

Urban and peri-urban agriculture in the EU

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Seasonal School

Actual Problems of Landscape Sciences: Environment, Society, Politics

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Urban and Peri-urban Agriculture (UPUA)

Five topics Ten questions

**I. Agriculture in
the Urban Context**

**II. Sustainability
impacts**

**III. Motivations,
objectives and
potentials**

**IV. Political and
institutional
environment**

**V. Recommen-
dations for
Policy Action**

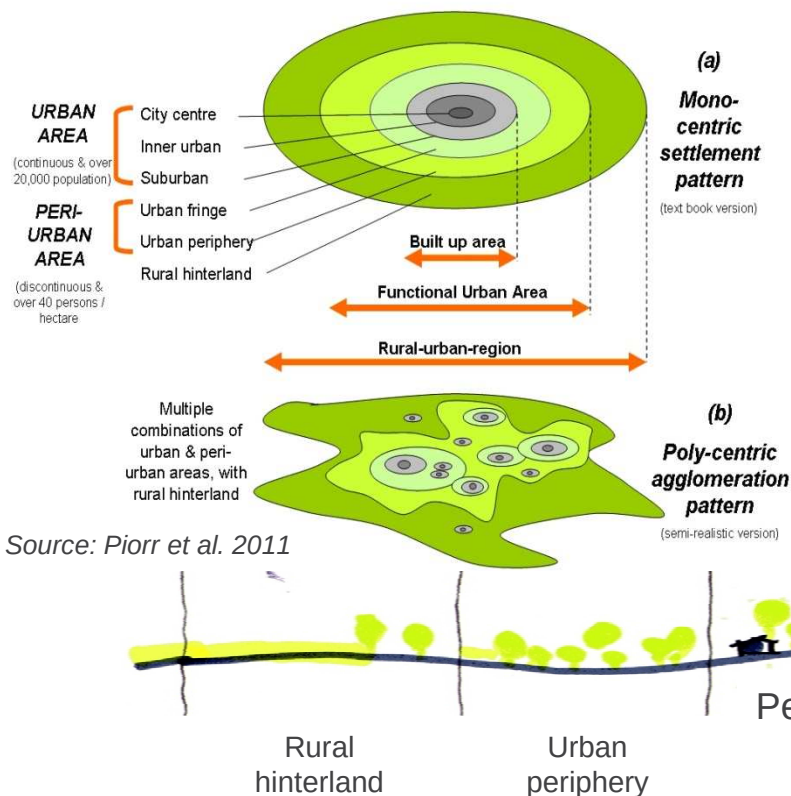
I. Agriculture in the Urban Context

1. What is urban and peri-urban agriculture (UPUA)? How is it defined and characterized?

The Peri-urban Space

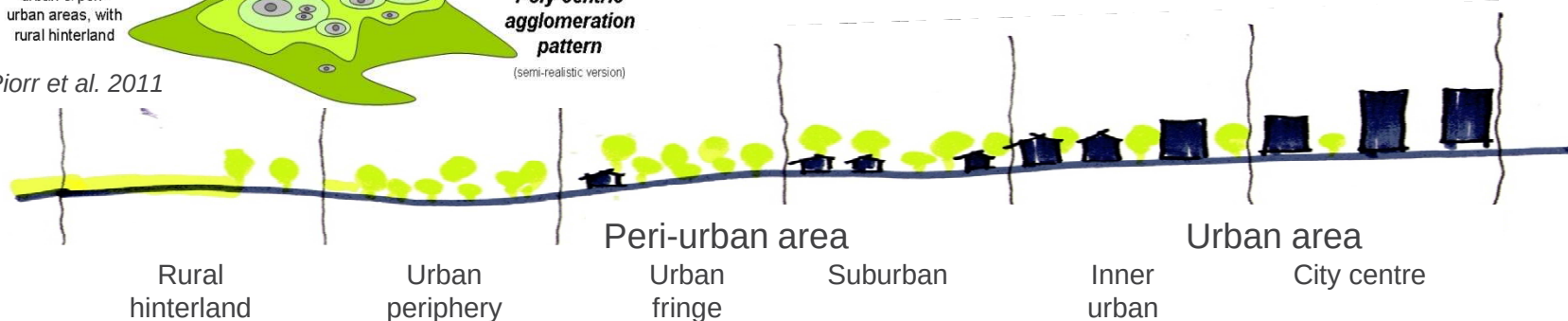
Peri-urban areas & the 'rural-urban-region'

Geographic concepts & definitions as used in the PLUREL project



The peri-urban area (zone) is often understood as **transitional zone between city and countryside**.

PUA is not a "discrete area, but rather as a diffuse territory, identified by **combinations of features and phenomena**, generated largely by activities within the urban zone" (Adell, 1999)



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Urban Pressures and Opportunities

- **Competition** on regional land and labour markets, **nuisance and conflicts** with other urban functions
- Proximity to urban **consumer markets** and **infrastructure, creative milieus, urban communities** as driver for transition
- Triggered the emergence of different **adaptation strategies and business models** and **alternative/ local food chains/ networks**



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Urban Agriculture



(Berlin/Photo: A. Piorr)



(London/Photo: I. Zasada)



(Berlin/Photo: R. Berges)



(Ljubljana/Photo: M. Glavan)

