened wire fences or hedgerows between communications and on the edge of the area,
- Public bicycle site.
- Prefabricated sanitary unit
- Parking spaces for the needs of users,
- Decorated green space for socializing users gardens (up to 150.00 m2)
- Playground (up to 200,00 m2)
- Water supply

In arranging the land use ZV should consider the following conditions:

if the area borders the public transport communication, should be closed up with a **hedgerow**, which allows passage

- Internal separation paths between gardens seperate the garden plots in the strips, from 10,00 to 15,00 m.
- The size of the garden plot from 50.00 m2 to 150.00 m2,
- 30% of the area of each plot is allowed to use for a shed (out of a maximum of 15,00 m2 or 15% of paved surfaces).
- the ZV area must be connected to a water supply, they
 must have arranged parking and a single orderly manner
 of waste management.

Deviations in the EUP of land use ZV are:

- at least 15.00 m from the riverbank of Sava and Ljubljanica river and at least 5.00 m from other watercourses,
- at least 50.00 m from the roads
- a minimum of 100.00 m from the motorway and
- at least 30.00 m from the EUP of land use IP or the UK.

Facilities in the EUP of land use ZV:

- a) Wooden shed:
- Ground floor: the maximum size of 2.00 x 2.50 m, height of 2.50 m,
- The total ground floor to a height of 4.00 m with an area up to 60,00 m2 in 1500,00 m2 gardens.
- b) Wooden box:
- Surface up to 1,60 m x 0,70 m x 0,45 m.

Savsko naselje

At the residential neighbourhood Savsko naselje it supported and encourage residents to a communal gardening as a part of neighbourhood revitalisation project.



The school gardens

 EKO garden – many primary schools and kindergartens in the area of Ljubljana is included in the network of ekogardens

The role of the City

- Not enough land in the possesion of the city at ZV areas
- Act as a coordinator acts as a coordinator between providers and seekers of land for the gardens
- Support civil iniciatives lease agreement

In 2010, at the abandoned municipal building site as a temporary use a community garden was established.



Challenges for the city

- Because of unrealized projects and the crisis in Ljubljana there are lots of abandoned land, where urban agriculture under certain conditions and regulations as a temporay use could take place.
- Does they have to be defined in a planning documents?
- To organize one office where garden coordinator can be employed.

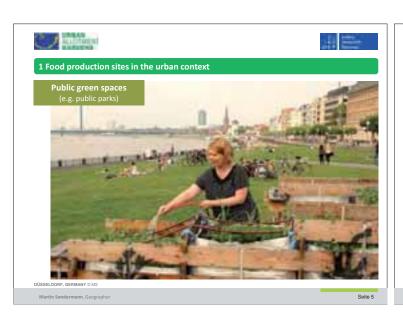
















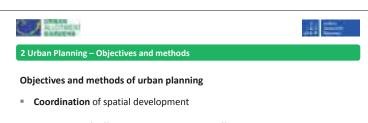












- Integration of different sectoral plans and different actors (communicative / cooperative planning – Governance)
- Weighing of interests
 (e.g. housing vs. industrial sites vs. nature conservation...)
- Moderation (mediation) in a complex field

Seite 13

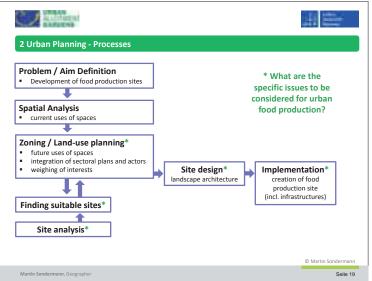


2 Urban Planning - System public National level sectoral agencies legal framework planning neral guidelines Sub-national level environmental associations (states, districts, regions) civil society actors Local level (Municipality) planning sovereignty decisions on land-use zoning plan land-use plan part of the municipality





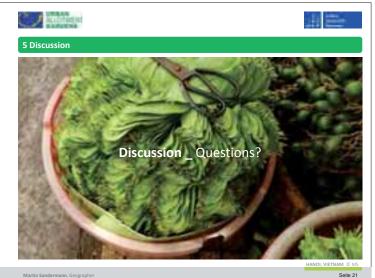






protection vs. urban food production)

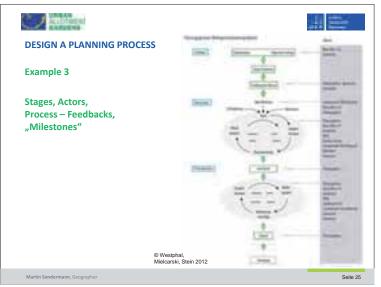
Example 2















Different Levels of Governance Regimes and Policies Workshop 9

Andrew Adam-Bradford
Centre for Agroecology, Water and Resilience
Coventry University

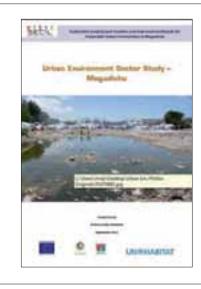
Session Structure

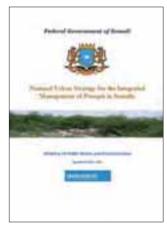
- Introduction
- EU case studies from participants
- RUAF Multi-stakeholder Policy Formulation and Action Planning tool

Definitions

- Governance
- Policy
- Political ecology











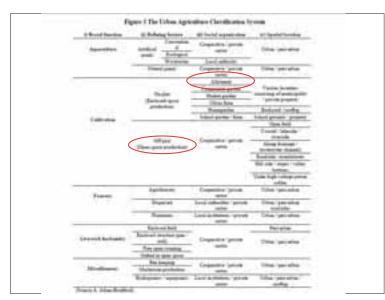
UA Definition

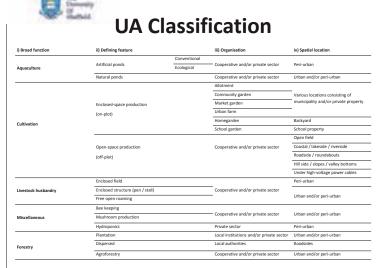
UA can be broadly defined as the integration of food, fibre, ornamental and medicinal plant production systems within an urban ecosystem.

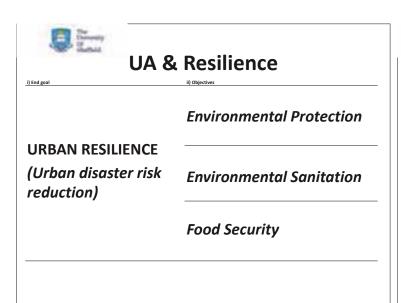
Peri-urban agriculture can be defined as the areas of agricultural production on the urban fringe or periphery (PUI – peri-urban interface).

Rural agriculture decreasing connections to an urban eco-system.

	Figure 1 The Librar Agriculture Christianna Incom			
6 Book Senton	St Belong berry	all held agent dos	at Special Secretor	
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	Reference assessment	Land & closed, Street	Title service	



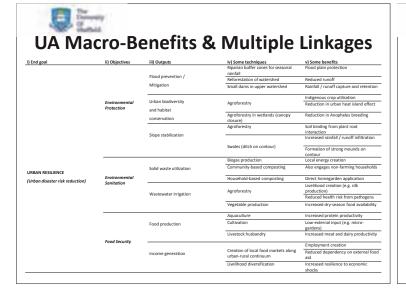


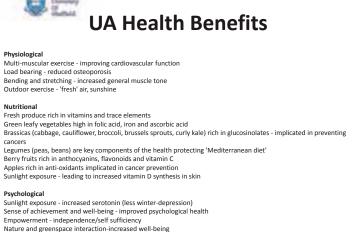


Objectives & Outputs		
ii) Objectives	Flood prevention / mitigation	
Environmental	Urban biodiversity & habitat	
Protection	conservation	
	Slope stabilization	
Environmental	Solid waste utilization	
Sanitation	Wastewater irrigation	
Food Security	Food production	
	Income generation	

Objectives & Outputs			
Flood prevention / mitigation			
Urban biodiversity & habitat conservation			
Slope stabilization			
Solid waste utilization			
Wastewater irrigation			
Food production			
Income generation			

Outputs & Some Techniques		
	Riparian buffer zones for	
Flood prevention /	seasonal rainfall	
Mitigation	Reforestation of watershed	
······································	Small dams in upper	
	watershed	
Urban biodiversity	Agroforestry	
and habitat	Agroforestry in wetlands	
conservation	(canopy closure)	
Slope stabilization	Agroforestry	
Stope Stabilization	Swales (ditch on contour)	









Urban-Regional Resilience

Urban food security

Enhanced social networks and community interaction-increased well-being

Sense of community and belonging-increased well-being (Leake, Adam-Bradford and Rigby 2009).

Requires effective food production linkages along the urban – rural continuum (PUI).

Natural hazards (drought / flood / fire)

Requires integrated watershed management (IWM) for disaster prevention, mitigation and response (other approaches – disaster risk reduction / ecosystems services).





Managing risk....

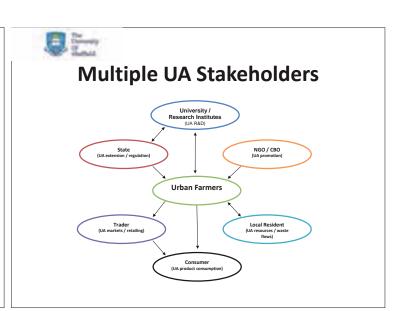
Land cultivation

- Pathogen
- Heavy Metal
- Persistent organic polutants (POPs)

Livestock husbandry

- Pathogen
- Zoonoses

		-/ 10	iiiu as	sociated r	ISKS
i) Broad landso	ape function	ii) Specific activity		iii) Possible environmental risks	iv) Possible human health risks
			Conventional	Sedimentation, eutrophication	Low risk
Aquaculture		Artificial ponds	Ecological	Sedimentation, eutrophication	Low risk
Aquacuiture			Wastewater	Sedimentation, eutrophication,	Heavy metal /pathogens / POPs in foo
				groundwater contamination	product, farmer exposure
		Natural ponds		Change in natural ecosystem	Low risk
		Inappropriate agric-chemicals usage		Groundwater contamination	Agric-chemical residues in food produ
	Techniques	Inappropriate manure ap	pplication	Plant scorching	Pathogens in urban ecosystem
		Wastewater irrigation (di	ry season)	Groundwater contamination, increased	Heavy metal /pathogens / POPs in foo
Cultivation				pest problems	product, farmer exposure
		Along drainage / wastewater channels Coastal / lakeside / riverside /wetland		Groundwater contamination	Pathogens in food product
	Location			Ecosystem contamination	Flooding leading to crop loss (econom
		Hill side / slopes / valley	bottoms	Bush fire, soil erosion	Fire, flash floods
		Roadside / roundabouts		Low risk	Heavy metal / POPs in food product
Forestry In all forestry systems		Tree damage from air pollution	Low risk		
		Enclosed field		Soil compaction, overgrazing	Zoonoses, pathogens in urban ecosystem
Livertock buch	andr.	Enclosed structure (pen / stall)		Effluent discharged in ecosystem	Zoonoses, pathogens in urban ecosystem
Livestock husbandry		Free open roaming		Urban environmental hazard	Zoonoses, pathogens in urban ecosystem
		Staked in open space		Soil compaction, overgrazing	Zoonoses, pathogens in urban ecosystem
		Bee keeping		Low risk	Low risk
Miscellaneous		Mushroom production		Low risk	Low risk
		Hydroponics / aguaponics		Low risk	Low risk





Conclusion

- UA has multiple applications, including food security, environmental protection and sanitation, and disaster risk reduction.
- Requires planning and design that minimises the risks while maximising the benefits.
- For full potential requires bold urban visions, strong and enlightened leadership and human and technical resources.

Group Activity

- Production of joint working paper on governance models and policies
- Form into five working groups
- Each group prepare presentation of examples of governance models and policies from respective countries, can include various agencies, what they do, tools they use, policy documents – city food strategies, bylaws...
- 20 minutes preparation 10 minutes presentation

Multi-stakeholder Policy Formulation and Action Planning on Urban Agriculture

- Participation of governmental and nongovernmental actors in joint policy-making and action planning
- non-governmental actors given equal chance to contribute to preparation, implementation and evaluation of policy and related action plans
- Open and transparent process
- Final decisions honour contribution from various actors involved

Important Elements

- Enhancing awareness in participating organisations
- Capacity building
- Continuous building of trust and cooperation
- Policy making as well as joint action planning and implementation
- Shared budgeting and resource mobilisation
- Early implementation of initial actions (pilot projects, new techniques) at local level

1. Preparatory Activities

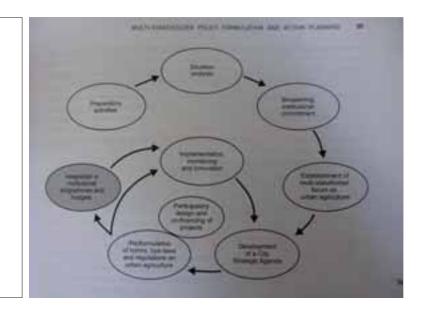
2. Situation Analysis

3. Broadening Commitments and Participation

4. Establishment of a Multistakeholder Forum on Urban Agriculture 5. Development of a City Strategic Agenda on Urban Agriculture

6. Operationalization

7. Implementation and Monitoring; adaptation/innovation

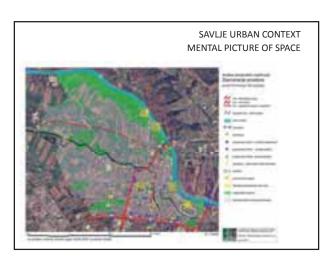


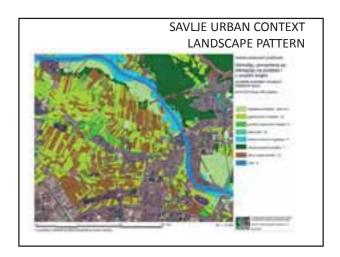
Questions...

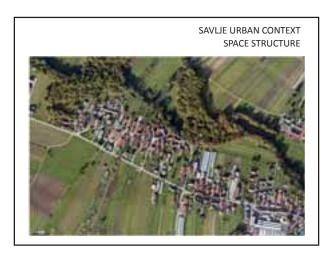
• Joint working paper

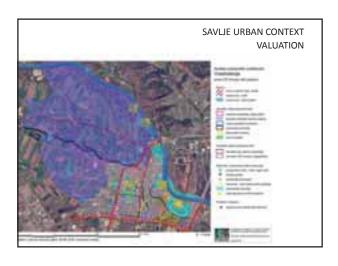
Case studies to : ab3805@coventry.ac.uk



























Reports of working groups (Annexes 12 - 16)

Annex 12: Report from Working Group 1
Annex 13: Report from Working Group 2
Annex 14: Report from Working Group 3
Annex 15: Report from Working Group 4
Annex 16: Report from Working Group 5







Ljubljana Joint Training School on Urban Food Production

COST Actions TU1201 and TD1106 21-24 October 2014, Ljubljana, Slovenia

Report from Working Group 1

WG members:

	NAME	PROFFESIONAL BACKGROUND	COUNTRY
1	Carsten Heinrich	Architect, Geographer (student)	Germany
2	Dimitra Theochari	(landscape) architect,	Greece/Germany
		researcher	
3	Lucie Sovová	Environmentalist	Czech Republic
4	Rozalija Cvejić (tutor)	Agronomist, researcher	Slovenia
5	Sean Shanagher	Anthropologist	Ireland
6	Xavier Recasens	Agronomist	Spain
7	Zala Schmautz	Sanitary engineer	Switzerland/Slovenia

WG leader: Sean Shanagher

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1 INTRODUCTION

City of Ljubljana is a Youth-friendly European Green Capital. Youth-friendly cities design youth policies that include measures for integration of ever new generations of young people (15-29) to individual parts of society life and promote their independence. Urban green infrastructure (UGI) planning is one field where City of Ljubljana does not actively include youth. Integration of Youth policies and UGI development is unsatisfactory. Synergic potentials between them are immense but in practice unexplored.

Is there any interest of Youth for UGI planning in City of Ljubljana? Generally no. However, recently a Youth action called "Young House Friends" demonstrated a clear need of Youth to be included in management of green parts of neighbourhoods. Activities included maintenance of parks, social activities and setup of raised beds for planting edible plants (e.g. salad, tomatoes). They raised several important questions in society, i.e. are the green surfaces in neighbourhood properly maintained, can Youth maintain them better than concessionaire, is there a way for Youth to be included in maintenance of UGI, and can neighbourhoods be re-set to achieve higher social inclusiveness through plant cultivation? The mentor of the "Young House Friends" initiative was non-government organisation Zavod Bob.

A very simple case of UGI is a garden (public, private, indoor, outdoor). Garden is a symbolic area where "gardener" interacts (e.g. experiences activity, relaxation, feeling of independence and ownership, satisfies basic needs such as food production). Groups of gardens (e.g. allotment gardens) are a very classical form of UGI in which citizens of Ljubljana are active in planning of their own space. Groups of gardens are different to other UGI in the city. They offer a more comprehensive experience than for example classical parks, where own shovelling and maintenance of green-brown surfaces is mainly unwanted, and where activities are reserved mainly for recreation and socialisation.

There are many forms of urban gardens in city of Ljubljana.: Classical allotment gardens, Allotment gardens (private landlords), Gardens on brownfields, Alternative gardening in Centre, Community gardens, School gardens and Collective green interventions, Guerilla gardens.







Walk through urban gardens and Savlje site visit: A = guerrilla gardens in Ljubljana city centre, B = Savlje professional plant production, C = organic gardens for rent in Savlje. Phot by Carsten Heinrich

The main differences of different gardens: way they are set up, which creation principle they use, what is their main aim (education, food production), what type of plants the use (space restrictions, prejudice, favourites), which non-government sector is included in their creation (culture, green non-gov.), and most the population they include in the creation of the communal space.







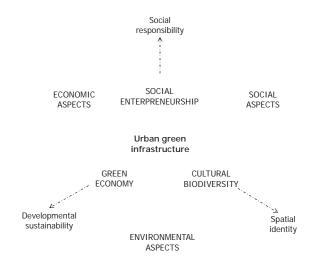
In City of Ljubljana elderly, young mothers, nearest neighbours and children are favoured, especially when UGI are setup by the city government; others are commercial and separate society based on wealth (employed can afford). None of them so far includes Youth. Integration of Youth policies and UGI development is unsatisfactory. To improve the integration the City of Ljubljana offered to Zavod BOB - who is a not-for-profit organisation engaged in work with local youth - the possibility to establish its activities at LIVADA area.

