

Document downloaded from:

<http://hdl.handle.net/10251/122876>

This paper must be cited as:

Cerrada-Serra, P.; Colombo, L.; Ortiz-Miranda, D.; Grando, S. (2018). Access to agricultural land in peri-urban spaces: social mobilisation and institutional frameworks in Rome and Valencia. *Food Security*. 10(6):1325-1336. <https://doi.org/10.1007/s12571-018-0854-8>



The final publication is available at

<https://doi.org/10.1007/s12571-018-0854-8>

Copyright Springer-Verlag

Additional Information

1 TRANSMANGO Rebuilding Food Systems Special Section.

2 **Access to agricultural land in peri-urban spaces:**
3 **social mobilisation and institutional frameworks**
4 **in Rome and Valencia¹**
5

6 Pedro CERRADA-SERRA² (pedcerse@esp.upv.es)

7 Department of Economics and Social Sciences

8 Universitat Politècnica de València

9 Camino de Vera s/n

10 46022 Valencia (Spain)

11 Tlf. (+34) 963877000 Ext. 74722

12
13 Luca COLOMBO (l.colombo@firab.it)

14 Italian Foundation for Research in Organic and Biodynamic Agriculture (Fondazione Italiana per la
15 Ricerca in Agricoltura Biologica e Biodinamica–FIRAB)

16 Via Pio Molajoni 76

17 00159 Rome (Italy)

18
19 Dionisio ORTIZ-MIRANDA (dortiz@esp.upv.es)

20 Department of Economics and Social Sciences

21 Universitat Politècnica de València

22 Camino de Vera s/n

23 46022 Valencia (Spain)

24
25 Stefano GRANDO (stefano.grando@yahoo.it)

26 Italian Foundation for Research in Organic and Biodynamic Agriculture (Fondazione Italiana per la
27 Ricerca in Agricoltura Biologica e Biodinamica–FIRAB)

¹ Cite as: Cerrada-Serra, P., Colombo, L., Ortiz-Miranda, D., Grando, S. Food Security. (2018).
<https://doi.org/10.1007/s12571-018-0854-8>

² Corresponding author

28 Via Pio Molajoni 76
29 00159 Rome (Italy)

30 Introduction

31 Urban and peri-urban agriculture (UA and PUA respectively) have gained worldwide momentum
32 within the framework of the renewed food and nutrition security agenda and are receiving greater
33 consideration in their potential role to sustainably provide healthy and nutritious food to a growing
34 urban population (FAO, 2014; Eigenbrod and NazimGruda, 2015). This is so not only in the
35 developing world but also in the global North (Opitz et al., 2016), in which UA could grow the
36 basic vegetable intake of the urban poor (Badami and Ramankutty, 2015) and answer the specific
37 demands for culturally-acceptable food (Wekerle and Classens, 2015), one of the requirements
38 considered in the utilisation dimension in the FAO's definition of food security.

39 The way in which UA and PUA can reframe urban food and nutrition security (FNS) and reconnect
40 urban centres with their surrounding territories has given rise to the concept of 'city region food
41 systems', defined as "the complex network of actors, processes and relationships to do with food
42 production, processing, marketing, and consumption that exist in a given geographical region that
43 includes a more or less concentrated urban centre and its surrounding peri-urban and rural
44 hinterland; a regional landscape across which flows of people, goods and ecosystem services are
45 managed"³.

46 Although UA and PUA are often considered under the common label of *urban agriculture*, it has
47 been argued that it is necessary to tackle them separately, as their dynamics and their potential
48 contribution to FNS can completely differ (Opitz et al., 2016). PUA has been said to be a residual
49 form of agriculture at the fringe of growing cities (Opitz et al., 2016): the peri-urban area,
50 characterised by its spatial fuzziness, further complicated by its temporal transitionality and
51 uncertainty (Wästfelt and Zhang, 2016). However, PUA is also a meeting space, reconnecting the
52 urban and the rural, the city and its surroundings (Sonnino, 2007; Pául and McKenzie, 2013). PUA
53 has the potential to provide a number of goods and services to urban dwellers that go beyond food
54 (Zasada, 2011).

55 The European cities in the Mediterranean Basin have been argued to maintain strong links with
56 their surroundings (Pául and McKenzie, 2013). In a review of the main recent dynamics of peri-
57 urban agroecosystems, Soulard et al. (2017) find that the urban regions of Southern Europe have
58 witnessed a renewal of the links between urban development and agriculture as a consequence of
59 the recent economic crisis and the mobilisation of urban actors to rebuild the food connections
60 between the city and its surrounding countryside. This indicates that the renewal of PUA and its
61 contribution to FNS form part of a broader process of new food politics and cannot be separated
62 from the role of emerging food-related social movements. This combination of factors –the renewed
63 social and political interest in PUA, the search for new livelihood options in the context of the
64 economic crisis and the opportunities arising from growing market demands for proximity food
65 (Duke and Aull-Hyde, 2002) - has given rise to a growth in PUA initiatives of critical mobilisation,
66 led either by newcomers or by already installed farmers.