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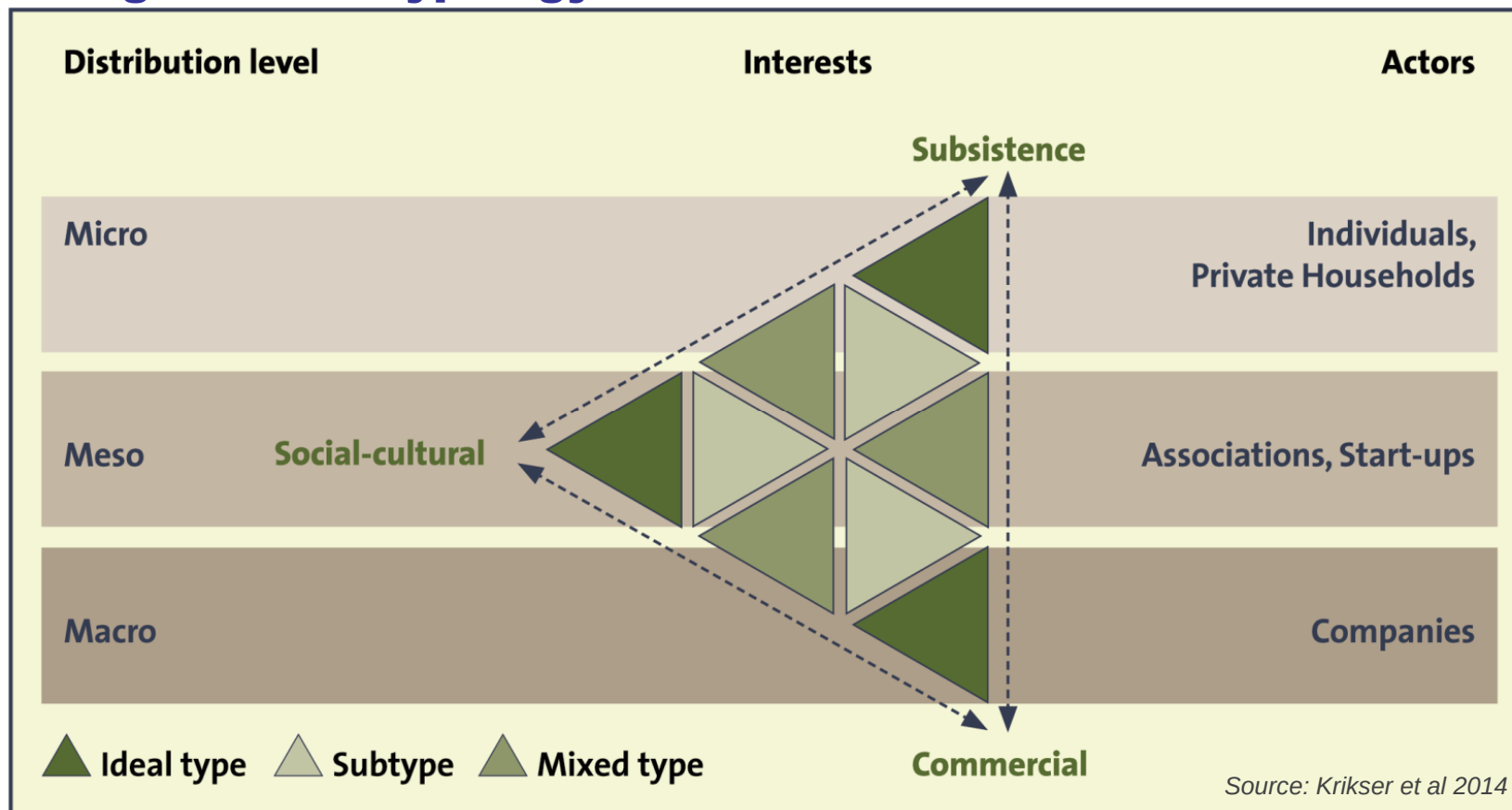
Definition and Characteristics of Urban Agriculture

- "... The production of plants and animals **on comparably small spaces within urban areas**"
- „...most actors have **no formal agricultural education** and are **seldom profit-oriented**"
- „...they (temporarily) **use set aside spaces**, build **new connections of objectives**, develops **new concepts and techniques**, is acknowledged to deliver **innovative** and positive solutions for **urban sustainability**"

I. Agriculture in the Urban Context

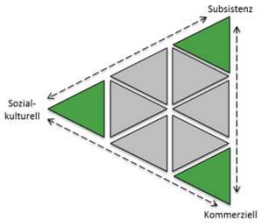
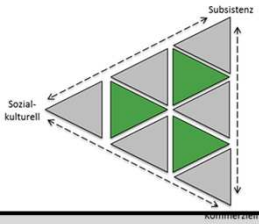
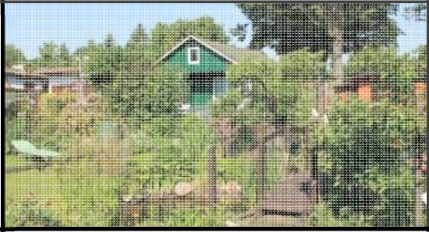
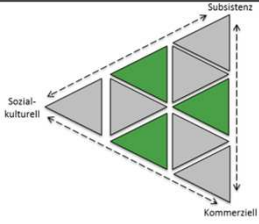
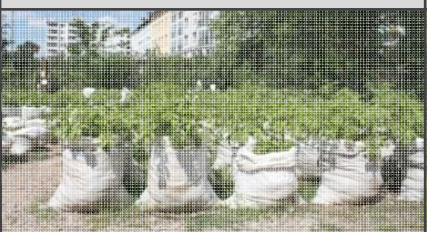
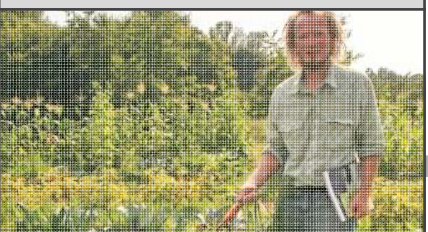
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Urban Agriculture Typology



I. Agriculture in the Urban Context

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	Subsistence	Socio-cultural	Commercial
Ideal type 	Household garden, balcony garden 	School garden 	Mushroom farm (indoor) 
Subtype 	Allotment garden 	Guerilla garden 	Aquaponics farm 
Mixed type 	Community garden 	Intercultural garden 	Self-harvesting garden/farm 