Including Youth in planning brings significant challenges to current UGI programming. It requires introduction of principles "the whole is more than the sum of the parts", "don't do everything at once", "programme under construction", "temporary use of space", "live space", "creative interaction with neighborhood", "mobility" and "adoption of space".

How would UGI look like if its planning included youth? How would planning process look like if UGI development included youth? How can we include youth in UGI planning? How to design adaptability of space? Leave it empty? How to perform suitability analysis to define areas suitable for development of UGI with Youth? How Youth measures distance — is one kilometre really 1000 metres?

The recommendation of the WORKING GROUP 1 is to research further the challenges of including UGI planning and Youth to recommend policy guidance for City of Ljubljana that will set-up some ideas for other European cities dealing with similar challenges. The physical outcome might be formation of new UGI with Youth at LIVADA.

However the experience from WORKING GROUP 1 shows new UGI should be defined as both multifunctional and multi-scale phenomenon that occupies an "amplified position" at socio-ecological-economic crossroad of its constituents within synergetic planning to simultaneously enhance ecological, social and environmental domain of UGI development. The diversity of services and benefits of UGI is immense, but unbalanced. Properly balanced UGI relates to climate change adaptation, cultural biodiversity, collective social action and green economy. These are all important policy topics of City of Ljubljana and interestingly, UGI fits Youth expectations best when most balanced.



Idealised Urban Green Infrastructure. Drawing by Rozalija Cvejić







2 CASE STUDY WORK

During four days of workshop we explored outdoor urban infrastructure in Ljubljana that include urban agriculture, exercised plant production and explored pros and cons of site LIVADA to become a new urban agriculture site. The workshop included work with real stakeholders (youth non-government organisation). Though exploration of their needs we zoned a new programme at LIVADA site. We designed the site with stakeholders and envisaged how a planning process in reality would ideally look like if UGI planning included similar stakeholders. We concluded the workshop with overview of cases from abroad.



Overview of Ljubljana Joint Training School on Urban Food Production.

Overview by Rozalija Cvejić

Below we briefly represent the case study work and lessons learnt and conclude the report with your view, comments and ideas about urban food production and the Ljubljana Joint Training School on Urban Food Production.

2.1 CASE STUDY TOPIC: Zavod BOB Plot

2.1.1 Short description of the case study area (location, position within the city, size, accessibility, spatial situation, environmental conditions, spatial potentials and problems...)

Zavod BOB (SI. *Zavod* = a society, organization) has the possibility to establish its activities area in a plot of 6000 m², located between Hladnikova cesta, Ižanska cesta, Malova ulica and Dolgi breg on SE part of Ljubljana (marshy type of land). The site is located about 30 minutes walk from the centre of Ljubljana, which is an aspect to consider with regard to the planned use.

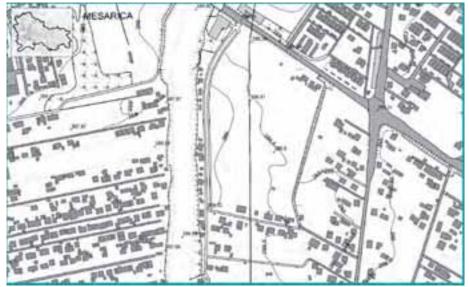
The whole area is flat, with very little slope. It has herbaceous vegetation and some shrubs. Its proximity to the river Ljubljanica, less than 100 meters, is one indication that it is a flood zone. The soil is clay, with a layer of humus underneath it.

Since the orientation of the plot is perpendicular to the river, with a boundary of hedgerows /shrubs, it might seem that drainage of water from the field to the river might be an option. Unfortunately according to the map (below), the topography has been transformed by the channelling of the Ljubljanica river, the roads construction, the towpath and the houses. Our field now is a flat area with at a lower level to the surrounding ground, and without natural drainage.









Topographic map of the area (red colour)

Before cultivation or carrying out any type of activity, it is necessary to establish a drainage channel and connect this with the river (or alternatively, build a pond and then pump the water to the river).

2.1.2 Short description of the potential stakeholders (as they were defined for the case study), their needs, priorities and motives you were building your proposals and ideas on.

Zavod BOB is a not-for-profit organisation engaged in work with local youth. They offer a one year long program for school 'drop-outs', giving the youngsters the opportunity to discover their potential and priorities for the future. Furthermore, Zavod BOB has a team of street workers who contact the target group in its 'environment'.

Currently there is a group of about 20 youngsters interested in gardening. Furthermore, Zavod BOB strives to establish a multifunctional youth centre, combining public space, the possibility for both outdoor and indoor activities, and a community garden. They need a multi-functional area where they can make their activities, workshops, their meetings and urban agriculture.

CONCLUSION: The Zavod Bob participants recognised some difficulties in accessing the site, due to lack of private transport from Ljubljana city centre and it is not well communicated with public transport.

2.1.3 Starting points you defined for future development of the area

<u>Drainage:</u> The cheapest way is to build a superficial drainage with triangular channels (1.5 m wide by 1.5 m deep). To calculate the number of channels we should know the soil water transmissivity. We suppose that with two channels it is enough to keep the water in a level that allow us to cultivate vegetables.







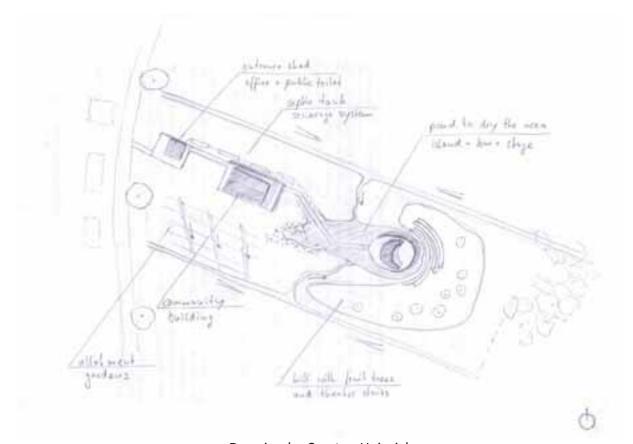
Soil: To improve the clay soil it is necessary to add organic matter (manure, compost, .and so on).

<u>Crops:</u> If we keep the water 0.5 m under the soil surface, we can grow a large number of vegetables.

Such initiative are a good platform to recover and spread land races of vegetables (old varieties). These land races are adapted to the Slovenian climate and perhaps some of them to these kind of soils.

2.1.4 Presentation of the ideas, proposals and scenarios for future development of the area. Please present as graphic part (schemes, sketces, concepts, ...) and written explanation!

Since water is the main issue on the site and a sophisticated drainage system might be too costly, we propose to create a pond with simple canals draining the water. The pond can be used for recreation (e.g. ice-skating in winter) or fish breeding. It would also constitute an original and recognizable feature of the site. Around the pond we propose raised terraces, which would allow the growing of vegetables and could also serve as an amphitheatre for performances. Moreover, the amphitheatre would stay open on one side, creating an inviting space. One building should be located next to the road, serving as an entry point to the site. A stage with a second shed could be situated on pillars, partially above the pond.



Drawing by Carsten Heinrich







2.1.5 COMMENTS (Please describe where the problems were and obstacles within your work, what was the added value, what did you like and what didn't you like! You can write about as a group or each member separately.)

Xavier: Perhaps the location of the plot is not the best, being a very flat area, with flooding problems and with an inoperative drainage net. There are agronomic solutions but they are expensive and they need maintenance.

Lucie: What seemed the biggest challenge was that the stakeholders we talked to were quite insistint on their original idea, which did not seem very realistic at the site they were offered. On the other hand, they were very creative and enthusiastic about our ideas as well. For me the dialogue with people from Zavod BOB was the most interesting part, which also made the task seem a bit more real than a mere exercise.

Zala: Challenges to combine stakeholders' idea together with realistic way of planning on the site. Although on the beginning task seemed to be almost impossible to do, on the end we still managed to find some really good ideas how to plan the site.

Carsten: The group was originally supposed to create a monofunctional garden design for the given plot. Although the place on the edge of the city center seems to be well situated for this purpose we intuetively skipped this idea due the significant restrictions in questions of water management. Contrary to the assumption of Zavod BOB members who were doubting the quality of the site we believe that places attract people as long as there is something special taking place on it. Based on this approach the design phase carried out some interesting strategies to deal with such a place implementing the experiences, needs and ideas of the young people.

Sean: Although this was a sizable site that had been granted by the munipality, this was a challenging site, especially in relation to the flooding and poor soil quality. As a group, we tried to make a virtue of necessity by working with the water issue rather than against it. This was the thinking behind our development of the pond. The Zavod Bob participants had some interesting ideas, but as Lucie said, we needed to adapt those to the site.







3 LESSONS LEARNT AND INFORMATION EXCHANGE

Please describe (by each member of the group) in few sentences:

Xavier Recasens:

A. Please list the most important lessons learnt from each Workshop:

	WORKSHOP	LESSONS LEARNT
1	WALK THROUGH URBAN GARDENS AND SAVLJE SITE VISIT	Overview of urban agriculture in Ljubljana and how two periurban farmers adapted their business model to the citizens. Both of them sell directly their production and one of them transforms his production (flour and chesses)
2	UNDERSTANDING ECOLOGICAL FOOD GROWING	Easy and funny way to teach how made an organic crop rotation.
3	ENVIRONMENTAL ASPECTS OF URBAN FOOD PRODUCTION	Which aspects should be considered to promote new urban agriculture areas. Pollution and water disponibility and also.
4	SOCIAL ASPECTS OF URBAN FOOD PRODUCTION	The urban agriculture for leisure has various motives: hobby, physical exercise, interested in food origin, social relations, to be self sufficient, to be creative and The food production perhaps is not the main objective.
5	ECONOMIC ASPECTS OF URBAN FOOD PRODUCTION	Innovation in short food chains, marketing, process, products and consumer habits.
6 7	CASE STUDY WORK	The urban agriculture phenomenon must be analyzed from multiples aspects. For this reason it is important that multidisciplinary teams work to find the best solutions.
8	DESIGNING PLANNING PROCESS FOR URBAN FOOD PRODUCTION	Participatory processes and the importance to consider the stakeholders' opinion, (it is not common in Spanish or Catalan urban design/planning).
9	DIFFERENT LEVELS OF GOVERNANCE, REGIMES AND POLICIES	The urban agriculture success has different actors and all of them should be considered. The governance has an important role to establish policies that benefit the urban agriculture.

B. How do you see the difference between urban agriculture and urban gardening? (Please add to these descriptions also the 2 pictures from your country you define as urban agriculture and urban allotment gardens which you have already prepared for the JTS as a task).







Urban agriculture



Vineyards in Tiana. Alella Alt Alella is a winery located in Tiana. It has 17 ha of vineyards; they produce a wide range of wine, cavas (Spanish sparkling wine). All of them are organics and natural wines, without sulphites. They not only produce wines, they also try to connect with the citizens, and they offer ecotourism experiences (tastes, gastronomy, activities with the vines).

Urban gardening



Can Cabanyes Allotment garden is located in Badalona. Can Cabanyes is a manor house, which ancient orchards are grown by citizens. These allotment gardens are controlled by Badalona city council. The users are retired people that grow parcels of 25 m² for 4 years. Each 4 years the council does a lot among the citizens seeking a plot. In Can Cabanyes there are 13 plots. Now 12 plots are grown by men and one is grown by a woman. They grow under organic management.

C. How would you define the »urban sense of place« and »rural sense of place« and and how is it linked to urban food production? (Please add to this discriptions also the 2 pictures you have prepared for JTS as a task)

Urban sense of place



Badalona the third city of Catalonia, the 25 th city of Spain in number of population (220,000 inhabitants, density 10,373 inhabitants/ km²).

The municipality of Badalona is 21.2 km², 38 % of the surface are not urban. There are only 27.8 ha of farmland.

Rural sense of place



Forestry in Casserres. Casserres is located 98 km far from Barcelona. Casseres has 1,594 inhabitants (density 29.5 inhabitants km²).







D. Please present and comment all the examples of governance models and policies from your countries you have collected as a group in the Workshop 9.

Periurban agriculture – Catalonia (Spain).

Periurban agriculture is not officially recognized, but there is a project of law (not approved yet), that it recognizes the roll of the periurban agriculture. Peri urban Agriculture areas must be identified in the New Agricultural Land Planning of Catalonia.

In Catalonia there are some agricultural spaces protected, close to cities:

- Baix Llobregat Agrarian Park
- Gallecs Rural Park
- Sabadell Agrarian Park

The Government of Catalonia has a label to promote the short food chains. It is a way to promote the local food production.

There are also some obstacles, to implement agricultural activities near cities. The urban planning in Catalonia and Spain defines which activities are admitted and which not:

- Allows the cultivation in areas defined as agricultural.
- Greenhouses are admitted (in general).
- Animal breeding for commercial proposes is not admitted in some municipalities.
- Agro industry:
 - Cellars are admitted,
 - Others (cheese, jams, slaughterhouses, ...), sometimes are not listed.

<u> Urban agriculture – Catalonia (Spain).</u>

Not formal (Riverbanks, spaces between infrastructures ...). The municipal authorities and hydrological authorities fight against this type of soil occupation. Formal:

<u>Public administration</u> (municipalities) offers plots to retired people (> 65 years) or people in risk of social exclusion. The most characteristic example is this: The town hall is the owner of farmland and it reclaims the space as allotment garden. Each Town Hall elaborates rules of its allotment gardens (management, by lot, profile of the users,). There are allotment gardens in Barcelona, Badalona, Mataró, Mongat, Sabadell, Terrasa, ...

<u>Private</u>. Some farmers offer plots (100 m²) to rent. Since October 2013, there are some suggestions from the Territory Department. These suggestions address issues such as location, sizes plots, constructions, etc and what the administrative processes are. The Catalan Farmer Unions are against that farmland is used as allotments.

Zala Schmautz:

A. Please list the most important lessons learnt from each Workshop:

	WORKSHOP	LESSONS LEARNT
1	WALK THROUGH URBAN	Urban gardens: Each place has its own history.
1	GARDENS AND SAVLJE SITE	Different kinds of organization between users.







	VISIT	Savlje site: How to make organic gardening accessible
	V1311	to people living in the cities.
	LINDERSTANDING ECOLOGICAL	· · · · · · · · · · · · · · · · · · ·
2	UNDERSTANDING ECOLOGICAL	How to make ecological food growing interesting
	FOOD GROWING	(even for kids) and understanding of crop rotation.
3	ENVIRONMENTAL ASPECTS OF	Gains of urban food production (green spaces in city
3	URBAN FOOD PRODUCTION	centres, growing local plants, habitat for animals,)
4	SOCIAL ASPECTS OF URBAN FOOD PRODUCTION	Learning about different reasons why urban food production is important for society and also for individuals.
_	ECONOMIC ASPECTS OF	With urban food production less transport is needed
5	URBAN FOOD PRODUCTION	→ less CO2, with it less waste is produced.
6		Combining wishes of stakeholders together with
		knowledge and experiences of the experts on their
	CASE STUDY WORK	professional field. Importance of multidisciplinary
7		team and good communication between team
		members.
	DESIGNING PLANNING	members.
8	PROCESS FOR URBAN FOOD	Different approaches to planning process (analysis,
0		planning, wishes of stakeholders,)
	PRODUCTION	
	DIFFERENT LEVELS OF	
9	GOVERNANCE, REGIMES AND	
	POLICIES	

B. How do you see the difference between urban agriculture and urban gardening? (Please add to these descriptions also the 2 pictures from your country you define as urban agriculture and urban allotment gardens which you have already prepared for the JTS as a task).

Urban agriculture



*picture from internet

Urban gardening



*picture from internet

Food is produced in the cities by companies. Food is produced by locals in city centres. Example: rooftop aquaponic farm in Basel, Example: gardens in Ljubljana city centre Switzerland

C. How would you define the »urban sense of place« and »rural sense of place« and how is it linked to urban food production? (Please add to this descriptions also the 2 pictures you have prepared for JTS as a task)







Urban sense of place



Rural sense of place



Houses are near to each other, with small green spaces in between, maybe some public parks. Example: Ljubljana city centre with different types of urban gardens (guerrilla, allotment, ...)

Houses with their own gardens, a lot of green areas. Example: Einsiedeln near Zurich City in Switzerland.

D. Please present and comment all the examples of governance models and policies from your countries you have collected as a group in the Workshop 9.

ZURICH CITY: The policy and regulatory framework for the Zurich City region is quite complex. It constitutes a mix of national, cantonal and city/community related laws, regulations and guidelines for implementation and also some policy goals and programmes. In the City of Zurich, there is a great importance of gardening in allotment gardens. These are garden zones with long standing history and mainly very strict rules and strict organisation/associations with social control. City administrators reported that until now the main interests of family garden representatives are generally to have "tidy gardens" and they regularly check that garden sheds and other construction works are built according to the rules (Schmid and Jahrl, 2013/14 – City region of Zurich (Switzerland); SUPURBFOOD WP2 Final case study report).

Carsten Heinrich:

A. Please list the most important lessons learnt from each Workshop:

	WORKSHOP	LESSONS LEARNT
1	WALK THROUGH URBAN GARDENS AND SAVLJE SITE VISIT	How much the ability also in food production depends on what someone really wants to achieve. Two farmers on opposite sides of a road run different strategies (conventional vs. organic) and mean each it is the only way possible at the place and in their situation
2	UNDERSTANDING ECOLOGICAL FOOD GROWING	Easy access to the system of crop rotation by a game. Could also be interesting for more ambitious gardeners or be transformed into a web-application
3	ENVIRONMENTAL ASPECTS OF	Do not forget about the properties of a place that are







	URBAN FOOD PRODUCTION	not visible at first sight
4	SOCIAL ASPECTS OF URBAN FOOD PRODUCTION	What growing food and over all caring for its own environment can mean for people. Empowering those who live there!
5	ECONOMIC ASPECTS OF URBAN FOOD PRODUCTION	UG meets just little the demand of cities. More important seems to integrate UA in local food chains to reduce traffic and to decrease the dependance from global food markets
6 7	CASE STUDY WORK	Bring stakeholders together and listen carefully to the needs of those who want to do something. Do not predefine a target group too early in the process
8	DESIGNING PLANNING PROCESS FOR URBAN FOOD PRODUCTION	Do not be fixed to planning principles that have been successful at similar projects. Each Place is unique!
9	DIFFERENT LEVELS OF GOVERNANCE, REGIMES AND POLICIES	Totally different approaches over the continent. All somehow related to tradition or way of living at the countries/regions

B. How do you see the difference between urban agriculture and urban gardening? (Please add to this descriptions also the 2 pictures from your country you define as urban agriculture and urban allotment gardens which you have already prepared for the JTS as a task).

Urban agriculture



Urban gardening



Bigger continuous areas close to the city not used for building activities. Helps to cultivate and by that maintain these areas and make it support the city's climate system as well as short food supply chains.

Located more direct in the neighborhoods on left over or reconverted areas. Beeing a playground for the needs and interests of young city population in the informal and older citizens in the more formal way.

C. How would you define the *urban sense of place and *urral sense of place and how is it linked to urban food production? (Please add to this descriptions also the 2 pictures you have prepared for JTS as a task)







Urban sense of place



Place dominated by people and human activities.

Rural sense of place



Place dominated by nature, cultivated or not.

D. Please present and comment all the examples of governance models and policies from your countries you have collected as a group in the Workshop 9.

Aachen, Germany: The city of Aachen has a long tradition in preserving its natural environment. Located in a bowl the dense urban body needs to interact with little valleys that bring cold air from the surrounding forests and fields down directly to the mediaval city centre. Without any excepts the areas of these fresh air aisles along creeks have never been used for building activities. At some there is agricultural use, at some there are huge plants of allotment gardens existing for decades.

These gardens that you find everyvere in Germany look a bit like squatter settlements because one can build a little shed on each plot. This and many more rules are set in the "Bundeskleingartengesetz". So i.e. that a third of the area of each garden has to be cultivated. The allotments give people a garden who live in multiapartment dwellings and brings many together by the organisational form as clubs that asks members to get involved in communal activities and take part at decisionmaking processes.

The city and the county give financial support to farmers who provide facilities that help the nature to compensate the impact by the urban such as bird protection, watercleaning, waiver of fertilizer or biodiversity.

Sean Shanagher:

A. Please list the most important lessons learnt from each Workshop:

	WORKSHOP	LESSONS LEARNT
1	WALK THROUGH URBAN GARDENS AND SAVLJE SITE VISIT	A very interesting exploration of guerrilla gardening projects, a community garden and two farm sites. Learned about the impact of more bottom approaches at the gardens. Farms useful for understanding markers and CSA schemes. We really got a good feel for life here in Ljubljana.
2	UNDERSTANDING ECOLOGICAL FOOD GROWING	Very neat set of tools for planning a garden using crop rotation techniques, complementary planting, and awareness of seasons. Would be good to get these cards in English.
3	ENVIRONMENTAL ASPECTS OF	Irrigation was of interest, although not so relevant to







	URBAN FOOD PRODUCTION	the Irish climate. The soil quality presentation was
		crucial for considering a community garden in a city
		environment.
		Central to the success of any urban growing project,
4	SOCIAL ASPECTS OF URBAN	an awareness of different cultural conceptions of the
	FOOD PRODUCTION	urban and rural is useful. Might have covered more on
		community-building initiatives too.
	ECONOMIC ASPECTS OF	Very important presentation on the economic
5	URBAN FOOD PRODUCTION	context: climate change, neoliberalism, and the value
	ORBAN 1 OOD FRODUCTION	of small scale local projects.
6	CASE STUDY WORK	Good to interact with people from various parts of
		Europe, to hear about their experiences, and to ork
1_		together on a real-world case study. Also, to meet the
7		Zavod Bob participants, and gain an insight into life in
		Ljubljana for young people.
	DESIGNING PLANNING PROCESS FOR URBAN FOOD PRODUCTION	Our group put the emphasis on a bottom-up approach
8		that worked from the needs of communities 'up',
0		viewing the municipality as a facilitator rather than
		initiator. Tutor guidelines were very useful.
	DIFFERENT LEVELS OF GOVERNANCE, REGIMES AND POLICIES	Again, useful to hear about the different experiences.
9		In Ireland, relevant governance is primarily at the
9		council level. There have been considerable advances
		in this sphere since in the last 10 years.

B. How do you see the difference between urban agriculture and urban gardening? (Please add to this descriptions also the 2 pictures from your country you define as urban agriculture and urban allotment gardens which you have already prepared for the JTS as a task).





of vegetables to an urban CSA scheme. The focuses on cash crop for export, in this case

Urban gardening



This is an image taken recently of the delivery The vast majority of farming in Ireland is farms growing the food are located 20km cattle farming – both dairy and dry stock.







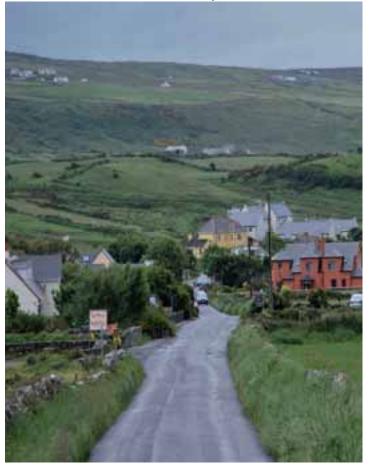
outside the city, but are very much integrated into an emerging urban sensibility that community-building, cooperation involves and organics.

This requires large tracts of land to make a living, and is heavily subsidised. A greater focus on supplying food to local buyers group would be less land-intensive and would support the local economy.

C. How would you define the »urban sense of place« and »rural sense of place« and how is it linked to urban food production? (Please add to this descriptions also the 2 pictures you have prepared for JTS as a task)



Rural sense of place



This is a community garden in Finglas, a built-up suburb in Dublin. Located on the grounds of a school, it makes use of available resources such as cardboard for mulching. It speaks of a new way of being, and of producing food, in the city.

This is the typical image of a rural sense of place in Ireland - pasture with small villages and dispersed farmsteads. This image is of Doolin, a popular tourist destination with a strong tradition of Irish music.

D. Please present and comment all the examples of governance models and policies from your countries you have collected as a group in the Workshop 9.







Our approach used the placement of images of urban agricultural practices on a map of Europe. This allowed is to discuss the types of challenges and opportunities that different governance models present. There was considerable variety between the six countries that featured. Most participants felt that municipality-level initiatives were of most value.

Lucie Sovová:

A. Please list the most important lessons learnt from each Workshop:

	WORKSHOP	LESSONS LEARNT
1	WALK THROUGH URBAN GARDENS AND SAVLJE SITE VISIT	I was impressed by the fact how the authorities are letting urban gardens "live" and become a very organic part of the city landscape. In Savlje, the farmers were able to take advantage of the road to attract costumers. The new organic gardening project seemed inspiring although maybe too complicated with the certification.
2	UNDERSTANDING ECOLOGICAL FOOD GROWING	Learning about crop rotation – interesting, also the cards are a nice idea. I'm not sure if it was really needed for the purposes of the training school though.
3	ENVIRONMENTAL ASPECTS OF URBAN FOOD PRODUCTION	Soil contamination for dummies.
4	SOCIAL ASPECTS OF URBAN FOOD PRODUCTION	Very complex, framing urban agriculture in the context of global food production and the meanings constructed around it.
5	ECONOMIC ASPECTS OF URBAN FOOD PRODUCTION	Urban gardening cannot be evaluated only in terms of savings and profit, but I'm convinced that it is very important to include these aspects. Great workshop.
6 7	CASE STUDY WORK	Experiencing team work with people from different backgrounds, trying to fit the pieces of our knowledge and worldviews together.
8	DESIGNING PLANNING PROCESS FOR URBAN FOOD PRODUCTION	Re-considering the planning processes we now take for granted. Complicated and inspiring.
9	DIFFERENT LEVELS OF GOVERNANCE, REGIMES AND POLICIES	I enjoyed learning about the attitude of Ljubljana municipality and space planners.

B. How do you see the difference between urban agriculture and urban gardening? (Please add to this descriptions also the 2 pictures from your country you define as urban agriculture and urban allotment gardens which you have already prepared for the JTS as a task).







Urban agriculture



I am not familiar with examples of urban farming, so I decided to compare two present types of urban gardening instead. The first one are allotment gardens, which have a long tradition and are widespread. Yet they are rather marginalized in media and policies, because they are often associated with socialist times.

Urban gardening



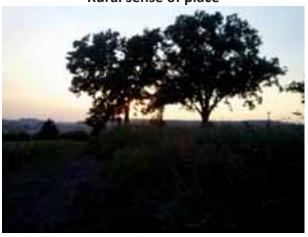
The second type are community gardens, which are recently emerging in the Czech Republic. They are based on examples from Western Europe and linked with civic engagement, which is why they are attractive media and public. However contribution to food production and selfsufficiency is marginal.

C. How would you define the »urban sense of place« and »rural sense of place« and how is it linked to urban food production? (Please add to this descriptions also the 2 pictures you have prepared for JTS as a task)

Urban sense of place



Rural sense of place



Urban spaces are more artificial, manmade, more grey than green. Urban sense of place or belonging is often constructed through interventions in public space, which

The picture is actually from a suburban area right outside the city. There is much less human presence, artificial interventions are more subtle. The sense of place is based on







bring personal ownership to the largely the site itself, its history and characteristics. anonymized environment.

D. Please present and comment all the examples of governance models and policies from your countries you have collected as a group in the Workshop 9.

Allotment gardening is the most common type of urban agriculture in the Czech Republic, occupying an area of 14 972 ha countrywide. Most of the allotments are organized in the Czech Gardeners' Association which has around 150 000 members. Unfortunately these numbers have been declining since the fall of state socialism in 1989. Gardeners are mostly elderly people, although there are some signs of renewed interest especially from young families. Apart from land competition in the cities, allotments are facing discoursive pressure – they are perceived as a relic of the past and are expected to disappear rather than contribute to urban food production in the future.

On the other hand, alternative food networks and short supply chains are gaining more and more attention in the last decade. There has been a boom of farmers' markets, the first CSA groups and box schemes appeared etc. The state is not very active in the area, the role of NGOs, informal civic groups or even engaged consumers is more important.







4 YOUR VIEWS, COMMENTS AND IDEAS ABOUT URBAN FOOD PRODUCTION, JTS LJUBLJANA AND/OR WORKSHOPS

(Please collect your views, comments, opinions, ideas, suggestions and photos you wish to share with all of us... and present them as you wish.)

Xavier Recasens:

For me it is important to know, which vegetables and fruits are consumed by the citizens. I want to share pictures of Ljubljana's market. There are a lot of vegetables, roots especially, that they are not consumed in Catalonia/ Spain.





Zala Schmautz:

Although I am coming from Ljubljana it was nice to see city from another perspective. JTS Urban food production showed me Ljubljana in completely different "light" then I knew it from before.

Carsten Heinrich:

I like the concept of the training school that you first get an overview about what are the different movements and developments taking place at a particular city (in this case Ljubljana) and after that work on own ideas to support or guide future projects as part of this development. The most interesting part was to understand how team members with different academic and regional background deal with a task and how the different approaches come together in an idea or a design.

Sean Shanagher

This was a very intense but rewarding week for me. As an academic-activist, I felt that the benefits were for both the academic and the activist. In the first case, there were interesting approaches to planning, economic considerations, and technical approaches to the site. In the second case, the real-world nature of the workshops, and the visits to the gardens and farms, provided many inspiring ideas about developing urban agriculture.











Workshop 2: Understanding Ecological Food Growing



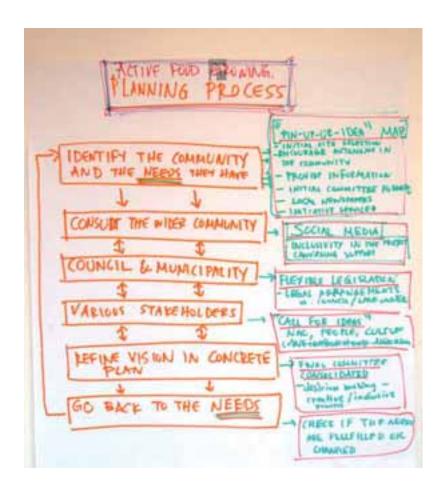


Day 2: Visit to the site









Workshop 8: Our Suggestion for the Planning Process







Ljubljana Joint Training School on Urban Food Production

COST Actions TU1201 and TD1106 21-24 October 2014, Ljubljana, Slovenia

Report from Working Group 2

WG members:

	NAME	PROFFESIONAL BACKGROUND	COUNTRY
1	Krista Willman	PhD Student in Environmental Policy	Finland
2	Snežana Jovičić	PhD student in Ecology	Serbia
3	Vasiliki Giatsidou	Msc in Agricultural Economics	Greece
4	additional contribution:	Forestry	Slovenia
	Janja Merkač		
5	additional contribution:	PhD candidate in Social	UK / Slovenia
	Petra Matijevič	Anthropology	
7	(Sarah Liebing)		Germany
8			

WG leader: Krista Willman

1. CASE STUDY WORK

CASE STUDY TOPIC: ED park (Educational and Edible park), case study in Livada area

A. Short description of the case study area (location, position within the city, size, accessability, spatial situation, environmental conditions, spatial potentials and problems...)

The case study area is located in the south of Ljubljana, app. 2.4 km from the city center and its size is 6000 m². This part of the city belongs to the famous Ljubljana Marshes where prehistoric pile dwellers lived 4000 BC. The area is now protected as a landscape park and has been designated as an UNESCO World Heritage Site. Therefore this area has to be checked by archaeologists before any kind of a construction work. It is a place of great biodiversity, especially regarding birds (a nesting area of one half of all birds known in Slovenia).







Livada case study has been proposed as a new community garden. Not so far from the city center and just a few feet distance from The Path of Remembrance and Comradeship, it is considered as a good location that would attract people. On the other hand this area is not accessible by car because of the mentioned path. There are some parking spaces nearby which could be used and also a city bus.

However, environmental conditions across the field could not be considered as favorable for gardening, especially regarding physical (but also other) condition of the soil. The soil profile showed a large amount of clay in the soil surface and a humus layer under it. The land is flat and an efficient drainage system is essential.

The area is surrounded by (illegal) houses, so there is a challenge of linking the local community with the project.

B. Short description of the potential stakeholders (as they were defined for the case study), their needs, priorities and motives you were building your proposals and ideas on.

The main stakeholder in the case study of Livada is a youth non-governmental organisation called Zavod BOB. Our group's task was, however, to plan a public green space that would serve the needs of all citizens of Ljubljana. We developed an idea of a park where people from all different age groups and backgrounds could meet up and spend their leisure time. The concept of a park is an educational and edible park (ED park).

One major target group of the park is school kids, their teachers and parents. Kids from nearby schools will benefit from the park by learning biological aspects of city nature. Park would be integrated to biology teaching program of the nearby schools. The kids could observe the growth of the herbs or bushes or other plants they have planted earlier.

Park godmothers and -fathers are another essential stakeholder group of the Ed Park. They are senior citizens who have spare time and enthusiasm for gardening but maybe not enough time or energy to keep their own allotment plot. Godmothers and -fathers would take care of perennial plants, berry bushes and fruit trees of the park.

City of Ljubljana would be the initiator of the project and would name a contact person who's job is to regularly supervise the conditions of the park.

The ED Park is an answer to citizens need for open green space, where it's possible to try different things and learn by doing. Leisure and educational purposes of the park form a combination that serves large range of citizens. Possibility to enjoy the taste of berries, fruits and other edible plants makes the experience even more luscious.

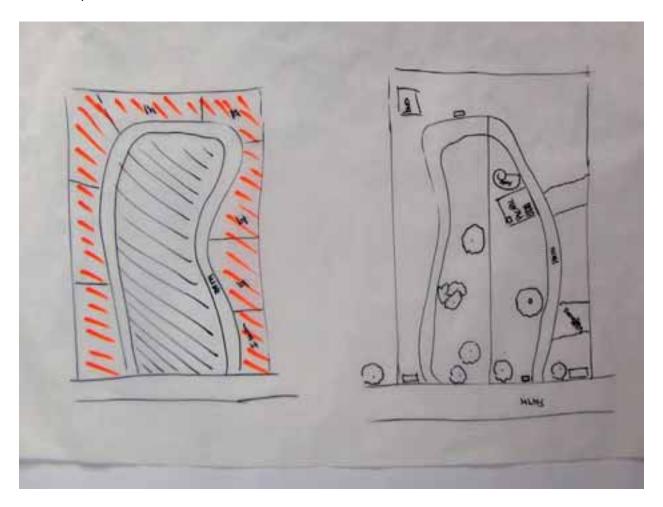






C. Starting points you defined for future development of the area

- Open / public space, easy access (arranging parking places at Restaurant Livada, improving public transport for example establishing station for city bikes http://en.bicikelj.si/)
- Edible Park with educational and leisure purposes (workshops, edible and ornamental gardening, environmental education, food book and recipe crossing) etc.
- **D.** Presentation of the ideas, proposals and scenarios for future development of the area. Please present as graphic part (schemes, sketces, concepts...) and written explanation!



We didn't want to formulate one certain kind of concept of the park, because the main idea is that the users can freely design the park by themselves (the bottom-up idea). Anyway our proposal is that there goes a maintained path around the area. The outer circle of the path could consist of different kind of action areas, for example beekeeping, herb garden, school kids garden, edible weed education area, composts, compost toilets ect. On the inside of the path circle there could be a more maintained lawn area, where people could have picnics and play games or however they want to spend their time at a park. There would also be an







outside kitchen for preparing food. Berry bushes and fruit trees would be planted all around the area.

E. COMMENTS

Plese describe where were the problems and obstacles within your work, what was the added value, whad did you like and what didn't you like! You can write about as a group or each member separately.

Krista:

Different back round of the group members maybe caused some challenges in understanding the ideas of the others at the beginning. On the other hand the multidisciplinarity of the group improved the discussions and ideas brought up.

Vasiliki:

Obstacles: The limited period of the training school since it was quite hard to develop a common base of understanding among the participants of the group.

Challenge: Find ecological ways to develop an empty green space for public purpose

Added value: The multidisciplinarity of the members of the group

Like: The interaction between tutors, groups, Zavod Bob and members of Urban Planning.

<u>Snežana:</u> It was a bit challenging to carefully go through all the lectures, workshops and field trips. Four days were just not enough:) On the other hand, all the participants were fully motivated to work together on the important topic such as urban food production itself is. Different backgrounds and experience made the group working better and productive.

Petra: The urban planner in our group rejected the top-down approach immediately and our design consisted of a simple path along which the participants would decide for themselves what of the above activities to put where (the trees, the plots, a common space etc). We didn't really develop the process of how the participants will be informed and selected, leaving it to the municipality and mostly referring to them as the 'local community.' I expressed the opinion that the approach is not really bottom-up if the people involved can decide only where something is but not what the subject of placing is. I gathered that in this way we were merely putting the responsibility for decision-making onto somebody else since we didn't interfere at this point. My remark was somewhat ignored. Bottom-up, planning in a way of 'less is more' since this allows for 'participation' sounded nice enough to get the other group members votes, I felt. Fences were also seen as closed and limiting by default and were avoided in the design. The participants, the 'local community' was abstract throughout the exercise and my insistence that we find a job for the unemployed but quite eager and interested neighbour to whom I spoke during our visit to the site was also not taken seriously. I do however realise that my 'job' as the anthropologist in my group was to complicate things a bit in order to rethink things to easily taken for granted.