Source: Berges et al. 2014

I. Agriculture in the Urban Context

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Peri-Urban Agriculture



Photo: R. Koester

1. What is urban and peri-urban agriculture (UPUA)? How is it defined and characterized?

Definition of Peri-Urban Agriculture

- “...agriculture **adversely affected** (in terms of costs, land taken out of the farm, marketing, environmental conditions, uncertainty etc.) **by the presence and the expansion of urbanisation**” (OECD 1979)
- “...the **cultivation of crops and rearing of animals** for food and other uses [within] and **surrounding the boundaries of cities**” (EPRS 2014)
- “...undergoing a major transition process, [...] regarding its **heterogeneity in farming types and systems, activities and practices** and the **involvement of the urban and peri-urban communities.**” (Piorr et al. 2018)

I. Agriculture in the Urban Context

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Specialised Production



Slovenia/Photo: M. Glavan



Rotterdam/Photo: I. Zasada



Berlin/Photo: I. Zasada



Slovenia/Photo: M. Glavan

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Direct Marketing and Short Food Chains



Photo: Bundesprogramm Ökolandbau



Krakow/Photo: A. Doernberg



Presentation for the Con



on Agriculture and Rural Development

London/Photo: Growing Communities

I. Agriculture in the Urban Context

1. What is urban and peri-urban agriculture (UPUA)? How is it defined and characterized?

Diversification of Farm Income



Berlin/Photo: A. Piorr



Amsterdam/Photo: I. Zasada



Berlin/Photo: A. Piorr



Brandenburg/Photo: FÖL e.V.