2. LESSONS LEARNT AND INFORMATION EXCHANGE

Please describe (by each member of the group) in few sentences:

A. Please list the most important lessons learnt from each Workshop:

	WORKSHOP	LESSONS LEARNT
1	WALK THROUGH URBAN GARDENS AND SAVLJE SITE VISIT	Krista: The variety and creativity of urban gardening. Vasiliki: The possibility of creating sustainable and functional public green spaces Snežana: different kinds of urban gardening practice give different results Petra: I enjoyed the contrast between both of the urban garden sites; the first a traditional one but occupied in a guerilla way, with no legal consent, the second cultivated by Metelkova activists but with clear landowner's approval. On the first the JTS group was clearly observing the 'locals' in their gardening ways and on the second the questions addressed to Irena were asking about if the gardeners collaborated with the 'locals.'
2	UNDERSTANDING ECOLOGICAL FOOD GROWING	Krista: The importance of planning the structure of the garden in advance: plant families and from year to year circulation of plants. Vasiliki: Ecological food growing is attainable as long as we are able to appreciate principles such as sustainability, environmental protection, food safety etc Snežana: There a lot of things that should be taken into consideration when planning the garden. Petra: I found Nataša's presentation at the Savlje site and her subsequent workshop a bit to promotional for an academic training school but ended with liking her Garden Cards™ a lot. For me, a future allotment gardener, the product and her lecture was quite informative and I will consider a lot of her suggestion when gardening myself. When our group was deciding on what to grow in our imaginary garden some vegetables like chinese cabbage and brussel sprouts were discarded by some group members on the grounds that they were not local crops, as the name clearly suggested. I found that quite interesting.
3	ENVIRONMENTAL ASPECTS OF URBAN FOOD PRODUCTION	Krista: To find out the environmental features of the land: if it is contaminated, how is the soil profile, infiltration rate of the land. Vasiliki: Environment is an inseparable section of urban food production including (in general) the reduction of food miles (carbon footprint) and the rational use of natural resourses Snežana: You can't have healthy food if you don't have (at least







		to some extent) healthy environment, so before making the mistake of planting the plants in unhealthy environment, check the soil and water resources. Seeds too:) Petra: The water irrigation lecture was not suited to all the participants and some have difficulties following it. The soil contamination lecture was interesting. It made me realise that urban gardening does face additional limitations related to what the lands was used for previously.	
4	SOCIAL ASPECTS OF	Krista: Needs and motives of the gardeners.	
	URBAN FOOD PRODUCTION	Vasiliki: Needs of the gardeners to socialize, to share cultural habits, to interact by learning	
	TRODUCTION	Snežana: We can't consider urban gardening as only practical	
		activity which gives us food or money, without considering the	
		human capital. Urban gardening is about the people, about their	
		habits, feelings, culture, Petra: The exercise with photos of the urban and rural evolved	
		into an interesting discussion about people's imaginaries of	
		both. It showed how the participants, mostly urban academics,	
		were imagining the rural as a place for smallholders, family farms and tradition.	
5	ECONOMIC ASPECTS OF	Krista: The impact of food chain distances to food price. Urban	
	URBAN FOOD	food system innovations.	
	PRODUCTION	Vasiliki: Producing healthier and more secure food, shortening	
		food chains, fair trade, lower food cost and employement	
		Snežana: Food price depends on many factors, most of them unknown to final consuments. People should educate	
		themselves more about costs of production, costs of	
		transportation and problems with a long chain of dwellers.	
		Petra: Glavan's lecture provided the much needed politico-	
		economic backdrop to the discussion about urban allotments	
		and it based the practice within considerations about food and income, not only space and place.	
6	CASE STUDY WORK	Krista: Thinking about the actual implementation of a communal	
7		garden or public park: what is the aim of the project and what	
/		are the difficulties?	
		Vasiliki: All aspects have to be taken into consideration in order	
		to develop a green open space for public purpose Snežana: In order to plan and implement a project regarding	
		construction of a green urban space different factors should be	
		considered such as natural, economic, human capital,	
		Petra: The case study work provided me with a peek into how go	
8	DESIGNING PLANNING	about an urban planning process which was new to me. Krista: Planning is a communicative process.	
	PROCESS FOR URBAN	Vasiliki: It's very important to take into consideration legal	
	FOOD PRODUCTION	conditions, characteristics of the site such as accessibility and	
		other dimensions	
		Snežana: There are different kinds of approaches in order to plan and implement an urban garden or green space. Nowadays,	
		pian and implement an urban galuen of green space. Nowadays,	







		bottom up approach is something we should focus on, since the community is the one who will use the green space at the end. Petra: Since the urban planners also plan the planning project I realised that although limited by different levels legislation they potentially hold great power in decisions about who the project will include or exclude.
9	DIFFERENT LEVELS OF GOVERNANCE, REGIMES AND POLICIES	Vasiliki: Urban food production is a mixture of different planning cultures (national, regional, local) based in communicative process and normative beliefs and values Snežana: Different countries, regions and even cities have different kind of policies regarding urban gardening, depending on tradition, cultural norms, economic situation in a country, Petra: There is myriad of policies, laws and regulations that affect the allotment gardening practice. Different levels, different policy areas. These are implemented very differently across different European countries and while it is informative to look for examples of good practice it is also necessary to understand the allotment gardening practice in the context of the national and regional cultural patterns.

B. How do you see the difference between urban agriculture and urban gardening? (Please add to this discriptions also the 2 pictures from your country you define as urban agriculture and urban allotment gardens which you have already prepared for the JTS as a task).

<u>Urban agriculture</u> is more intensive and large scale food production than urban gardening. Urban agriculture usually takes place on outskirt of a city in farms. Urban agriculture includes cultivating, processing and distributing of food in a professional level in order to response to the daily demand of consumers within a city. Additionally, it requires intensive practices and methods for food production, marketing and food safety.

<u>Urban gardening</u>, on the other hand, is often more communal and small scale action. It can take place near the city centre for example in urban brownfields like in old industry areas or sites waiting to be built some day. Urban gardening connects with the socialization and emotional well-being of people who get involved. The cultivations are not for profit, and they support vulnerable social groups based on the principles of organic farming. People with common goals are gathering to urban gardens to enjoy the benefits of working with and being in contact with the soil. It is common to use raised beds in urban gardening due to contaminated soil or paved land.

Not only the location makes agriculture or gardening urban, but it's integration to local urban life and ecological and economic circulations taking place in the city. An urban farm can for example use compost that is formed from citizens' organic waste, and produce and distribute the vegetables or other products to local small shops or vegetable box schemes.









Urban allotment garden in Tampere, Finland (Krista).



Urban agriculture (gardening) in Tampere, Finland (Krista).









Urban Agriculture (Thessaloniki, Greece)



Urban gardening (Thessaloniki, Greece)











Urban gardening, Serbia







Additional (by Petra Matijevič): In a way urban gardening is only a part of urban agriculture that can include other food production activities like beekeeping, crop farming, animal husbandry and so on. On the other hand the term 'urban gardening' retains some association with the leisure activities or community building while this is less pronounced with 'urban agriculture'. I also think that both term could mean identical things and it sometimes depends on which term the policy-makers and state-officials want to use to achieve a desired goal.

C. How would you define the »urban sense of place« and »rural sense of place« and and how is it linked to urban food production? (Please add to this discriptions also the 2 pictures you have prepared for JTS as a task)

<u>Urban sense of place</u>: Metropolitan areas with high human population density, crowded public spaces, industrial zones, huge blocks of buildings, expressways, metros, industrial estates, airports, commercial ports etc. On the other hand we can see the urban sense of place consisting of the meaningful places inside the urban structure: the places where one feels being able to pause, breathe and connect to.

In an urban area food production depends on retailers, whole-sallers and not farmers. The mainstream food production is under the controlled system of food marketing. There is a significant food insecurity due to the fact that the unknown origin of food, high food cost and heavy infrastructure for transport, delivery and services.

<u>Rural sense of place:</u> Being in a place (most of the times an isolated agricultural area) with low population density, small settlements and small-scale farms. According to the social aspect there are bonds and interactions between community and neighbourhood. "Rural" is equivalent with the "quality of life".

Rural areas are linked directly to the food production where rural people cultivate crops, produce dairy products in a small-scale level. Especially in Greece, there are many women cooperations where local food is being produced (with personal work and local raw materials) and being delivered in urban areas.









Urban sense of place, Tampere, Finland (Krista).



Rural sense of place, Finland (Krista).



Urban sense of place (Commercial Port of Thessaloniki, Greece)









Rural sense of place (Greece)

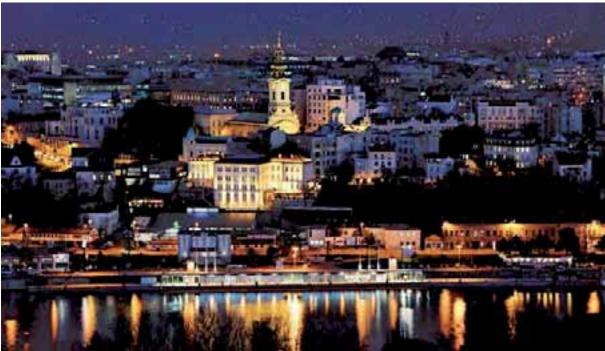


Rural sense of place, Serbia









Urban sense of place, Serbia

Additional (by Petra Matijevič): I haven't prepared the photos for JTS in advance because I think the distinction is problematic. The aim of the workshop on this topic too was to make the participants realise that the distinction is socially constructed and it is not inherent or 'natural.' Moreover, making the distinction through photos can soon become merely an issue of aesthetics, of how urban and rural things and spaces look like and the other properties of a sense of a certain place like experience and social networks could be lost. Urban and rural are also so dependent on each other and so difficult to delineate that some suggest it is better to talk about the urban-rural continuum. Here is a photo of the urban-rural continuum, taken from my window on Bratovševa ploščad, with a view of Savlje.









D. Please present and comment all the examples of governance models and policies from your countries you have collected as a group in the Workshop 9.

Germany:

- -Allotment gardens / Federal Law on Small Gardens, regulated by the German Building Code/ Organized as an association, hence own rules
- -Urban Gardening /No Laws or acts on Federal or State level/ All are affected by Laws of environmental and nature conservation, sewage and waste

Finland:

In the city of Tampere, Finland there are three modes of urban gardening (besides home gardening): Urban allotment gardens with cottages (4 such gardens in Tampere, initiated between 1916 and 1949), urban allotment gardens without cottages (14 such gardens in Tampere, initiated between 1941 and 2013) and city gardens of new urban gardening movement (dozens of such gardens, new ones appear every spring since 2009).

There are no specific law for allotment gardens, but the law for Land Use and Building regulates allotment gardens concerning the cottages. In these allotments with cottages the land is owned by the City but rented by allotment garden associations. Cottages are privately owned.

In urban allotment garden plots (allotments without cottages) the land is also owned by the City of Tampere, and plots are being managed and rented by 4H association. The City and the 4H association have made service agreement about the allotment areas. In 11 of the allotment gardens the plots are rented for one year at a time and in 3 of them for continual use.

City gardens are a new popular form of urban gardening in Finland. They are part of new urban gardening movement appeared in Finland in this decade. This is a bottom-up action that starts small scale gardens near city center, in public space and wastelands. Gardens are being initiated by associations, communities or group of citizens. There are some signs that in the future such gardens might also by initiated by the City when city is aiming to take control of this uncontrollable action.

Serbia:

-Private Gardens/ No laws or acts on national level, neither on regional/local There is a tradition of growing food in private gardens, bus this topic is not developed and regulated by policies.

Greece:

-Urban and Peri-urban Gardening

Aristotle University of Thessaloniki: Vegetable gardens, Green roofs, Urban vineyard -Allotment Gardens/ Social, economic criteria

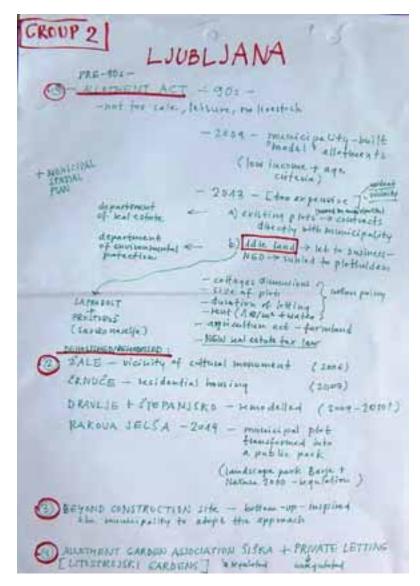
No Federal Laws







Slovenia: (on city level – Ljubljana)









3. YOUR VIEWS, COMMENTS AND IDEAS ABOUT URBAN FOOD PRODUCTION, JTS LJUBLJANA AND/OR WORKSHOPS

Please collect your views, coments, opinions, ideas, suggestions and photos you wish to share with all of us... and present them as you wish.

Vasiliki:

In my opinion JTS Ljubljana was a great experience as I had the chance to meet new researchers, inspiring tutors and new friends. Also, I found really interesting the fact that the city has all the specifications for urban food production.

I think that we should be able to work our projects a little bit more since the participants had different educational backround and if we had much more time we would be able to know each other better. I would suggest to elongate the training school's program for one day.

In future I hope that I will have the chance to attend such interesting projects as JTS Ljubljana.

P.S Ljubljana is such an adorable city!

Krista:

I think the JTS Ljubljana succeeded superbly in presenting Ljubljana as an interesting case city of urban agriculture. We learnt many aspects and explored several different modes of urban agriculture. The presence of local stakeholders during the workshops, like city architects and planners and members of the local NGO Zavod BOB, brought a huge contribution to discussions and work shop sessions.

<u>Snežana:</u>

It was a wonderful experience, almost a week full of new ideas, approaches, stories and interpretations. Great lecturers and useful workshops that will help us in future assignments related not just to urban gardening, but to many interdisciplinary tasks. Thank you:)

Petra:

The workshop was packed with contributions from different perspectives and angles and succeeded very well with presenting a holistic view of the concerns regarding urban agriculture/gardening that could then be to an extent put into practice through the case study work.







Regarding the group forming I think putting people with similar rather than different backgrounds might also prove to interesting (for future events) if the environmental, urban planning, economic and social science groups would then present their concepts to all the participants. This might yield improbable and unrealistic but fresher concepts that could then be adopted to more realisable solutions in the last workshop with groups formed more like the regular project groups.

Although the JTS consisted of so many activities over the course of day and was hard work for all the participants, it was impeccably organised and carried out.







Ljubljana Joint Training School on Urban Food Production

COST Actions TU1201 and TD1106 21-24 October 2014, Ljubljana, Slovenia

Report from Working Group 3

WG members:

	NAME	PROFFESIONAL BACKGROUND	COUNTRY
1	Zorica Medo	MSc Architecture	Serbia
2	Zoe Heuschkel	MSc Agricultural Science and	Germany
		Resource Management, MA	
		Cultural Anthropology	
3	Pedro Vasconcelos	MSc Lanscape Architecture	Portugal
4	Zala Velkavrh	BSc Marketing and	Slovenia
		Communication Studies	
5	Rebecca St. Clair	MSc History of Science, Medicine	United Kingdom
		and Technology	
6	Lea Egloff	BSc Environmental Engineering	Switzerland

WG leader:

1. CASE STUDY WORK

CASE STUDY TOPIC: Urban Agriculture Area in Savlje

A. Short description of the case study area (location, position within the city, size, accessability, spatial situation, environmental conditions, spatial potentials and problems...)

The Savlje area is located in the Northwest of the city Ljubljana, around 7km away from the Centre. The green surfaces of the Savlje area are part of the Ljubljana Green Belt and some of them are also water protection areas.

Different people reside in the Savlje area: farmers, residents owning a house, residents living in apartment buildings, etc. Although it is part of the Ljubljana City Area, it has a rural atmosphere and many of the residents perceive themselves as villagers.

Many of the local farmers adapted their production to the urban location and i.e. produce fresh vegetables and sell them in farm shops (direct marketing). These shops depend mostly on passing trade via the car traffic in Savlje, from daily commuters from the northern outskirts of Ljubljana, who pass through the area.







As the area is very close to the city it is often used for recreational activities (dog-walking, jogging, etc.). Problems could occur out of this multifunctional use of the area: housing, production and recreation.

B. Short description of the potential stakeholders (as they were defined for the case study), their needs, priorities and motives you were building your proposals and ideas on.

Residents:

Farmers: owner of green spaces, use the spaces for food production, sell products by direct marketing in farm shops by the road, don't want to give away land for other uses, want to have unpolluted land

Non-Farmers: Live in the Savlje area and want to have a green unpolluted open green space in front of their house which they can use for recreation. Maybe like to develop the Area and bring more added value to Savlje area (restaurant, shops, etc.).

Non-Residents:

Recreation users: want to use open green areas for recreational activities, like to have a picnic area with a fire-place and trash bins, wish to have a silent unpolluted green area so they can recover from the city.

Municipality: area is part of the green belt and a water protection area. Municipality wants to develop a multifunctional area without conflicts between different stakeholders. Customers: like to buy fresh and local products at farm shops, need road accesibility and parking spaces

Commuters: pass the area when driving to work or home, sometimes like to buy food at farm shops, want to have roads free from traffic jams.

C. Starting points you defined for future development of the area

<u>How develop the area to meet the different needs of the stakeholders? To have an</u> multifunctional area?

- Name different stakeholders and define their needs.
- Identify the existing potential of the space.
- Develop ideas for the region and check which ideas meet needs of stakeholders.
- Choose five ideas and design them.
- D. Presentation of the ideas, proposals and scenarios for future development of the area. Please present as graphic part (schemes, sketces,concepts...) and written explanation!