I. Agriculture in the Urban Context

1. What is urban and peri-urban agriculture (UPUA)? How is it defined and characterized?

CSA/Self-harvest/Community-orientation



Witzenhausen/Photo: A. Doernberg



Berlin/Photo: A. Piorr



West Midlands/Photo: I. Zasada

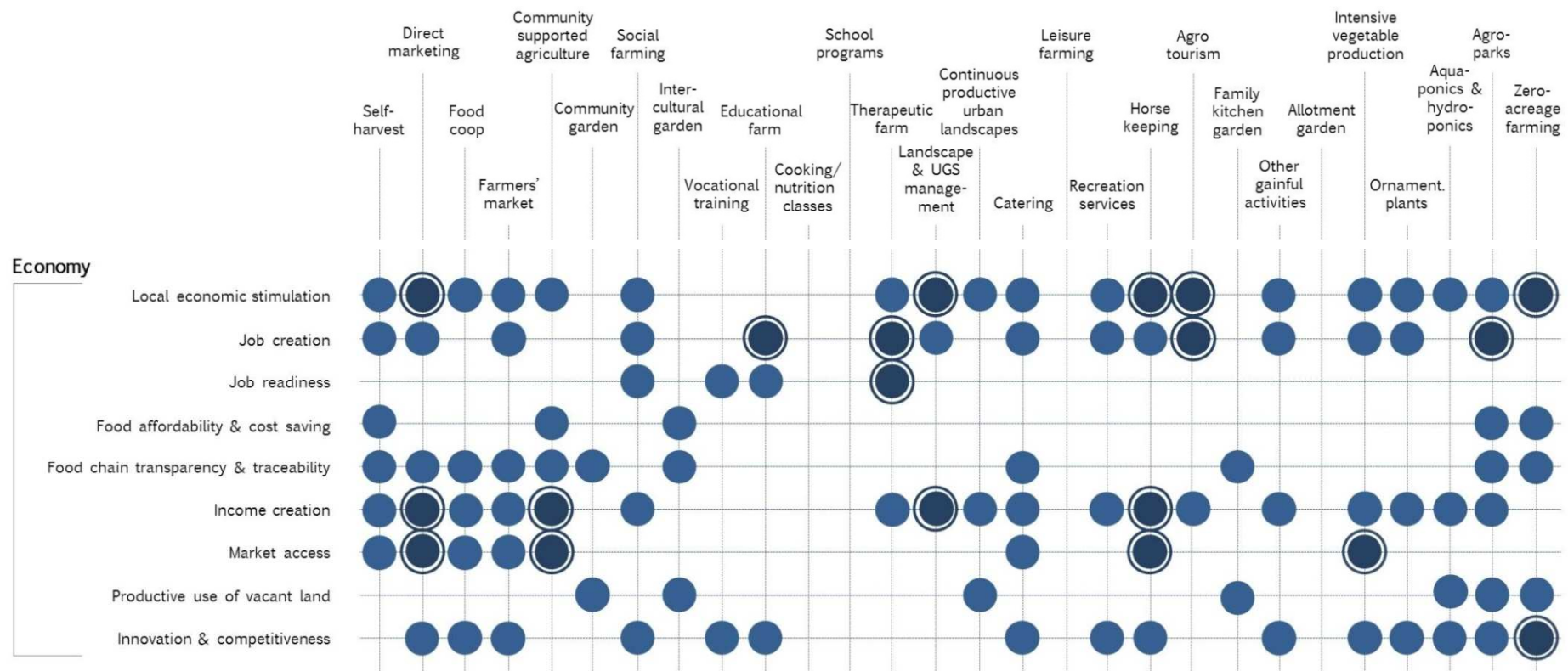


Ljubljana/Photo: M. Glavan

II. Sustainability Impacts

2. Which are potential Benefits and Opportunities of UPUA?

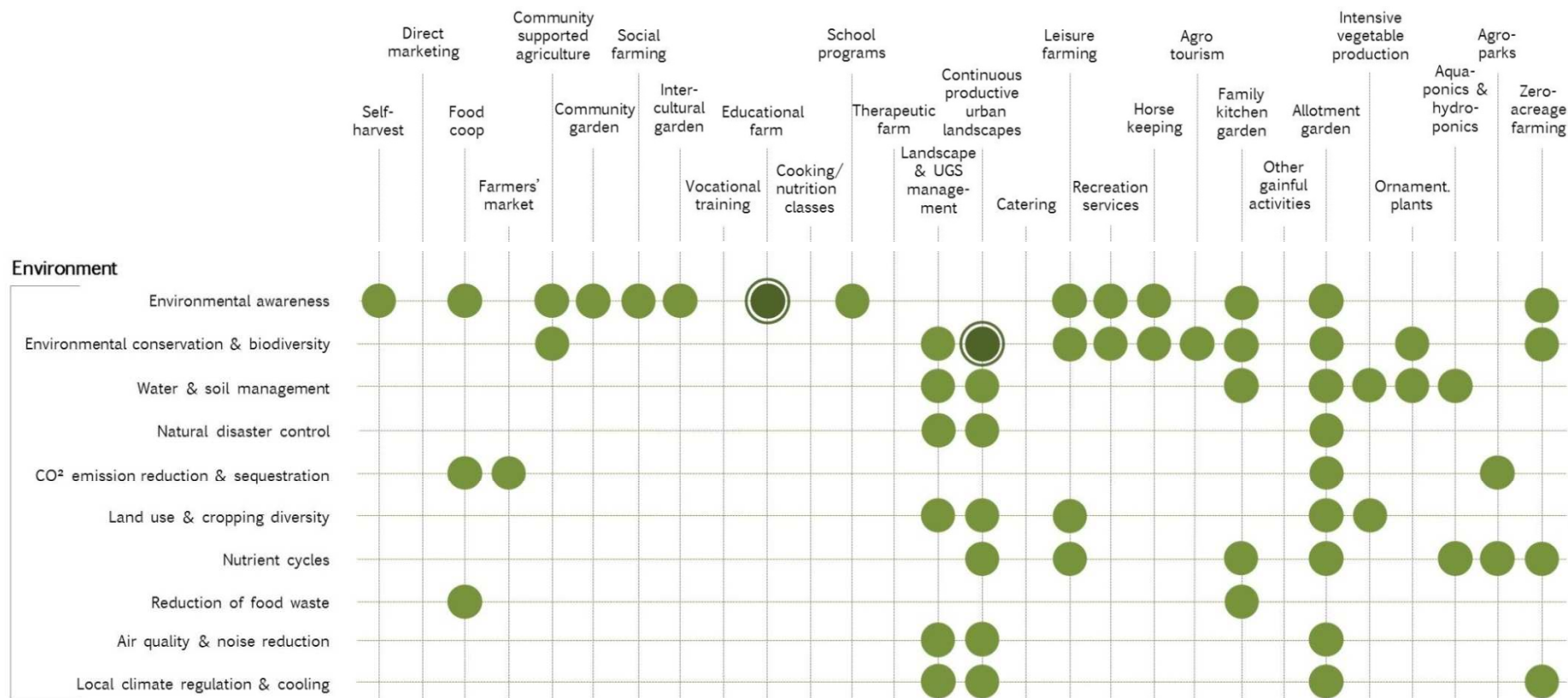
Economic Benefits and Opportunities



II. Sustainability Impacts

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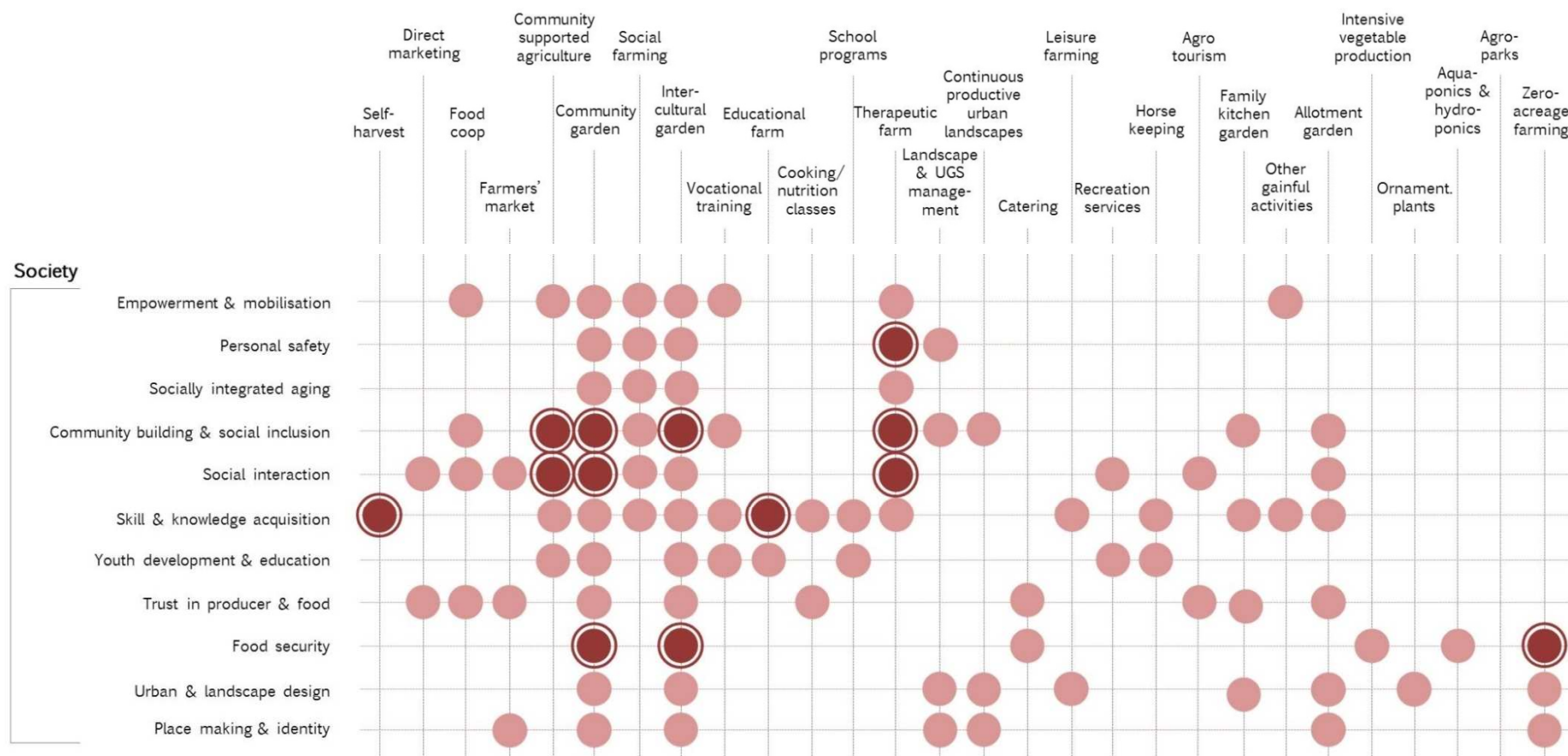
Environmental Benefits



II. Sustainability Impacts

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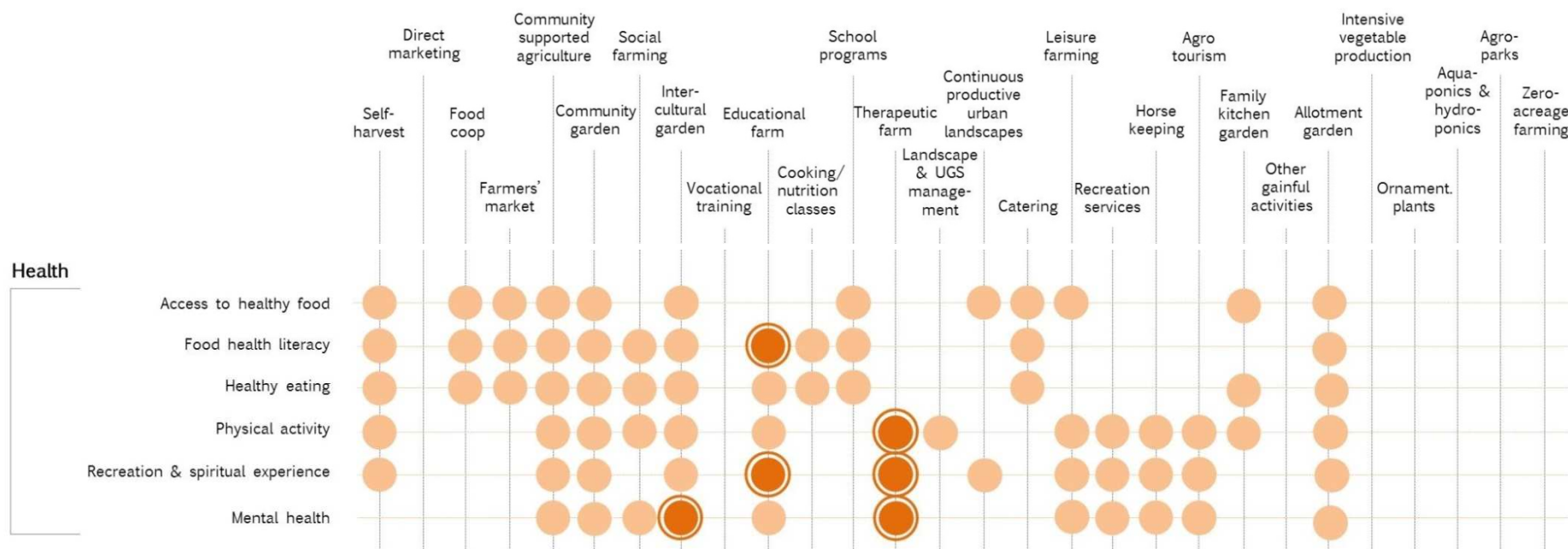
Societal Benefits



II. Sustainability Impacts

2. Which are potential Benefits and Opportunities of UPUA?

Health Benefits



II. Sustainability Impacts

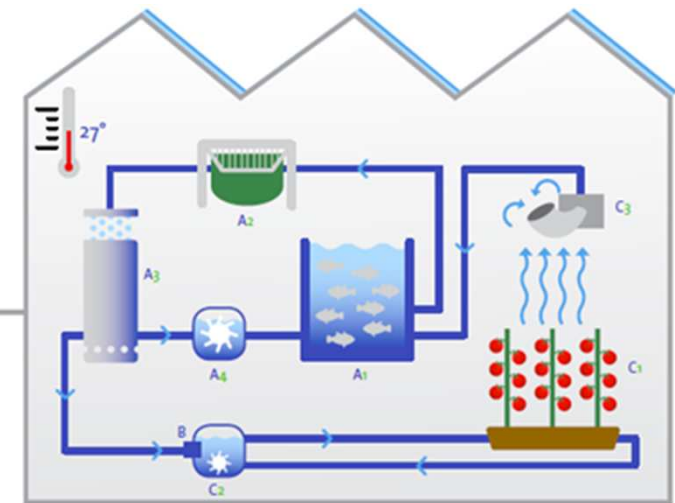
4. Which are the potential Limitations and Threats of UPUA?

Limitations and Threats for UPUA

- Access to land (pressures on land, fragmentation, land market, succession models)
- Technical solutions for indoor farming systems not fully developed (energy demand, carbon footprint, investment costs)



(Source: www.nourishscotland.org, C. Sandson)



(Source: www.igb.de)

4. Which are the potential Limitations and Threats of UPUA?

Limitations and Threats from UPUA

- Lack of agricultural knowledge
- Legal grey area (quality control, safety at work, taxes...)