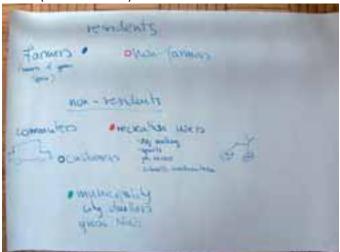
In accordance with the outlined goals and work process, we started our research with the stakeholders. First we detailed our main stakeholder groups to residents (farmers and non-farmers) and non-residents (commuters, customers, recreation users) and the municipality

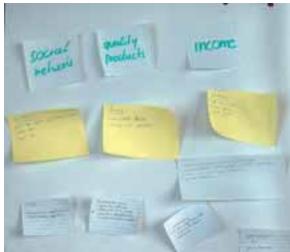






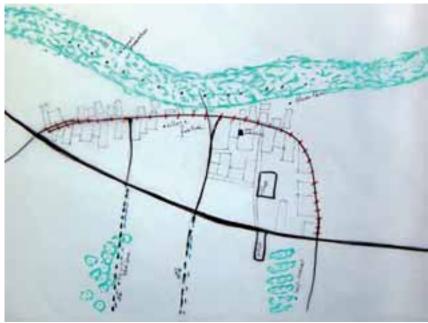
(Picture 1). We got acquainted with the characteristics and needs of our stakeholders: needs were assigned to three main stakeholder groups and arranged from general to specific (see Picture 2).





Picture 1 Picture 2

In the next step we identified the most important characteristics of the proposed site in Savlje (see Picture 3).



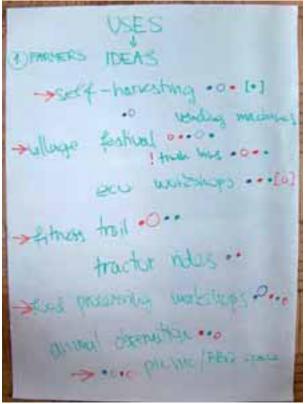
Picture 3

Through a group brainstorming session we produced several ideas for the development of the site. Proposed ideas varied in scale, relevancy and estimated costs. It was obvious that some proposals took into account the needs of some stakeholders and left out others. We developed a simple tool to evaluate the quality of each proposal: different dots represent different stakeholder groups. As a group, we assigned the dots that seemed appropriate to each proposal. The proposals with the most dots are therefore the most suitable since they can fulfill the needs of more stakeholder groups (see Picture 4).









Picture 4

The chosen ideas were self-harvesting (from which the farmers, municipality, existing customers and recreation users could benefit), yearly village festival which would include eco workshops and food-processing workshops, a fitness trail around the village and a picnic/barbecue space among the fields. The chosen ideas were placed on site in a rough sketch as seen on Picture 5.



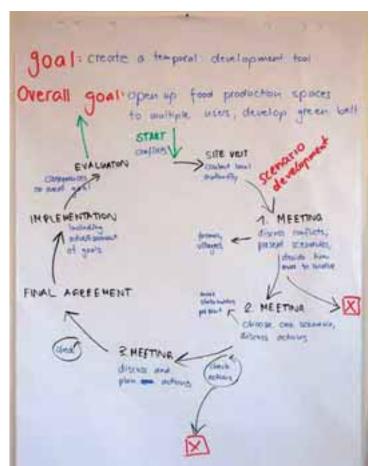
Picture 5







Finally, we designed a concrete plan for implementation of our ideas on the site. While the overall goal remained the opening up of food production spaces to multiple users and contributing to Ljubljana's Green belt at the same time, the objectives became much more tangible. We identified the steps we need to take to develop a temporal development tool for Savlje, the participation of stakeholders in the decision-making process and the possible risks and threats of such implementation (Picture 6).



Picture 6

E. COMMENTS

Please describe where were the problems and obstacles within your work, what was the added value, what did you like and what didn't you like! You can write about as a group or each member separately.

Obstacles:

- We did talk to one farmer of Savlje area but did not have contact to other stakeholders to know their wishes and aims for Savlje area (non-farmer residents, recreational users, etc.).
- In order to increase site access for more people with a view to upscaling the sale of farm products, it was suggested that there should be space for cars to park. This provoked a discussion whereby the balance between accessibility for cars and promoting the use of green transport was debated.







2. LESSONS LEARNT AND INFORMATION EXCHANGE

Please describe (by each member of the group) in few sentences:

Lea: It was good to work together with people from different countries and background on a topic which concerns all of us. Within discussions I realized that for all projects (not just for Savlje case) it is very important to integrate perceptions from different views. This leads to less problems and unforeseen obstacles in the ongoing project. At the same time I had the impression that it is quiet hard to develop something, as we do not have lots in common. I was a little bit disappointed that we kind of stayed at the surface of the topic. Zala: JTS enabled me to discover the various fields that unite around a single topic: urban food production. This was interesting because even if one tries, it is difficult to be familiar with the proceedings of all the different scientific disciplines concerning the topic. For me, this was the most valuable outcome of JTS: to deliver interesting bits of knowledge to a student or a researcher who is otherwise pursuing the narrowly defined goal of her research. Rebecca: The JTS provided an unique opportunity to meet people from other countries and to explore other people's perceptions of urban agriculture (both formal and informal). It was fascinating to learn about the allotments and farms in and around Ljubljana and the training school provides a fantastic platform to hear from academics and practitioners from a variety of disciplinary backgrounds. It was extremely useful to try and perceive the planning process as a fluid development that includes as many stakeholders as possible from the very beginning in order to establish a successful multifunctional space.

A. Please list the most important lessons learnt from each Workshop:

	WORKSHOP	LESSONS LEARNT
1	WALK THROUGH URBAN GARDENS AND SAVLJE SITE VISIT	The variety of urban agriculture in Ljubljana, the social, economic and cultural impact it has on local residents.
2	UNDERSTANDING ECOLOGICAL FOOD GROWING	Playing cards are an engaging way to educate children on growing crops. The gamification of food growing engages users in solving problems and increases their contribution
3	ENVIRONMENTAL ASPECTS OF URBAN FOOD PRODUCTION	The physical environment determines the scope and type of urban food production. Environmental aspects (soil,climate, irrigation,) are the most important precondition on which social consensus (or conflict) on urban food production can be built.
4	SOCIAL ASPECTS OF URBAN FOOD PRODUCTION	The border between urban and rural is less clear than we think. It is useful to think of "urban" and "rural" as purely mental categories that are usually represented by (both positive and negative) stereotypical imagery. This has tangible consequences







		for production and consumption of produce from urban	
		agriculture.	
5	ECONOMIC ASPECTS OF	The growing trend of urban food production, be it as plot	
	URBAN FOOD PRODUCTION	gardening or urban agriculture, should be – at some point –	
		evaluated through economic metrics. The advantages and	
		disadvantages of urban food production should be considered	
		when propagating for a change in the food production and	
		consumption circle.	
6		Savlje is an extremely interesting case of urban agriculture that	
<u> </u>	CASE STUDY WORK	cuts the boundaries between urban and rural in many ways. In	
7		many cases it seems like the process in Savlje is slower than in	
		bigger European and American cities. Here the city is approaching	
		the village in such a pace that it is – for now – possible to	
		combine the benefits of both, rural and urban. What Savlje needs	
		now is a new vision for a future that will be combine	
8	DESIGNING PLANNING	The needs of the various stakeholders and the scenarios for	
	PROCESS FOR URBAN FOOD	future development of the site must be implemented carefully.	
	PRODUCTION	Public participation ensures the successs of the project and	
		provides the planner with important insight into needs and	
		wishes of residents and visitors. That is why planning process	
		must be rolled out carefully. Planners must anticipate the path to	
		the final decisions and the possible problems in the process.	
9	DIFFERENT LEVELS OF	The sheer spectre of policies that apply to urban food production	
	GOVERNANCE, REGIMES AND	ranges from local, municipal, regional, national and wider. One of	
	POLICIES	the gratest questions for planners of urban food production	
		remains how to modify policies to truly reflect the situation of	
		individuals in the production and consumption circle and take	
		care of environment at the same time.	

B. How do you see the difference between urban agriculture and urban gardening? (Please add to this descriptions also the 2 pictures from your country you define as urban agriculture and urban allotment gardens which you have already prepared for the JTS as a task).

Lea: Urban Agriculture: Focus on production, professional business with income for workers Urban Gardening: Focus on social aspects (environmental education, intercultural and intergenerational links).

Rebecca: Urban agriculture (very similar to above) - tends to focus on food/fuel production with other outputs being a side-effect.

Urban gardening - social/health aspects more important than the food produced. Zala: Urban agriculture is food production on a wider scale, with more sophisticated

production methods, the economical value of such production is arguably higher compared to plot gardening. However, the reduction of plot gardening to social aspects seems to overlook the economic and environmental aspects of urban gardening. Plot gardens can provide household with substantive amount of food and contribute to the quantity and quality of green space in urban areas.







C. How would you define the »urban sense of place« and »rural sense of place« and and how is it linked to urban food production? (Please add to this discriptions also the 2 pictures you have prepared for JTS as a task)

The difference between urban and rural is better described in temporal, not in spatial dimension. While urban places indicate acceleration of time, be it for work, travel, leisure, ... rural places signify slower tempo. Therefore we perceive rural places as places »where time stands still«. We can sense urban and rural in the same geographical unit (in a city, on the countryside, ...). The cases shown below signify urban and rural sense of place to me. First photo shows fluidity and mobility of people, goods and cultural elements (the photo was taken in Vienna). The second photo was taken in Tallinn, where urban residents celebrate a song festival (which originates from pagan beliefs) every four years. The whole day is spent with family and friends and dedicated to singing and socialising.



D. Please present and comment all the examples of governance models and policies from your countries you have collected as a group in the Workshop 9.

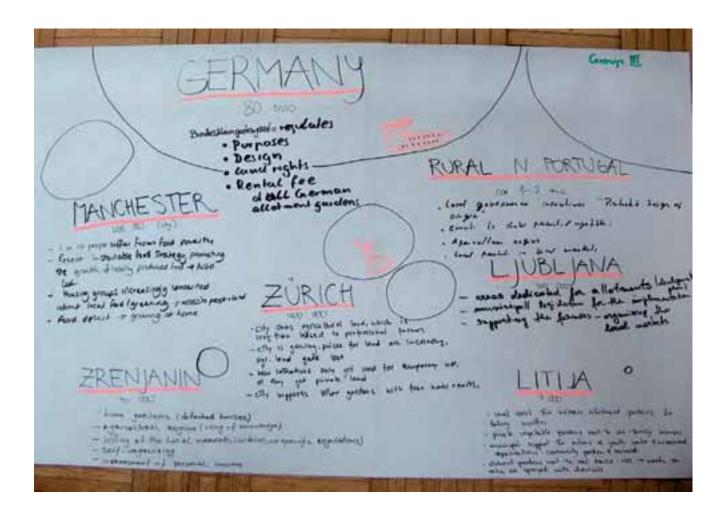
The comparison between different countries and different administrative units from Germany, Northern Portugal, Manchester, Zürich, Ljubljana, Zrenjanin and Litija shows more differences than common points. It seems as though the policies and actions the governments take are very much connected to the social, economic and spatial dynamic of the region. Prices of land are increasing in Zürich, where municipal government allows only temporary gardens to newcomers. Regulations are different in areas where economical position of residents is weakend: authoritites in Zrenjanin don't intervene in the grey economy of urban food production and consumption, and municipality of Manchester, where one in ten residents suffers from food







poverty, actively promote urban gardening. While our observations are too vague to draw any conclusions, it would be interesting to observe how policies concerning (urban) food production change in times of economic prosperity and hardship from historical perspective.



3. YOUR VIEWS, COMMENTS AND IDEAS ABOUT URBAN FOOD PRODUCTION, JTS LJUBLJANA AND/OR WORKSHOPS

Please collect your views, coments, opinions, ideas, suggestions and photos you wish to share with all of us... and present them as you wish.

The urban food production is one concept that needs to have careful studies to support all the population that live in big cities and near them. Actually we have the cities growing but without the plan to the food production that will include quality of soils, the capacity of the land to grow vegetables, the pollution that is surrounding this areas, and social dynamic of the area. This is the big goal for the future of urban food production: to connect the cities to the agricultural areas without transforming them both completely.

The JTS in Ljubljana provided the visits and workshops which showed the specific situation, but one that could be generalised to many cities in Europe.







The advantage of work groups, constituted by members with different backgrounds, was that all ideas, energie and knowledge in the same point, giving to the case of studies the best solution possible. Such initiatives need to be congratulated because they give the exchange of knowledge between all members.







Ljubljana Joint Training School on Urban Food Production

COST Actions TU1201 and TD1106 21-24 October 2014, Ljubljana, Slovenia

Report from Working Group 4

WG members:

	NAME	PROFFESIONAL BACKGROUND	COUNTRY
1	Jenny Sjöblom	Urban planning	Sweden
2	Andrew Speak	Physical Geography	UK
3	Ivana Blagojević	Landscape architect	Serbia
4	Mari Shioya	Resource Management	Slovakia
5	Giorgia Silvestri	Environmental Science	Italy
6	Sonja Fahr	Urban Planning	Germany
7			
8			

WG leader: Sonja Fahr

1. CASE STUDY WORK

CASE STUDY TOPIC: SAVLJE URBAN FARM

A. Short description of the case study area

Savlje region is located in Ljubljana, Slovenia - some 5 km north of Ljubljana, the country's capital. Its geographical coordinates are 46° 6' 0" North, 14° 30' 0" East. Savlje has average elevation of 286 meter above sea level. The area is very densely populated with 1,465 people per km². The nearest town larger than 50,000 inhabitants takes less than 10 minutes by local transportation. Savlje has a humid (> 0.65 p/pet) climate. The land area is not cultivated, most of the natural vegetation is still intact. The landscape is mostly covered with sparse vegetation. The climate is classified as a subartic (severe winter, no dry season with a cool temperate wet forest biozone . The soil in the area is high in cambisols







(cm), moderately developed soils with lower horizons having color or structure changes from the parent material which permit the identification of a cambic b horizon (retrieved from internet source: http://www.chinci.com/travel/pax/q/3191223/Savlje/SI/Slovenia/0/).

There were two study cases defined under Savlje region (Figure 1). The first one was the agricultural site of farmer Pavel Zetler (Figure 2). He formed so called "Tržnica Paradižnik", based on integral production mostly of vegetables. This professional farm produce seasonal vegetables and then sell on the market under the barn in the settlement named Kleče.

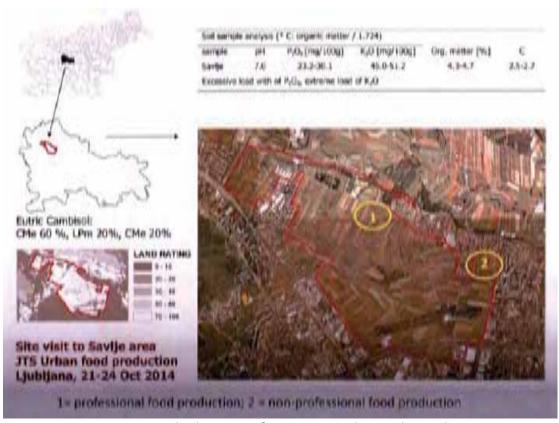


Figure 1. The location of two case studies under Savlje region in the city of Ljubljana, Slovenia

The second case study was farm of organic production near "Tržnica Paradižnik". It is a familly buisness and this familly has a certificate for organic prodution of many argicultural products, such as: milk and milk products, cattle meat, jam, marmalade, fruit juice and so on.









Figure 2. Site location according to the city location





a. "Tržnica Paradižnik"



b. organic farm in Kleče

Figure 3. The images of two researched sites in Savlje region







B. Short description of the potential stakeholders (as they were defined for the case study), their needs, priorities and motives you were building your proposals and ideas on.

The following stakeholders were identified:

Farmers – The farmer wants freedom to grow what he wants and stay on his land. He wants the safety of his land to be ensured, wants to be able to trust visitors and wants a thriving market for his produce.

Village citizens – The village citizens also want land security and to be able to trust visitors with a minimum of intrusion on their daily lives. They also want good local infrastructure (roads, schools etc)

City residents – The users of the space want recreation opportunites in natural/agricultural environments. They may want to be educated about food production and partake in rural tourism. In terms of infrastructure they want a restaurant/cafe, car park and shops or a central market.

Geographer/climate scientist – The scientist is thinking of the future sustainability of the land use, perhaps with regards to climate change forecasts for the region. Therefore the scientist wants preservation of existing greenspace and the creation of new green corridors, in particular trees for their multiple ecosystem service benefits. Farming techniques in the region should be ecologically sound.

Architect – The architect is interested in preserving traditional rural installations. Any new buildings should fit into the local environment well. The space should be organised efficiently. The design of a visitor centre or central market would be exciting to the architect.

Local government – The government want to ensure the preservation of the land / greenspaces and protection of resources. They want to ensure a local supply of food for city residents. They want to preserve the local culture. Perhaps they may want to build on the land eventually as the city expands but for the time being resource protection is paramount.

C. Starting points you defined for future development of the area

The future development scenario should include all the stakeholders such as farmers, village citizens, urban residents, and scientists. Local government and architect will come in as a moderator for the realization but not as main actors like in the traditional way of planning.

The farmers and village citizens need some privacy and security so the car park is located at the edge of the village. The visitors can leave car there and enjoy the walk or cycling along







the designed path. There are signs to encourage visitors following the rule and path that can protect local residents from external disturbances.

There is kids farm or educational farm is located next to the visitor centre in the village so that the visitors have opportunities to learn and experience the farming life. Purchasing local agricultural product is possible at the shop inside as well as eating in at the restaurants next to it. The small handcraft shops in the village provides chance to buy local products as well as learning and practicing the traditional skills. Visitors can take small lessons to learn how to make the hand-craft, at the same time, the traditional knowledge and the skills will be passes to the next generation.

D. Presentation of the ideas, proposals and scenarios for future development of the area. Please present as graphic part (schemes, sketces, concepts...) and written explanation!

After the analysis of the potential stakeholders of the area we identified a project that could benefit each involved stakeholder and we developed three different scenarios (Figure 1.2.).



Figure 1.2. The design of the 'Multifunctional community centre'.

The first developed scenario concerns the development of a project called 'Multifunctional community centre' with the aim to improve the local economy and, at the same time, enhance ecological, social and traditional values of the investigated area.

The 'multifunctional community centre' can be divided in the following elements:

Cooperative local market

Through the cooperative shop market local farmers could sell directly their products. We decided to set the cooperative market next to the parking zone that already exist in the area to make easier the access from people coming from the city of Ljubljana.

During the closing times the market area could be transform in an open space suitable for the organization of local events (e.g. local festivals, cinema, cultural events, etc.).







Recreational area

We considered to develop a recreational area surrounding the market in order to provide recreational services both to the clients and sellers of the market. This recreational area includes: pic nic areas, playgrounds for children and bents.

Educational centre with community garden

An educational centre was designed in the west side of the village. The aim of the educational centre and the community garden is to provide lessons to both adults and children on organic agriculture technics developing also practical lessons into the community gardens. The purpose is to enhance a 'learning by doing' process and to give the possibility to people and children coming from the city to re-contact with nature and soil. Additionally we considered the possibility to develop an animal farm for children education. The lessons could be implemented also for local farmers to improve their awareness and knowledge about sustainable agriculture technics.

• Connection paths between the cooperative shop market and the educational centre

We considered the importance to connect the cooperative shop market and the educational centre through two different paths:

- Ecological path: to be created inside the forest. This path aims to improve ecological knowledge and it includes a cycle track equipped with benches and educational panels providing ecological information of the area (e.g. different species of plants and animals present in the area).
- ➤ Local traditions path: to be created along the village. This paths will include educational panels giving information about local tradition, history and craft activities and products. Additionally local craftsmen could sell their products along the paths using temporary stands.

Cycle paths

We designed multiple cycle paths connecting the village to the centre of Ljubljana. In particular we considered to implement the cycle paths in the areas with available space for their realization, as shown in Figure 1.3.

The following figure (Figure 1.3.) represents the designed elements of the 'Multifunctional community centre' project to be realize for the sustainable development of the area.







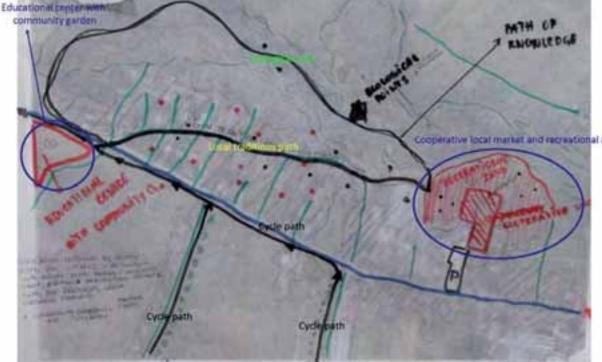


Figure 1.3. The 'Multifunctional community centre' and its elements.

E. COMMENTS

Plese describe where were the problems and obstacles within your work, what was the added value, whad did you like and what didn't you like! You can write about as a group or each member separately.

It was problematic that we were to design an area without having talked to all the stakeholders that would be affected and without including them in the design part. Even though it was only an exercise it's problematic to organise a workshop in that manner since that is not the way we should be working, or be trained to work. The added value was that by working together we could present a solution which included many different aspects, thanks to our diverse backgrounds. I was also good that an area which we had visited was choosen because it made it easier to visualise when we had been there a few days before.

F. COMMENTS

Plese describe where were the problems and obstacles within your work, what was the added value, whad did you like and what didn't you like! You can write about as a group or each member separately.

It was problematic that we were to design an area without having talked to all the stakeholders that would be affected and without including them in the design part. Even though it was only an exercise it's problematic to organise a workshop in that manner since that is not the way we should be working, or be trained to work. The added value was that by working together we could present a solution which included many different aspects, thanks to our diverse backgrounds. I was also good that an area which we had visited was choosen because it made it easier to visualise when we had been there a few days before.







2. LESSONS LEARNT AND INFORMATION EXCHANGE

Please describe (by each member of the group) in few sentences:

A. Please list the most important lessons learnt from each Workshop:

	WORKSHOP	LESSONS LEARNT
1	WALK THROUGH URBAN GARDENS AND SAVLJE SITE VISIT	Jenny: Urban gardens: The variety of the design of the gardens, how differently they can be organised, the problems with ownership of land, benefits and challenges with guerilla gardens. Andy: Use of land, local problems with land characteristics e.g. soil quality and drainage, the logistics of getting food from ground to consumer. Ivana: impression of landscape character Mari: Communication between land users, participation degree of the local stakeholder, landownership and legal matters to have the activity in countinious way. Giorgia: Different local initiatives developed in Ljubljana and their motives, organization, setting, practices (e.g. types of agriculture technics, water management, etc.), activities, their relationship with neighbours, municipality and landowners. Problems and challenges to be addressed (e.g. soil quality, closure of the community garden for building infrastructures, change of participant's awareness about organic food production).
2	UNDERSTANDING ECOLOGICAL FOOD GROWING	Jenny: The lack of ecological food growing in allotment gardens and home gardens in Slovenia, which is probably the case all over Europe. Andy: A need for more awareness on how to grow ecologically Ivana: The awareness about ecological/organic food growing is raising, but still need to work hard on it, especially in urban areas. Mari: Education or leaning process for ecological food growing shall be provided more often. Giorgia: The lack of awareness about the importance of ecological food growing, especially in traditional allotment gardens and the need to develop lessons about ecological agriculture technics. Organic food production and crop rotation technics using specific cards.
3	ENVIRONMENTAL ASPECTS OF URBAN FOOD PRODUCTION	Jenny: That the concern for urban farming due to environmental hazards can be somehow exagerated; like







the fact (that one of the lecturers talked about) that soil and airpollution doesn't necessarily need to be a problem and shouldn't hinder urban gardering. Since there are mostly ways to tackle these.

Andy: Pollution issue is important to consider but quite often there is no cause for alarm. Soil tests and an appreciation of the local land use and historical land use at the site should give information on if caution is needed.

Ivana: If all requirements for organic production are satisfied, there is no need to be worried. In that case environmental aspects are not in danger.

Mari: Soil contamination or pollution could be treated in a better way (e.g. phytoremediation, bioremediation plants). Researching the soil quality before gardeing or farming is an inevitable process.

Giorgia: It is important to analyse the soil quality through chemical analysis and to historically analyse each site for understanding the previous uses of the soil (e.g. presence of industries, etc.). Additionally it is important to consider the water use and the typology of irrigation systems.

4 SOCIAL ASPECTS OF URBAN FOOD PRODUCTION

Jenny: The importance of including the stakeholders. It became very clear that the NGO we met which had been given a piece of land had not been listened to since the land offered didn't meet their needs or expectations at all.

Andy: Different people have different ideas of what urban food production is and means to them so this can lead to conflict or ignorance about the issues.

Ivana: This is very importanta aspect of urban farming. Gardening connects people, it is good for excersise and health.

Mari: Lack of communication to the each actors could lead to conflict that makes difficult to manage the are with struggles. Inclusion of the stakeholder in long term process is important.

Giorgia: Participants in community gardening initiatives have different aims to start urban agriculture activities. Urban gardening provides social benefits building social relations and reinforcing social ties between the participants at the initiatives. The importance of considering stakeholders needs for the development of community gardens projects.

ECONOMIC ASPECTS OF URBAN FOOD PRODUCTION

Jenny: A somehow missed aspect when it comes to food production in the so called global north. That urban food production can make cities more resilient in the global north as well and that it can have very importanct economical aspects for people who live in the cities and







		who cannot afford healthy food. Andy: Market prices for food often mask a whole range of
		processes and issues in food production, and quite often
		the farmer recieves very little of the revenue generated by
		food sales.
		Ivana: Economic aspects of urban farming could be seen in
		two ways. First of all it is good to have your own garden in
		order to get more healthy food much more cheaper. But on
		the other side if someone looks at urban farming (allotment
		gardens) as a way of raising money, then this can't be
		economically achievable.
		Mari : We could see what is behind the farming food
		production from farmers or industrial point of view. Our
		choice is answered by the market sometimes thus we also
		need to make dicision as wise consumers.
		Giorgia: Different system innovations and technologies
		connected to sustainable food production and consumption
		existing at the time. Economic factors connected to the
		food market.
6		
6	CASE STUDY MODE	Jenny: The importance of involving stakeholders at an early
7	CASE STUDY WORK	stage. Something we lacked in our task where we had only
		met the farmer and not the rest of the people living in the
		village.
		Andy: Our case study was fun, but ultimately to do it
		properly in practice you need a lot more time and resources
		and meetings with stakeholders.
		Ivana: Even it was not a lot inspirational site for big design
		experiments, it was good exercise of mental thinking and
		planning concepts for developing better future for the
		village.
		Mari: Stakeholder participation was lacking from our
		exercise. We perhaps planned in a classical way but the
		inclusion of the actors will be needed.
		Giorgia: The importance to connect stakeholder's needs
		and the setting characteristics of the case study with the
		project design. The teamwork of our group permitted to
		understand the importance of collaboration and dialogue
		between people with multidisciplinary backgrounds for the
		project development.
8	DESIGNING PLANNING	Jenny: The complexity of designing planning processes for
	PROCESS FOR URBAN FOOD	urban food production and involving all the stakeholders.
	PRODUCTION	Andy: Goals need to be clearly set out from the start.
	I NODOCITON	Ivana: The same comment as previous.
		·
		Mari: Common aim or goal, consensus is difficult to be
		reached though the place of participation has to be
		provided.







				Giorgia: The complexity of structuring different phases of designing planning processes and the importance of considering different factors, technical analysis and the multiple involved actors.
9	DIFFERENT GOVERNANCE, POLICIES	REGIMES	OF AND	Jenny: The general lack of support from the ministry of agriculture, which I think should be researched further. Why is it so? Andy: There is a lot that cities can learn from each other. Perhaps compile best examples from European cities and present them to the other cities that are not so involved in urban agriculture. Ivana: If we talk about Savlje region, which was our case study, it is hard to say anything since we weren't much informed about planning acts specifically for Savlje region. Mari: The decision-making process tends to be done still in a traditional top-down way unless stake holder will participate to the policies and governance. Giorgia: The existing multiple governance and policies of urban agriculture in the cities of Europe. The importance of exchange of information between the cities to improve the current policies and governance.

B. How do you see the difference between urban agriculture and urban gardening? (Please add to this discriptions also the 2 pictures from your country you define as urban agriculture and urban allotment gardens which you have already prepared for the JTS as a task).

Jenny

Urban agriculture has not been talked about very much in my opinion in Sweden and therefore I haven't included any picture of that. In Sweden the focus has been very much on urban gardening including allotment gardens/plots and community gardens. However, I view urban agriculture as the overall concept which constitutes urban gardening. Urban gardering is therefore only one part of urban farming which constitutes all aspect of farming and gardering in urban areas. I think we must start talking more about urban agriculture rather than just focusing on urban gardening.









Figure 2.1. Urban gardening.

Andy

I think the difference lies in scale, with urban agriculture operating on a much larger scale and feeding more people than urban gardening, which is more something carried out by individuals.



Figure 2.2. Urban agriculture in Todmorden, UK. Community food growing on abandoned land.









Figure 2.3. Urban gardening. An allotment holder growing veg for his family.

Ivana

Differences between urban agriculture and urban gardening in Serbia? I think it is just play with the words...In urban gardens (allotment gardens) it can be planted flowers, but also fruits, vegetables, even crops, which are defined as agricultural products. So, is there really need to separate these two ways of urban activities?



Figure 2.4. Allotment garden at Vidovdansko settlement in the city of Novi Sad, Serbia

Mari

Urban agriculture has been quite popular in Tokyo as survival point for the mega city. There are school trips and activities to visit small scale of potato farms, fruit farms during the







harvesting season. Roof top garden or agriculture became popular at the commercial buildings due to the subsities from the city and also sometimes it could be also used for the advertisement (selling eco-friendly image) of the company at CSR (Company Social Responsibility) sector. On the contrary, urban gardening in organised scale are not much discussed probably due to lack of the abandunt place in the city.



Figure 2.5. Urban agricultu inside the private company (Pasona HQ) building in Tokyo, Japan (Source: yoshimi kono, ideasgm).



Figure 2.6. Urban allotment garden at NTT building, Tokyo, Japan (Source : T.Kitamura, AFP, city farm news)

Giorgia

Urban agriculture in my opinion concerns all the agricultural activities present in an urban area and peri-urban area. This means that urban agriculture concerns both urban agricultural marketing (activities with the aim to sell agricultural products and have a profit) and agricultural activities without selling of the products (urban gardening, traditional allotment gardens, home gardens).









Figure 2.7. Urban allotment gardens at 'Parco Nord' in Milan (Italy) (Source: Giorgia Silvestri).

Urban gardening in my opinion represent the urban agriculture initiatives developed in a urban area by a group of people or a community that grow food for their own consumption and not for selling. Furthermore, these local initiatives aim not only to produce food but also to build social ties and relations, to improve wellbeing, the re-contact with nature and soil, to educate about environmental and nutritional issues, etc.. An example of urban gardening is shown in the following picture (Figure n.) representing a community garden in Milan.



Figure 2.8. The community garden 'Coltivando' in Milan (Italy) (Source: Giorgia Silvestri).







C. How would you define the »urban sense of place« and »rural sense of place« and how is it linked to urban food production? (Please add to this discriptions also the 2 pictures you have prepared for JTS as a task)

Jenny

Urban sense of place often differs from rural sense of place where the rural is often seen as something romantic, a landscape that is used for leisure or food production but can be difficult to imagine ourselves living in. I think mentally we have for a very long time believed that food can only be produced in the rural areas which can explain why the concept of urban agriculture is quite foreign in Sweden. This might also explain why the ministry of agriculture is often not involved in these discussions or pushing towards more urban agriculture.



Figure 2.9. Rural sense of place.



Figure 2.10. Rural sense of place.









Figure 2.11. Urban sense of place.



Figure 2.12. Urban sense of place.

Andy

Urban sense of place includes built structures and alteration of the landscape by man's activities, whereas rural sense of place involves more 'natural' scenes where greenery and natural landforms dominate. Urban can be tentatively quantified by looking at the amount of ground sealing by buildings and impervious surfaces.









Figure 2.13. Urban sense of place.



Figure 2.14. Rural sense of place.

Ivana

Since we are living in the 21st century there is a thin line between urban and rural. In Novi Sad there are rests of former so called rural zones, where there were a lot of houses with gardens, fruits, vegetables and animals within it, but also modern architecture that is fighting for its piece of the land.



Figure 2.15. Rural between urban.







Mari

Urban sense of the place is more populated, surrounded by artificial matters; swimming pool instead of lakes, gym instead of open field, canals intead of open water. It has less access to the nature or to agriculture compare to rural sense of place. Urban gardening or urban agriculture towards food production could be the link between urban to rural providing food production to the city while it is located actually inside its city. It gives connection between urban and rural and reminds urban people the sense of rural or nature.



Figure 2.16. Urban sense of place.



Figure 2.17. Rural sense of place.

Giorgia

Urban sense of place includes building, infrastructures, services connected with urban life, as shown in the following Figure.









Figure 2.18. View of Rotterdam (The Netherlands): urban sense of place(Source: Giorgia Silvestri).

Rural sense of place involves low population density, less infrastructures and a connection with nature and agricultural activities.



Figure 2.19. View of 'Val D'Orcia' in Toscany (Italy): rural sense of place (Source: Giorgia Silvestri).

Urban agriculture represents a link between urban and rural sense of place. People can reconnect with nature and soil, they can learn about agricultural technics and, at the same time, they can be into the city with all its services, infrastructures and cultural activities.









Figure 2.20. A cultural event at 'Giardini in Transito' community garden in Milan (Italy) (Source: Giorgia Silvestri).

D. Please present and comment all the examples of governance models and policies from your countries you have collected as a group in the Workshop 9.

Jenny - Malmo

Food policy for the city of Malmö

- Policy for sustainable development and food for the city of Malmö.
- Follow a model called "SMART" (T= less transport)
- Minimize transport, environmental and climate impact, purchases according to season, benefit small and medium-sized enterprises by giving local suppliers the opportunity to sell their products.
- Keep te agricultural land in the city of Malmö; for food production, biodiversity, educational purposes. The agricultural landscape is important both as a source of recreation and to create stronger links between urban and rural areas.
- In future plans the importance of the agricultural landscape should be considered. Food production in and around the city are encouraged.
- The muncipialtiy of Malmö should encourage initiatives such as Farmers Markets in order to increase the contact between producers and consumers.

Urban gardening in Malmö

- No policy on urban gardening.
- Environment department, Traffic department and Property Management Department supports urban gardening.
- Urban gardening in Malmö has been a bottom-up procedure (citizens contacted the traffic and property management departments with questions about gardening, and administrations have responded to the need and created opportunities).







Ongoing discussion what will happen regarding a policy for urban gardening.
 Unclear about the new policiticans view on urban gardening; whether it will be a policy for the city or if the different departments will continue to pursue the issue.

Andy - Manchester

At the local council level there is mention of food sustainability (very briefly!) in a document called 'MACF – Manchester, A Certain Future' which is mostly a Climate Change action plan. One fact within the document is that 20% of the carbon footprint of a Greater Manchester resident is food related (food miles etc). Some actions proposed are to make land available for urban growing, promote exemplar projects, increase business involvement and promote food waste reduction and recycling. The council also wish to build a reputation for the city through events/festivals such as a recent 'Dig the City' event. Surely the money spent on this would be better spent on actual action rather than brief reputation boosting exercises?

The real change is happening at bottom-up level - NGO action. Some examples are:

- Kindling Trust: Use food as a vehicle for tackling social, environmental and economic problems. Radical perspective. Currently 8 projects including: investigating strategic ways to increase access to sustainable food in Manchester; a co-operative of local organic farms; Landarmy (volunteers grafting, waste veg collecting); Horticulture training. (www.kindling.org.uk)
- Incredible Edibles Levenshulme DIY spirit. Local group appropriating disused & private land for public vegetable production (www.incredibleediblenetwork.org.uk)
- **Biospheric Project** Salford. Closed systems. Aquaponics, mushrooms on coffee waste etc. in a disused mill (www.biosphericfoundation.com)
- Abundance Manchester Redistribute surplus food

Ivana - Serbia

The governance model in Serbia goes from top to bottom. At the national level there is National Planning Act, then Regional planning act, and Local acts such as General Urban Plan of the cities (Novi Sad, Belgrade...) and some acts of lower sides. In these acts there isn't discussed about urban farming or even allotment gardens. There is Act on Agricultural Soils, where it is assigned about some standards and regulations related to pollution and so on. The Low on Greenery is under construction and in this low it will be assigned some regulations related to urban gardening of any case.





Also in couple years before there have been noticed some initiates from the bottom, meaning activities of some NGO organizations have initiated thinking about defining certain standards for urban gardening at the local level (not only at the national, which will define The Low on Greenery).

Besides that there are lot of studies related to greenery, recreation area, ecology and so. Most of them are on local level.

Mari - Bratislava / Tokyo

Here are the two governance models and degree of participation from two cities in Europe and Asia. Though, there are small initiatives starting in Bratislava at local level, there are no incentives given by the city council. Tokyo government has a different attitude as they subsidies the roof-top gardens at the private owned buildings. However, this scheme is not commonly used by the citizens but more by the small scale private companies. The population recognise it as an image making for the private company but not for the individual use. In this context, promotion of urban agriculture or urban gardening for the citizen level is not succeeded. Self-governance or degree of participation is rather low as they consider this area has been influenced by strong governance attitude from the authority.