III. Motivations, Objectives & Potentials

5. What are societal and economic transformations driving urban and peri-urban agriculture?

Societal Transformations

- Ageing: tendency of higher share of younger farmers in urbanised areas (Caiani et al., 2015)
- Gender issues: Women among new entrants into farming
- Many examples for work with migrants and for social inclusion (intercultural community action spaces)

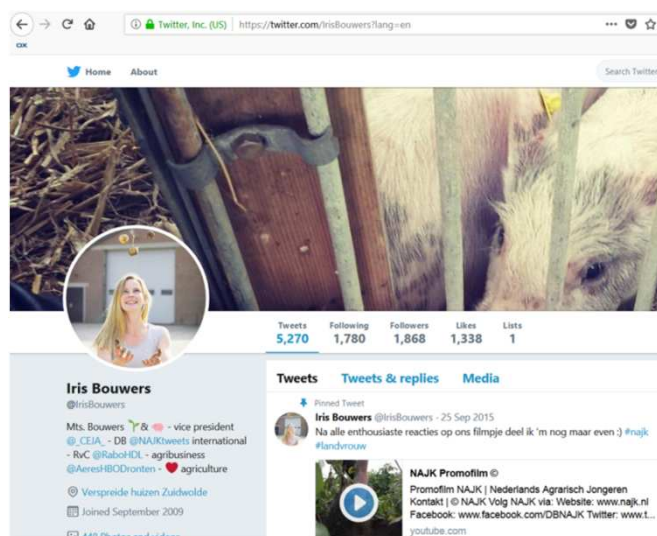


Photo: <https://learninglyceum.org/tag/kara-tepe/>

www.zalf.de

III. Motivations, Objectives & Potentials

5. What are societal and economic transformations driving urban and peri-urban agriculture?

Economic Transformations

- Global markets and competitiveness (e.g. food distribution hubs)
- Access to land: serious problem for smallholders and newcomers
- Post-productive paradigm, alternative economic concepts, sharing economy models
- Economic reasons and access to fresh food NOT mentioned from European consumers side



6. What are the motivations and objectives of the actors behind urban and peri-urban agriculture?

Farmers perspective

- Business model for diversified family farms, new entrants, interaction with consumers

Consumers perspective

- Dissatisfaction with globalized food systems, traceability, trust, changed nutritional habits



(Photo: I. Zasada)



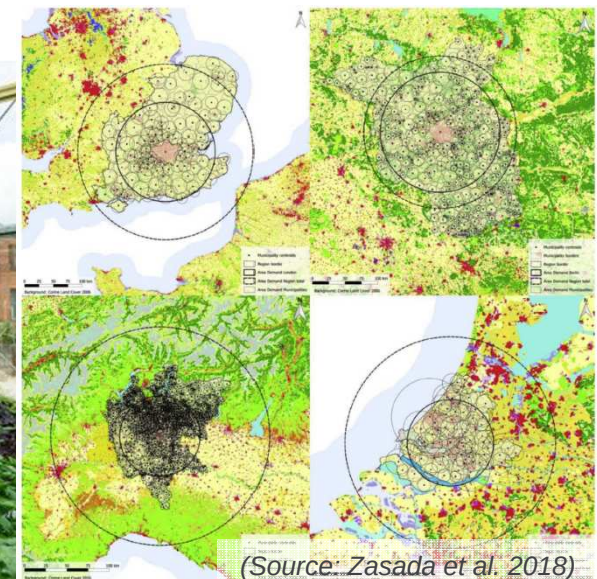
(Photo: R. Berges)

III. Motivations, Objectives & Potentials

7. Which role can UPUA play for food security, acceptance of traditional (rural) farming practices and for a transforming urbanising society?

Food Security

- Potential for food-insecure groups (Zezza and Tasciotti, 2010)
- Improving dietary quality, diversity, health (Armar-Klemesu, 2000)
- Large area-demand for urban food supply (Zasada et al. 2018) → need for alternatives, but poor evidence on yield potential of urban agriculture
- UA: single calculations for rooftop farming (Orsini et al 2014: 77% of Bolognas vegetable demand)



III. Motivations, Objectives & Potentials

7. Which role can UPUA play for food security, acceptance of traditional (rural) farming practices and for a transforming urbanising society?

Farming practices

- Generally high societal acceptance for UPUA, esp. organic farming
- Certain preference for traditional systems against “artificial high tech” systems



8. Who is doing what on the EU level on UPUA?

Translocal Networks

- PURPLE– peri-urban regions platform Europe
- RUAF Foundation-Global partnership on sustainable urban agriculture and food systems
- ICLEI-RUAF CITYFOOD Network
- C40 food systems network
- Città del Bio (Organic Cities Network)

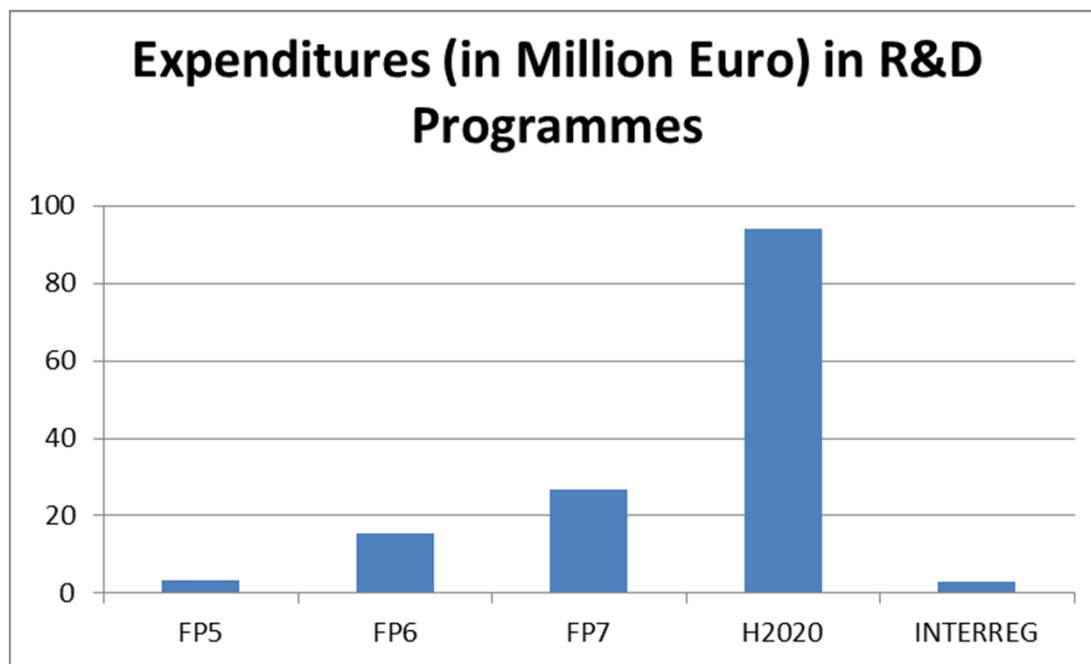
Global level

- UN-UNEP and UN-FAO: Sustainable Food Systems (SFS) Programme
- UN-FAO / Urban Agriculture
- UN-FAO and RUAF / Food for the cities programme
- UN-Habitat II and III (New Urban Agenda)

IV. Political & Institutional Environment

8. Who is doing what on the EU level on UPUA?

Research and Innovation



9. What are the major arguments and interfaces for policy intervention?

EU Regional and Cohesion Policy

- European Spatial Development Perspective (ESDP): strategic relevance of new urban-rural-relationship

EU Urban Agenda

- Circular Economy Action Plan (2018): integration of urban and rural functions, supply, demand and value chains and territorial planning

Environmental policy

- 7th Environment Action Programme (EAP): Green Infrastructure Strategy

Positions and opinions of different institutions at EU level

- European Economic and Social Committee (EESC)
- European Committee of the Regions (CoR)
- EU Parliament and its Services

International treaties

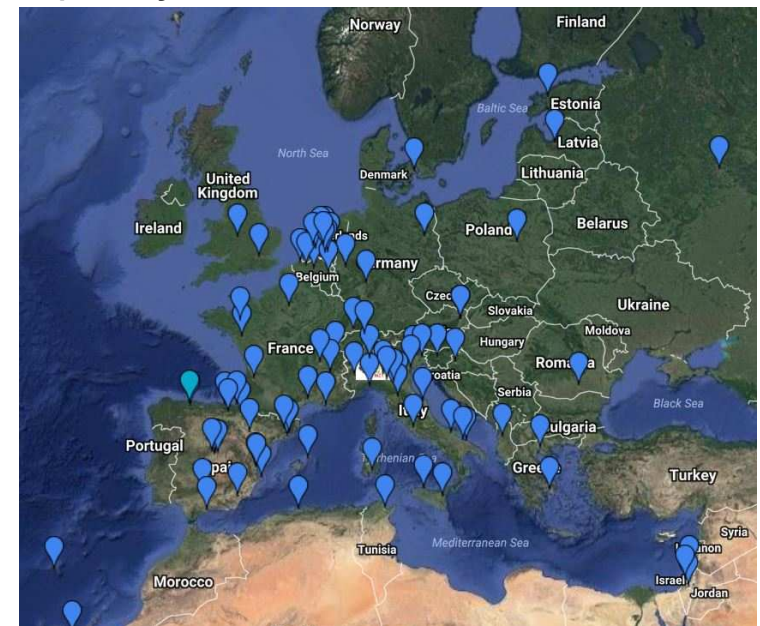
- European Landscape Convention ("Florence Convention")

IV. Political & Institutional Environment

10. What is the institutional setting at local and regional level supporting urban and peri-urban agriculture?

New urban food policies within strategic networks

- New actors: city administrations and civil society initiatives
- Site-specific programs: e.g. access to food, farmers markets, school meal programs, urban agriculture
- New institutions: city departments for food or food policy councils
- Strategic networks aiming at improving
 - Food security and nutrition
 - Livelihood of UPUA, jobs and economy
 - Ecosystems, climate change adaptation



10. What is the institutional setting at local and regional level supporting urban and peri-urban agriculture?

New urban food policies/strategies within powerful networks

Instruments

- Planning instruments: Laws, zoning, agricultural parks
- Stand-alone food plans (as informal planning instruments)
- Inclusion of food issues into comprehensive plans
- Consideration of food issues in planning decisions

Barriers

- Missing integration across themes and between city departments
- Unclear division of local, regional, national competences
- Lack of multi-level governance and policy coherence
- Missing links between research, practice and policy
- Difficulties in inclusion of critical actors in food policy, such as citizen associations (De Cunto et al., 2017)

V. Recommendations for Policy Action

UPUA as a “vehicle” to achieve broader policy objectives

Territorial integration

- Shaping a common policy arena
- Reconnecting urban–rural relationships and their functions
- Territorial governance approaches including planning

Sectorial integration

- Cross-sectorial approaches
- Policy coherence
- Nexus approaches (Water-Food-Energy)

Demand-driven policy action

- Legitimacy through regional debate and consensus about demands and potential contributions of UPUA
- Improvement of the knowledge base, e.g. tools
- Strategic foresight, also at local/ regional level

V. Recommendations for Policy Action

Thematic fields for policy action, policy levels, instruments

Access to land

- Local land use planning and zoning
- CAP mechanisms and incentivisation – direct income support (Pillar I) vs. public good provision (Pillar II)
- Consider UPUA in schemes for young farmers and new entrants

Market access

- UPUA in short food supply chains, regionally developed supply concepts
- Consumer-producer cooperation (e.g. bonus payments)

Levering the market logic of the (peri-)urban land market

- Pooling solutions

UPUA as learning and application field for transformations

- Dynamic phenomenon in a challenging spatial setting
- Different types of UPUA
- Multiple benefits for society, environment and economy
- Approaches/ solutions in line with for European strategic objectives
- Variety of policy domains and need for integration
- UPUA as "role model"/ "entrance door" to implementing integrated concepts and strategies for reaching the SDGs (green Infrastructure, nature based solutions, urban food policies, short food supply chains, new cooperation models in the urban-rural interface)
- Connecting and brokering knowledge from local solutions
- Policy integration across sectors, including planning
- Mechanisms and instruments feasible to addressing potentials of UPUA