Bratislava

- •No incentives (nor policies) in Bratislava city so far
- Most of the activities are bottom-up. Ex. Mobility garden, Vnútrobloku

Tokyo

It has clear policy and rule to support roof-top gardens with funding and subsidies in several districts in Tokyo. Below is the example from Setagaya district in Tokyo.

- Subsidies for roof-top gardens should have minimum green area 3m²
- Subsidies from the city will be given to the area has to fulfill the conditions as below:
- 1. When, in all or a part of the roof of the building are newly having trees or perennial plant planted after maintaining a planting base more than 1 square meter: $15,000 \text{ yen/m}^2$ (approx.100 euro/m²) in the case of less than thickness 15cm of the soil, or to 20,000 yen/m² (app.140euro/m²) when is more than thickness 15cm of the soil).
- 2. When, the outer wall surface of the building is newly covered with more than 1 square meter of creepers plants: Up to 10,000 yen per areas from the edge of wall surface tree planting creation plant to the edge or $1m^2$ in area of supporting materials. (The furtherance total sum has upper limit of 500,000 yen or to 1/2 of the object expenses).

Giorgia - Milan (Italy)

'Il Giardino degli Aromi' developed as the first community garden of Milan in 2003. In 2009 other two initiatives started: 'I Giardini del Sole' and 'Gianbellgarden' community gardens. In a first phase these initiatives were not connected and they did not collaborate with each







other. In October 2010, during a public event at 'I Giardini del Sole', some organizers of the first community gardens established a contact and started to share information. Several meetings between different community gardeners resulted in establishing a network called 'Libere Rape Metropolitane'. Through this network community gardens initiatives can support each other, share information, organize workshops, events and advice citizens that wanted to create a community garden. The network 'Libere Rape Metropolitane' progressively grew in terms of community initiatives' becoming members and established a contact with the Municipality of Milan. After a seven month dialogue process with the city, the community gardens' network reached an agreement on the management of the vacant green spaces of the municipal property entitled 'Giardini Condivisi'.

Citizens that want to create a community gardens have to follow the following steps. First, the citizens have to find an abandoned and empty space belonging to the municipality that they would like to transform into a community garden. They have to form a group and organize as a non-profit association. When the municipality has confirmed that the land is owned by the Municipality of Milan, the association can present a project to the specific office of the area where it wants to create the community garden. Community gardens have follow these rules:

- Organization of at least one public event every year;
- It is not allowed the presence of private parcels, the areas have to be shared;
- It is not possible any commercial activity;
- Agriculture with ecological methods and with the saving of water.



Figure 2.21. The bottom-up process for the achievment of the agreement 'Giardini Condivisi' in Milan (Italy).







3. YOUR VIEWS, COMMENTS AND IDEAS ABOUT URBAN FOOD PRODUCTION, JTS LJUBLJANA AND/OR WORKSHOPS

Please collect your views, coments, opinions, ideas, suggestions and photos you wish to share with all of us... and present them as you wish.

Jenny: I think it is very important when designing workshops that we have a participatory planning approach, rather than teaching how to make detailed plans or maps without involving the stakeholders.

Ivana: I think that this is a new topic for most of European countries, for Slovenia as well. We saw some very good examples how community can be involved in whole process of greening the city. It the process of urbanization the most hard task is always how to keep alive a tradition of the place but also to respond appropriate on the requirements of the of 21st century. It is a process and need time.

Mari: The practical part of the programme (site visits, group activities) were useful perhaps because my background is economics and politics and the subject of this workshop was rather new to me. The diverse of the participants were also exiting and it was great to have a stakeholders during the workshop even though we did not have a enough time to communicate with them. Overall the workshop organisation was in a great manner but I wish we had a more time in a schedule as it was quite packed and demanding.

Giorgia: I think the site visits were very useful to understand the Slovenian context and the organization of different urban agriculture initiatives. Additionally I really liked the practical group activities developed during the workshops because gave me the possibility to learn from people with different backgrounds and to collaborate with them as a teamwork. I also found very interesting the participation of the 'Zavod BOB' local NGO in our work. The negative aspect of the training school was the choice of 'Livada' area as case study since the area do not correspond to the real needs of 'Zavod BOB' NGO.







Ljubljana Joint Training School on Urban Food Production

COST Actions TU1201 and TD1106 21-24 October 2014, Ljubljana, Slovenia

Report of the Working Group 5

WG members:

	NAME	PROFFESIONAL BACKGROUND	COUNTRY
1	Herrera-Dueñas Amparo	Biologist	Spain
2	Oarga Andreea	Environmental Scientist	Romania
3	Palermo Valentina	Architectural Engineer	Italy
4	Piškur Kristina	Social Scientist	Slovenia
5	Tanulku Basak	Urban Sociologist	Turkey
6	Tóth Attila	Landscape Architect	Slovakia

WG leader: Attila Tóth, Landscape Architect, Slovakia

1. CASE STUDY WORK

CASE STUDY TOPIC: LIVADA, FOR PEOPLE (OR FOR GENERAL PUBLIC USE)

A. Short description of the case study area (location, position within the city, size, accessibility, spatial situation, environmental conditions, spatial potentials and problems)

Livada is part of Ljubljana Marshes (Ljubljansko barje) which are a vast marshy plain extending over approximately 150 square kilometres from the southern suburbs of Ljubljana to the first foothills of the mountains in the south. The study area, Livada, is located at 2 km south of the urban centre. The place can be reached by car, bicycle and there is a bus station nearby.

The area of the case study is approximately 0.5 ha. The place is surrounded by man-made drainage channels; there are no ongoing agricultural activities in the surroundings, perhaps due to possible difficulties with agricultural land use because of the high level of groundwater. At the site, across the road, there are approximately 10 illegally built houses with no connection to the city sewerage







system. There were raised beds in all observed small gardens at the surrounding houses due to environmental conditions that are characteristic for the studied area.

Geologically, the place is situated in a glacier area, and it is a marsh. The groundwater level is high, not only in periods of high precipitation, making the soil oversaturated. At a depth of 1.5 m, there is a layer of silky soil – sediments, from 50-1 m depth the soil is organic, not oversaturated, showing that the water table oscillates, and above 50 cm depth is clay - fine grained soil relatively impermeable to water, high pH, poor soil structure and infiltration capacity. This soil stratification defines the soil quality for gardening as improper.

This area is protected, not only because it is regarded as an exceptional natural treasure, one of the last remaining great wetlands or marshes and a habitat oasis of some birds and other animals, but also because it is one of the locations in six European countries where Neolithic or Copper Age pile dwellings existed. It was also designated a UNESCO World Heritage Site (www.slovenia.si).

Potential use: - as the group decided, the space can be 'transformed' for public use (including youngsters from NGO) with the NGO's help, but due to its value and environmental conditions, our suggestion is to modify the site as less as possible, to preserve and emphasise its special identity but also to become an educational (e.g. food production, information about history and nature), recreation and socialising place. The design that resulted in the group work was inspired from the way of living of the pile dwellers (e.g. raised houses and bridges) using local materials (mainly wood). In the case that the place will be decided to be reused for different purpose by the municipality, the installations can be easily removed without changing the place too much. Existing infrastructure (e.g. man-made channels) will have a functional role. Also the disadvantages of the place will be turned as a benefit of the design.

Disadvantages: unfavourable environmental conditions (soil quality, low infiltration, high level of groundwater), protected area (meaning limited modification possibilities), location in the suburbs.

B. Short description of the potential stakeholders

B.1 NGO *Zavod BOB* - the space was initially dedicated to Zavod BOB by the municipality, which is an NGO financed and supported through European Funds, as well as the Slovene Ministry of Education and Employment Service. It is dealing with youngsters who abandoned education or are not decided what profession to follow. Their main motivation was to use this space for educational and motivational purposes: the youngsters who are receiving help from the NGO's volunteers will try to practice gardening, helping to build the infrastructure, and at the end enjoying the results of their own contribution (e.g. this will build their self-confidence and self-exploring). One of the key inspirations is that the NGO is granted their own place that it does not have at the moment.

B.2 Public of Ljubljana (and wider Slovene area) will have access to the arranged space for education, recreation and appreciation as an example of good practice. As planned, this new public space would gain touristic /educational attractiveness by keeping its identity of a Marshland. The aim of the design is to combine the natural and historical exclusiveness of the site, which is on the one hand unique for its flora and fauna and on the other hand it is the location of historical settlements





from 2000 BC that were built entirely on piles ("Kolišča"), as the location of today's Marches used to be a lake. These special characteristics make this place a good scenario for developing an environmental education programme for schools and families. A programme based not only on the interpretation of natural resources, but also on the culture and tradition of the area. The access from the city is easy by bus, bicycle and car. Our proposal to the municipality is to set up a new bus station close to the place, as well as a station of the public bike rental service (Bicikelj).

C. Starting points you defined for future development of the area

The pillars of our concept named 'Gardens on Water' are natural and cultural legacy, and social dimension. The motto that defines our proposal is 'Do not divide! Do connect! Do things together!' The beneficiaries of the project are Zavod BOB and the interested wider public.

The design proposal *Gardens on Water* is based on the following keywords: nature, water, history, shared space, solidarity, preservation, cultural legacy, social inclusion, learning by doing, Zavod BOB as a teacher, public as learner.



Figure 1: The WG5 at work.

The starting points were: aims, procedures and expected outcomes of the stakeholders, explained in detail below. The aim was to keep the natural character of the area, using water as strength. The area is, in fact, characterized by clayey soil. That brought about some restrictions regarding building and cultivating the land, but enriches the place in other (natural, cultural) aspects.





An elevated plateau was designed to be used by people for different outdoor activities. The second point was the improvement of connections between the area and the city centre, making the trips safer. The creation of gathering spaces was also a priority to meet the NGO's needs.

D. Presentation of the ideas, proposals and scenarios for future development of the area.

At the first stage, we were thinking about a way to preserve the area in its natural condition, giving the chance to use and to access it. So we set an elevated wooden path system. The aim of the project was to design a multifunctional space where numerous activities can be hold: from leisure (exercises, concerts, activities, gardening, bird watching, butterfly observing etc.) up to educational use. The project is hold by two pillars, wants to enlighten the importance of sharing knowledge between NGO and the public, to underline the archaeological and historic side of the area and its potential to become a place for education.

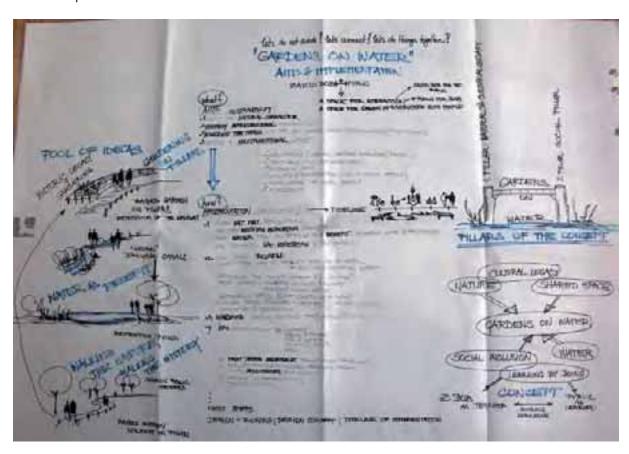


Figure 2: Gardens on Water - Aims (what?) and Implementation (how?), Pool of Ideas, Pillars of the Concept - One of the outcomes of the WG5 workshop in Ljubljana (brainstorming of the WG5, drawn and noted by Attila Tóth).







Figure 3: Presentation of the design concept of the WG5 (presented by Attila Tóth on behalf of the WG5).

After setting up the pathway, that would enable the usage of the place also in case of flooding, some forestation would be done (an orchard and shrubs with forest fruit, combined with the natural fauna). The orchard area would be used as a recreational/ relaxation space in dry seasons. To promote the presence and diversity of urban wildlife in the area, wildlife refuges, feeders and nest boxes would be installed. i. e., some species of plants known as *Lamiaceae* (*Rosmarinus*, *Thymus*...) are attractive for many species of butterflies; so the presence of this vegetation has been correlated positively with abundance and biodiversity of Lepidoptera.







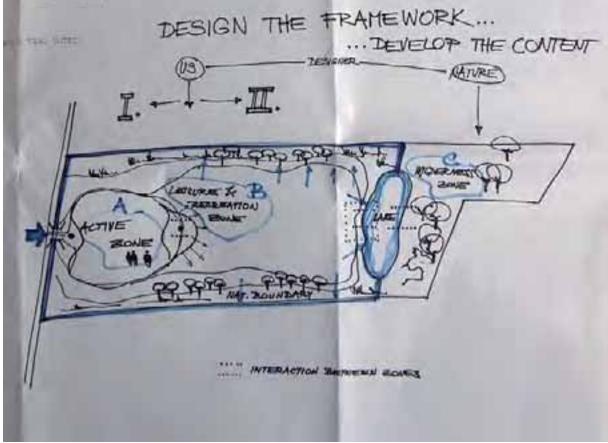


Figure 4: Design the Framework, develop the Content! - This graphic shows the different zones of the site to be developed within the design process, taking into consideration the timeline and progression of project implementation (brainstorming by WG5, drawn by Attila Tóth).

In order to learn gardening and growing own food, elevated pathway would in parts be extended for being used as surface for raised-beds, on which Zavod BOB (and potentially public) would grow vegetables. In accordance with the needs and abilities of stakeholders, a shared common space would be built (preferably roofed, closed). It would work best being set along the road by which the "Gardens on water" are accessible, introducing a centre, an active zone for gathering, practising different activities, sharing knowledge, etc. There is a part of the place that would be left "untouched", giving the project the "natural" character. A small lake, or a pond, would divide the more active zones (the shared-space building and recreational & cultivating area) from the inactive, "wilderness" that would not be maintained. There is a functional aspect of making a pond - with some minimum work on digging canals, the pond would collect the surpluses of water, preventing water to raise too much.







Figure 5: Presentation of design components in the context of the overall design concept, discussing the steps to be done and the contents to be implemented (result of the WG5 work, presented by Attila Tóth)

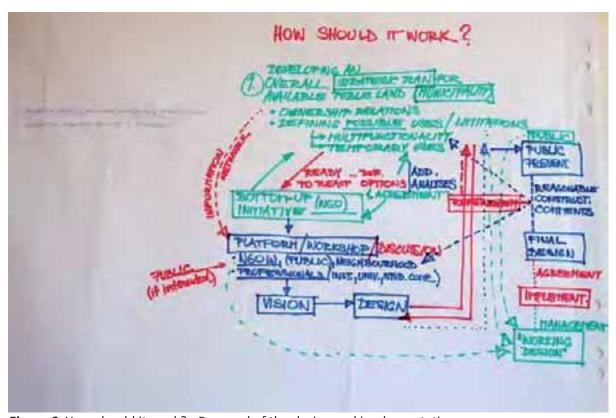


Figure 6: How should it work? - Proposal of the design and implementation process.









Figure 7: The WG5 presents its planning process.

E. COMMENTS

Our group was unanimously concerned with keeping the natural character of the case study area in Livada, which can be considered as a great success. When thinking about the infrastructural inputs, we strongly followed the step-by-step mentality, including the stakeholders wish to make it simple enough to do it themselves.

One of the obstacles, we needed to face was the problem with the high groundwater level and the environmental quality of the site, which we needed to consider in our design. The strong interdisciplinarity of the team helped us to develop a concept rich in ideas and creative in their implementation.







2. LESSONS LEARNT AND INFORMATION EXCHANGE

A. Please list the most important lessons learnt from each Workshop:

	WORKSHOP	LESSONS LEARNT
1	WALK THROUGH URBAN GARDENS AND SAVLJE SITE VISIT	Gardening is a way of self-expression, and no garden is arranged in the same way. A better infrastructure could help gardening to be more practical (e.g. a place for tools), but this depends on the place - in the garden with rental possibility we saw, had a proper infrastructure, but in the guerrilla gardens situation, it is totally different (people don't know when they will be sent out, often the place is robbed). The difference between traditional food production (Savlje rural area) and urban food production (both in Savlje and the centre). Learned about different motivations for it (professionalization, way of life, hobby, socialising activities, health issues, etc.) and completely different outcomes (amount of food, quality, social impacts, income). View on social importance of gardening for elderly people and social dimension of community gardening. The site visits were very good to know the sites in detail and in person. The School provided us with the chance of seeing different forms of urban allotment gardens and ways of food production as explained by tutors during the workshops on various forms of urban allotment gardens, while we visited two sites within the city centre (one private garden and the second is a public land - guerrilla gardening) we also visited two farms within the Ljubljana metropolitan area (one is organic small farming and the other is more integrated and industrial farming). We also visited a garden, which was a dumpsite. The urban walks helped us to understand the urban and spatial context of urban and peri-urban gardens of Ljubljana. We could perceive the cultural and historical legacy of urban farming as a different face of Ljubljana and also see farmers and farming outside the urban area, but yet in its municipal territory. It was interesting to hear, that farmers in Savlje perceive themselves being farming in a rural area, independently from the city of Ljubljana, while the spatial and administrative linkage is obvious.
2	FOOD GROWING	Humanity future is food, and as the population growth reached a dimension not seen before, we are forced to use less unrenewable resources, to turn to nature in a sustainable way.







Learning basics how to combine different vegetables and when to grow them. Basics about crop rotation through the Garden Cards (an easy and enjoying) tool to grow vegetables and fruits, particularly for beginners. For instance, we learned that cabbage in particular is the biggest family, and herbs need low nutrition. Ecological food growing is getting more and more important in the context of changing climate and growing urban populations. Food needs to be considered as a component of the urban systems, thus planned and designed in a resilient and sustainable way, considering urban ecological qualities.

3 ENVIRONMENTAL ASPECTS OF URBAN FOOD PRODUCTION

Before taking any actions, a detailed analysis of the place must be done, in an idealistic situation by trained professionals (e.g. soil quality, proper location, heath aspects). Growing food in cities brings not only food security but also aesthetical benefits. During the training school, we gained new and valuable knowledge of basic methods for soil analysis and water irrigation. This section was though quite technical, but aroused the interest in future exploring soil types and environmental aspect of food production (waste and water management). Urban food production has besides the functional food growing aspect also an important environmental dimension, as contributing to the urban green infrastructure and extending its social dimension and functional benefits. We consider the urban food production as a way to consider food growing as an organic component of urban systems, which improves food resilience and enriches the urban environment.

4 SOCIAL ASPECTS OF URBAN FOOD PRODUCTION

This is a very important aspect. Urban food means also 'common', and into human nature the thrust for land and possession with no sharing, is deep embedded. Urban food production is an appeal not only to need and food safety or urban resilience, but an appeal to the bright side of human being, having relaxing and self-reinforcing results and connection with nature and socialising in the cities! Urban agriculture can reduce criminality in cities, driven in this case by lack of jobs and occupation. The social construction of the rural as productive and urban as passive is limited. We see agriculture on a rural-urban continuum. There is hardly anything strictly urban in urban agriculture. Learning about the demographic structure of allotment gardeners in Ljubljana: predominantly female and in wide part elderly or unemployed people. The social aspects of food production: i.e. what pushes people to grow food near their homes (trend, health, political incentives, economic), who grows







food (women, elderly and retired?), and who benefits from this? Food production is not only about food (safety, economic benefits) but it also provides the community with cohesion, gives people an aim to be involved with the life, it can also protect the youth from harmful addictions, since it can act as a hobby and provide people (youth particularly) a real job for the future. Urban food production can increase the relationship between people and the place they live in. Gardeners can feel the "territory" both physically and emotionally, which strengthens the sense of belonging.

The discussion about the difference between urban and rural senses of the place was very interesting, as we had to choose photos from the collection and define whether it belongs to a rural or urban realm. The meanings attached to urban and rural depend on the context (the country of origin, the identity and the symbolic value attached to each realm in a certain country/culture). When discussing social aspects of urban food production, it is necessary to consider people involved in food production. It might be individuals or a group of people (a community). In this context, urban food production can be considered as a tool to improve urban social integrity, interaction and inclusion.

5 ECONOMIC ASPECTS OF URBAN FOOD PRODUCTION

Urban food is also food safety and urban resilience. The demand is driven by the need. Self-production means less expenses compared to buying from mass production. Mass production means also control, monopole, as food price follows now the oil price. We analysed the networks from producers to consumers, local, metropolitan and global agricultural systems and their optimal organisation. We also discussed the importance of assessing economic, social and environmental aspects of food chains. Examples of good practise in urban agriculture (straw bales, city bees, meat from lupine, micro-algae production). Margins on the basic food products are the highest (milk, bread). We discussed economic background of food production, i.e. why do we produce food as we do now? Each of us gave their opinions as "economic necessity (profit), demographic pressures, division of work, food safety, and the way we interpret the food, and political-economic context". Then we discussed what defines where and what we grow: it depends on the landscape, weather, and cultural differences in the







		interpretation of food, technology, demand, planning and
		legislation. We also discussed economic advantages and
		disadvantages of urban food production, such as economic
		advantages: space use, food supply and security, less
		transportation (low carbon), economic base, social benefits,
		reducing waste, etc. The economic disadvantages are land
		availability, contaminants, water scarcity, climate in cities
		and large markets. When considering the economic aspects
		of urban food production, we need to take into account,
		that urban food production stands for an option to reduce
		food miles and thereby also food costs and our ecological
		footprint. It stands therefore for an option of future food
		systems, where economic inputs can be reduced and food
		systems can be made more resilient and sustainable.
6		The <i>Livada</i> case study combined various dimensions we had
7	CASE STUDY WORK	the chance to work on and review during the school: first,
'		the site is a particular (protected and historic) area. Second,
		the area is inhabited by people from lower income groups,
		whose homes were (although looking well and rural)
		illegally built in a dangerous site (flooding risk). Third, the
		area to be developed into allotment garden was considered being small with several restrictions for potential gardeners
		(concerning what to grow, as well as planning and zoning
		issues). The work on the case study has to be considered
		rather as a brainstorming and a pool of ideas and
		inspirations, rather than a design project. This is mainly to
		the lack of time and to the diversity of the workshop, where
		not only planning and design issues were forced, but also a
		quite exhausting theoretical background.
8	DESIGNING PLANNING	Interdisciplinary collaboration is the most important tool,
	PROCESS FOR URBAN FOOD	not only in research, but in any trial of doing productive and
	PRODUCTION	quality work. The parts involved in designing and planning
		should listen better to each other, and to try to get out of
		their 'shell', but the most important is to consider also
		others opinion. Designing and planning for urban food needs from scientists till architects, anthropologists,
		planners, sociologists and even psychologists to work
		together. It was interesting and contributing to see a
		planning process in the context of different professional
		fields (environmental, social, spatial, architectural). It was
		important to consider the ideas of the stakeholders, as well
		as to rethink them in a way that the project serves the
		public. Designing and planning urban food production is a







		very complex issue that needs to be driven by planning professionals, such as landscape architects, planners or urban designers. At the same time, it is very important to integrate ideas of relevant fields and professionals, in order to achieve a more complex and qualitatively better design
		concept.
9	DIFFERENT LEVELS OF GOVERNANCE, REGIMES AND POLICIES	Urban food is not included in governances or policies. There are few cities (municipalities) which encourage this issue. Urban agriculture is until now mostly practiced and supported by volunteers, individuals, clubs, local associations, which are not 'levels of governances. Urban agriculture needs to be considered as an important issue of smart and sustainable growth of our cities, and needs therefore to be integrated into governance models, policies, national and international directives. The evidence is that at the moment there is not enough attention is paid to the issue, but this is changing.

B. How do you see the difference between urban agriculture and urban gardening?

When talking about agriculture and urban gardening, we can think about the concept of big vs. smaller, respectively. Urban agriculture has a large coverage and the difference between this two is more typologically and specially speaking. Urban agriculture means production in defined spaces (inside or at the outskirts of the city), includes economical activities, markets and their locality (distribution of a diversity of food or other products), and various types of products made in a dynamic interaction which usually differ from a city to another.



Figure 8: Urban agriculture in Cuba. Left: defined locations where the seeds are preserved and grown till a certain level. From there urban citizens can take seeds or seedlings to cultivate them in allotment gardens. Right: Allotment gardens resulted from the place.







Allotment gardens resonate in the concept of urban agriculture due to their crucial importance regarding productive, economical, recreational, ecological and social attributes. They stand also for a unique contribution to urban environments.



Figure 9: Allotment gardens on rooftops of buildings in Romania and at other locations managed by a local Communitarian Urban Gardens Group.

Urban gardening is reminiscent of hobby-gardening, where the economic aspect is undermined by the social aspect. However, urban agriculture is reminiscent of a more economically driven activity, where food production is the ultimate goal (also with a sense of profit and commercial activity). Urban agriculture is a wider term that is not yet in the public imaginary (most of the EU states). Urban is associated with trading, more than producing, in best case with gardening. The difference is in scale - urban agriculture includes urban gardening, but is more than that - a sustainable system of food production for the majority of people living in the urban area. Gardening can be sustainable and effective in terms of the amount of food outcome for gardeners' own use (including their family, friends), but is not wide enough to ensure the whole food chain.











Figure 10: Home small-scale agriculture at balconies in Ljubljana (left) means effectiveness, seasonal or temporal limitations, more sustainable use of spaces as are balconies, terraces, shelves, etc. Gardens along Gradaščica Kanal, Ljubljana, next to the Chemical Institute (right) are associated with group-organisation, allotment colony, co-working initiatives, public allowance, exclusivity (inaccessible from the street), with a variety of crops.





Figure 11: Urban agriculture can be considered as agriculture in the urban context, where agriculture gets in touch with urban areas or becomes an integral component of them. Urban agriculture should be considered as a part of urban systems and environments (on the left - example of Barcelona Metropolitan Area), while urban gardening is an acitvity taking place at a smaller place, integrated





into the urban system of a municipality. The focus is on the gardening activity as such, rather than at agriculture or food system in the context of urban environments (on the right - example of Tardoskedd municipality, Slovakia).



Figure 12. Milan Via Chiodi. Urban gardening is growing as a social daily reality. The image is from Via Chiodi, a private area of 25,000 square meters, that the owner decided to rent as gardens of 75 square meters each.

C. How would you define the »urban sense of place« and »rural sense of place« and and how is it linked to urban food production?

The line between rural and urban is hard to be drawn. Rural vs. urban = social construction. Even, if we close our eyes and try to imagine urban, we will see a lot of concrete, big agglomeration of people, blocks. The following two pictures represent the urban sense of place. The first picture is from Tbilisi, where old and new came together, while the second picture is a city of the future where urban agriculture is already something fully functional and a necessity, simply because people understood that.











Figure 13: (Upper) Urban sense of place in Tbilisi, Georgia; (Lower) Green city of the future.

When thinking about rural sense of place, one could imagine traditions as way of living, but not for touristic purposes. We could imagine rural as a place of peace and silence, as it is when we look at a village in the mountains like in the picture below.



Figure 14: Rural sense of place in Romania, Apuseni Mountains.

In terms of urban sociology, there is no distinct difference between rural and urban. There are only "fake" differences, as rural and urban operate in a single framework system.

In this context, there should not be any difference between the photos above. From an economic perspective, in a capitalist economy, since everything is connected and dependent on each other, there might not be a real difference between the rural and urban, besides the ways in which they look and are promoted. However, from a cultural point of view, people still attach different meanings to the rural and urban: while rural is seen as less corrupt, the urban is seen more degenerated and competitive site. In this context, there is also the well-known discourse on the "escape from cities" becoming a trend particularly since the 1980s resulting in escapist styles of life, seen in the examples of gated communities, exurban developments, etc. There is still a difference between the two, due to different lifestyles. As people want to escape from the everyday routines, they seek solitude and peace in places, regarded to be more rural. In this context, we could define the rural which is not urban (perception).

In terms of food production, rural is defined as a lot more productive, judging by the outcome. Rural production is extensive and relates to rural work ethics. Urban space is defined through scarcity (dense population, limited area), meaning that food production is limited either in the outcome or in the variety of production. Urban is also defined by dense and more effective use of space.











Figure 15: A green public space in Belgrade (left) shows a romanticised view on nature, with the city greening its public spaces (neat, colourful). Nature has rather decorative (than productive) character (relaxing ethics). House in Primorska Rural Region (left) - rural sense of place is regarded as abundant with space, marked with agriculture (housing designed for agriculture) and includes working ethics that set it on the productive side in public imaginary.





Figure 16: The urban sense of the place can be related to more distinctive architectural features, such as high-rise buildings and green spaces with aesthetic qualities for outdoor urban recreation (left: Vienna, Austria). The rural sense of the place can be rather related to less distinctive architecture, with clear architectural landmarks of cultural and historical importance, while the urban structures are very well connected with and integrated into the surrounding agricultural (productive) landscape (right: Tardoskedd, Slovakia).









Figure 17: Different perception of time, diversity of actors involved in the processes. The picture shows the most popular crop in Sicily, prickly pear giving the feeling of peacefulness and natural rythm.

D. Please present and comment all the examples of governance models and policies from your countries you have collected as a group in the Workshop 9.

In countries represented in the working group 5 (Slovakia, Slovenia, Italy, Spain, Turkey and Romania), urban agriculture is managed only at local level by Association of Farmers, NGO's, or neighbourhood associations. We did a classification of various legal authorities common in all these countries, dealing with agriculture, which ideally should promote also urban agriculture. These governance models and policies happen at different levels, such as:

- European level: EU by CAP, directives, quotas, prerogatives; FAO, UN Habitat, RUAF
- -National level: Ministries (of Agriculture) by acts and laws
 - National agencies, Institutes (producing research reports), Networks
 - Association of (Urban Allotment) Gardeners (Slovakia)
- -Regional level: Consortium -implementing EU policies (Spain)
 - Regional management body –subsidies (Italy)
 - Diputacion di Provincia (Spain)
- -Local/Municipal level: Master plan -territorial/spatial/land use plan (common)
 - NGOs, Association of Gardeners (common)







- Association (consortio) of Farmers (Spain)
- Neighbourhood associations (common)

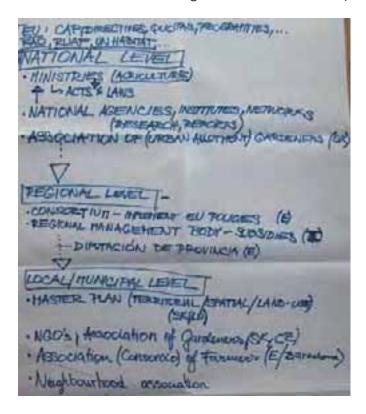


Figure 18: This figure provides an overview of different levels and scales of urban agriculture defined during the workshop in Ljubljana.

In the case of Romania, an example of information dissemination in urban agriculture should be mentioned. In the Cluj-Napoca, Transylvania, the municipality started an action of education called 'adopt a green space' which welcomes everybody (companies, individuals, associations). In the first phase, volunteers cultivated ornamental vegetables between the tram lines. The project is going on, and consists in the identification of available green spaces to be cultivated and the information to be disseminated.











Cluj-Napoca

Municipality program adopt a green space'
-materials used are donated principalities
-open for exerybody including companies,
100% handmade
-decorative regetables between the fram lines

Romanian food consumption is represented by the high share of self-production

-rural area, where self-production accounts for about 55 per cent of food consumption expenditures. Agriculture is by far the most important economic sector in the rural areas, and it plays quite an important role as a food security source both for rural and for related families from the urban areas.

Romania is characterized by a dual food consumption pattern: an urban consumption pattern, in which access to food is mainly restricted by the household's purchasing power, and the rural pattern, which includes the land-owning families whose food consumption depends both on self-consumption and on their purchasing power, determined mainly by their cash income.

Figure 19: Example of advertising urban agriculture in Romania.

Turkey is a developing country with an accelerated rate of urbanisation leading to changes in the rural fabric and communities, continuous immigration towards large cities such as Istanbul, Ankara where the rural immigrants became cheap labours for the big industry and/or the underclass of cities, losing their capability of dealing with agricultural production. Agriculture is becoming more industrialised where small producers became grabbed by larger companies operating in the food and dairy sectors. In addition, Turkey imports food (pulse, meat, vegetables). In this context, food should be something very political. Instead, these issues are not a concern of ordinary people. These issues are usually a matter of educated, liberal and/or leftist people who are usually removed from debates. The ordinary person in Turkey considers only populist politics. In the city, people from rural backgrounds are still involved with animal husbandry (chickens in their gardens, or beekeeping in vacant lands). People still produce vegetables in their homes (usually not apartments, but they live in illegal dwellings in the outskirts of city centres). Despite this, urban gardening, allotment gardens and food production are luxury and/or not in the headlines. However, in the last years, particularly after Gezi Parki resistance (in 2013) people became more concerned and local resistances found more voice in the mainstream media. In Istanbul, as being the largest city of the country, urban food production or more concisely, allotment gardening has been done for more than a thousand years, going back to the Byzantine Empire. There are several ancient allotment areas in Istanbul in this respect which are still used by people for the same purpose for very long time. These areas are under the threat of being demolished, or opened to development which pushed people to resist for their lands. Urban allotment gardening is organised through neighbourhoods association, but at the moment they are more concerned in the protection of these lands from the higher political bodies which try to convert these lands into developments or open them for commercial and private purposes. The popularisation of this subject is also parallel with the popularisation of slow food and slow cities movement in Turkey gaining momentum in smaller towns in the Western Anatolia and among the educated middle and/or upper class people living in large cities, mainly in Istanbul.







Related to that, also organic food weekly markets are being hold regularly in various cities, such as Istanbul, encouraging small-farming.

When talking about governance models and policies in various countries, it is interesting and important to mention the Association of Gardeners (Slovakia) which stands for an organisation gathering gardeners and farmers with a different professional background. This association provides gardeners and farmers not only with basic rules and recommendations in urban farming, but also provides farmers with the possibility to learn and educate themselves in food (fruit, vegetable or grain) production. It is an option of social interaction and sharing knowledge of gardening and farming.

In Italy, although some regions developed a regional organisation system, the most decisions are made at the municipality level. Each Italian city has its codes, but commonly the municipality calls for the assignation online and then interested people respond to the call receiving a plot. Municipality of Ravenna, for example, declares the necessity to have a unique code and provides for some innovative regulations about the amount of the rent and the assignation also to disabled people.

3. YOUR VIEWS, COMMENTS AND IDEAS ABOUT URBAN FOOD PRODUCTION, JTS LJUBLJANA AND/OR WORKSHOPS

Urban areas, where humans live, there are always markets, because of the basic needs that are drivers of demand. These urban markets stand for places of social interaction between producers and consumers. Urban agriculture has always existed, although it was not as specifically defined and designated as it is today. The first human settlements were located near fertile lands which ensured a close food source for urban inhabitants. As cities have been growing, the needs of urban inhabitants have been increasing as well. Even if Urban Agriculture has not yet been recognised at high governance levels, its role in society gets more and more acknowledged. Urban agriculture is a complex concept, which includes not only research into natural sciences (e.g. pollution, soil quality etc.) but also raises big questions from social, economic (migration, land markets etc.), planning and architectural point of view. The organisation of the training school was very good, the diversity of involved professionals allowed an interesting brainstorming and project co-operation. Food science could have been more represented among the well discussed issues in urban food production. The workshops were an interesting possibility to share experience and knowledge and it was very useful and educative. The trainers did a wonderful job! It was very interesting to follow and be a part of the group work of different specialists and see how a planner, an architect or sociologists work together. I think specialists and professionals should listen more to each other and consider opinions of other professionals, specialists or young scientists, who represent the future development.

The training school was hold in a beautiful city with a well-protected centre full of social life, arts and crafts surrounded by beautiful architecture in a historic urban context. The city is a mixture of Central European and Mediterranean cultures: it reminds Italy and some smaller towns in Central Europe





(such as Salzburg or Košice). Ljubljana is a city, where arts and culture are more distinctive than shopping or other commercial activities. Despite the country's experience of post-communism, the city still retains something from the past: One could have the feeling of travelling in time when strolling around the streets of Ljubljana. The city has lots of nice cafes and restaurants, but there were no international food chains. The city is represented by a lively culture. It was a pleasure for all of us to attend a training school in such a beautiful city, which provided us with the opportunity to see examples of different forms of allotment gardens and urban agriculture. The weekly urban food market offers lots of local products (fruits, vegetables and flowers). The training school covered a wide range of topics related to urban allotment gardens and agriculture from different points of view, becoming more and more popular in all parts of the world. The site visits in the city centre, and to the Savlje and Livada areas were very interesting. The tutors and the people who were working in these sites were very helpful and nice. Some issues discussed during the training school were a bit technical and less engaging, while some other issues such as the social, planning, design and governance issues enabled a more interesting and enriching dialogue and knowledge sharing. The group worked well, everybody did his best and tried to explain his own point of view before drawing and presenting the results.

It was very interesting and enriching to interact with stakeholders from Zavod Bob who are actively involved in the discussed issues. In the future, we have to deal also with critical thoughts on urban agriculture and urban food farming. The potential problems of urban food production need to be considered, i.e. is there class, gender or race based discrimination, i.e. who has access to these sites, who has the right to use these sites, who can sell and/or grow food products. Are there any other aspects of urban food production to be considered (land ownership, quality and origin of seeds, quality of urban food, etc.)?

