STUDY

Requested by the AGRI committee



Thank you

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Pierr, A, Zasada, I, Doernberg, A, Zoll, F and Ramme, W 2018, Research for AGRI Committee – Urban and Peri-urban Agriculture in the EU, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels

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Agriculture and Rural Development



Policy Department for Structural and Cohesion Policies
Directorate General for Internal Policies of the Union
PE 617.468 - April 2018

EN

and some other references



Freisinger, U. B., Specht, K., Sawicka, M., Busse, M., Siebert, R., Werner, A., Thomaier, S., Henckel, D., Galda, A., Dierich, A., Wurbs, S., Groß-Heitmeyer, J., Schön, S., Walk, H. (2013) Es wächst etwas auf dem Dach: Dachgewächshäuser ; Idee, Planung, Umsetzung. Leibniz-Zentrum für Agrarlandschaftsforschung, Müncheberg. http://www.zalf.de/htmlsites/zfarm/Documents/leitfaden/dachgewaechshaeuser_leitfaden.pdf



Berges, R., Opitz, I., Piorr, A., Krikser, T., Lange, A., Bruszewska, K., Specht, K., Henneberg, C. (2014). Urbane Landwirtschaft – Innovationsfelder für die nachhaltige Stadt? Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF) e. V., Müncheberg. <http://project2.zalf.de/innsula/downloads/Berges%20et%20al%202014%20Urbane%20Landwirtschaft%20%E2%80%93%20Innovationsfelder%20f%C3%BCr%20die%20nachhaltige%20Stadt.pdf>



Wascher, D.M, Kneafsey, M., Pintar, M. and **Piorr, A.** (2015). Food Planning and Innovation for Sustainable Metropolitan Regions - Synthesis Report. Wageningen: Wageningen University Research. <http://www.foodmetres-kp.eu/pdf/FoodmetresSynthesisReport.pdf>



Zasada, I. Schmutz, U., Wascher, D., Kneafsey, M., Corsi, S., Mazzocchi, C., Monaco, F., Boyce, P., **Doernberg, A.**, Sali, G., **Piorr, A.** (online first). Food beyond the City – Analysing Foodsheds and Self-Sufficiency under different Food System Scenarios in European Metropolitan Regions. City, Culture and Society.

Opitz, I., Specht, K., **Piorr, A.**, Siebert, R., **Zasada, I.** (2017). Interactions between consumers and producers in the urban-rural interface: Characterization, changing appreciation and learning fields. Moravian Geographical Reports. 85(3) 181-191.

Zoll, F., Specht, K., **Opitz, I.**, Siebert, R., **Piorr, A.**, **Zasada, I.** (2017). Individual choice or collective action? Exploring consumer motives for participating in alternative food networks (AFN). International Journal of Consumer Studies. DOI: [10.1111/ijcs.12405](https://doi.org/10.1111/ijcs.12405)

Schmutz, U., Kneafsey, M., Sarrouy Kay, C., **Doernberg, A.**, **Zasada, I.** (2017) Sustainability impact assessments of different urban short food supply chains: examples from London, UK. Renewable Agriculture and Food Systems.

Monaco, F., **Zasada, I.**, Wascher, D., Glavan, M., Pintar, M., Schmutz, U., Mazzocchi, C., Corsi, S., Sali, G. (2017). Food Production and Consumption: City Regions between Localism, Agricultural Land Displacement, and Economic Competitiveness. Sustainability. 9, 96; [doi:10.3390/su9010096](https://doi.org/10.3390/su9010096)

Doernberg, A., **Zasada, I.**, Bruszewska, K., Skoczowski, B., **Piorr, A.** (2016). Potentials and limitations of regional organic food supply: a qualitative analysis of two food chain types in the Berlin Metropolitan Region. *Sustainability* 8 (11), 11-25. doi:[10.3390/su8111125](https://doi.org/10.3390/su8111125)

and some other references



Doernberg, A., Zasada, I., Bruszewska, K., Skoczowski, B., **Piorr, A.** (2016). Potentials and limitations of regional organic food supply: a qualitative analysis of two food chain types in the Berlin Metropolitan Region. *Sustainability* 8 (11), 11-25. doi:[10.3390/su8111125](https://doi.org/10.3390/su8111125)

Krikser, T., **Piorr, A.,** Berges, R., **Opitz, I** (2016). Urban agriculture oriented towards self-supply, social and commercial purpose: a typology. *Land* 5, 3, 28. doi:[10.3390/land5030028](https://doi.org/10.3390/land5030028)

Opitz, I.; Specht, K.; Berges, R.; Siebert, R.; Piorr, A. (2016). Toward Sustainability: Novelties, Areas of Learning and Innovation in Urban Agriculture. *Sustainability*, 8, 356. [doi:10.3390/su8040356](https://doi.org/10.3390/su8040356)

Opitz, I., Berges, R., Piorr, A., Krikser, T. (2016). Contributing to urban food security: Differences between urban agriculture and peri-urban agriculture in the Global North. *Agriculture and Human Values*. 33(2), 341-358. [doi:10.1007/s10460-015-9610-2](https://doi.org/10.1007/s10460-015-9610-2)

Kathrin Specht, Rosemarie Siebert, Ina Hartmann, Ulf B. Freisinger, Magdalena Sawicka, Armin Werner, Susanne Thomaier, Dietrich Henckel, Heike Walk, Axel Dierich (2014): Urban agriculture of the future: an overview of sustainability aspects of food production in and on buildings. *Agriculture and Human Values* 31, 1, 33-51.
<http://link.springer.com/article/10.1007/s10460-013-9448-4>