³ Definition provided by the City Region Food Systems Alliance in 2015, quoted in Blay-Palmer et al. (2018).

67 However, these initiatives have to overcome a major limitation in peri-urban spaces: the access to
68 farmland, a key constraint to fully realizing the potential of PUA, which can undermine the capacity
69 to take full advantage of new opportunities in city region food systems (Forster and Getz-Escudero,
70 2014). The academic literature frequently mentions producers' difficulties in accessing farmland as
71 a characteristic and crucial factor conditioning PUA dynamics and the feasibility of professional,
72 market-oriented food production initiatives. However, a few empirical analyses directly tackle these
73 points. This is so despite the attention that this issue receives in the local urban policy agenda in
74 several places in Europe (see for example Galli et al., 2010; RUAF, 2017), where local and regional
75 authorities try to respond to the growing social demands by exploring mechanisms to 'mobilize'
76 both public and private vacant land in peri-urban areas.

77 This paper explores how socio-political mobilisations that combine claims for the renewal of local
78 food systems and new models of urban-periurban governance is revitalising the questions of the
79 access to peri-urban farmland. A comparative analysis was conducted in two Mediterranean
80 metropolitan areas (Rome in Italy and Valencia in Spain), where different institutional and policy
81 frameworks shape the conditions for new farmers or already installed farmers to access farmland, in
82 both cases aiming to adopt alternative business models. The two cities were also similarly hit by
83 serious youth unemployment and witnessed recent profound changes in political settings driven by
84 the crisis of traditional parties in both countries, so opening up possible windows for bottom-up
85 initiatives. Furthermore, Rome and Valencia are both engaged –as outstanding signatories of the
86 Milan Urban Food Policy Pact⁴– in developing local participatory food policies, so that the paper
87 also connects the way social movements activate processes of spatial, material, relational and
88 conceptual reconfiguration in dialectic interaction with local institutions, and so influence the re-
89 shaping of food systems.

90 The paper is structured as follows: the next section synthesises some key points in the literature
91 regarding access to land in PU areas in the global North. Case studies and data collection
92 procedures are then presented. The results are split into two sections: the new momentum of peri-
93 urban agriculture is described in both metropolitan areas and farmland access mechanism are
94 characterised. The results are then discussed and compared. The paper ends with some concluding
95 remarks.

96 Literature review: farmland issues in peri-urban areas

97 Farmers' access to land has become an outstanding issue in the global FNS agenda, in part due to
98 the role of social movements, which have specifically contributed to calling attention to these issues
99 at local and international levels (Franco et al., 2015), including Europe (Borras et al., 2016).

100 In the same vein, access to land has also been identified in the Global North as a crucial and
101 constraining factor in the development and transformation of peri-urban agriculture (Lovell, 2010).
102 In a survey conducted in the SUPURBFOOD Project, interviews with public and private experts
103 (Schmid et al. 2015) found that the demand to local governments to protect and enable access to and
104 tenure of land for food production in urban and peri-urban areas ranked first among the demands
105 addressed to local city governments to support innovative SMEs and organizations which deliver
106 multifunctionality through food production in urban food systems.

⁴ For instance, Valencia was declared the 2017 World Sustainable Food Capital.

107 Access to land in peri-urban spaces is totally conditioned by the intense competition for land use
108 due to urban growth processes that often take the form of urban sprawl. Indeed, peri-urban spaces
109 are characterised by high land prices (Munton, 2009), so that even prime agricultural land is used
110 for development (Knowd et al., 2006). Wästfelt and Zhang (2016) state that land value anticipation
111 is amplified by urban speculative behaviour, leading to higher rents, shortage of land and
112 fragmentation of land ownership. In order to remain open to future urbanisation opportunities, many
113 public and private land owners often tolerate UA only as an interim use (Opitz et al., 2016). Apart
114 from the high prices and the long term insecurity of tenure rights, peri-urban farmland is affected by
115 land fragmentation due to urban sprawl and infrastructure development.

116 The market forces operating in peri-urban areas are subjected to strong land use regulation by
117 regional and local public bodies, which, on the other hand are also influenced by these same forces.
118 In fact, one of the aims of these regulations is precisely to protect farmland from urban-related
119 developments. In this regard, zoning regulation –i.e. the definition of zones adjacent to urban areas
120 where land use change is forbidden- has been the traditional tool for farmland protection (Zasada,
121 2011). Actually, as Opitz et al. (2016) argue, in order to improve the contribution of PUA to urban
122 food security, urban pressure has to be regulated and controlled and priority zones for farming can
123 be an effective planning instrument to provide more security and stability for peri-urban farmers.

124 However, it has also been argued (Päul and McKenzie, 2013) that effective farmland protection
125 cannot be achieved simply by means of zoning restrictions and it is necessary to sustain the
126 productive dimension of agriculture. Long-term tenancy security thus becomes a crucial factor for
127 farm viability. As Munton argues, land property rights are held in more complex ways (including
128 more short-term letting of land) in the urban fringe. In Southern Europe, Souldard et al. (2017) report
129 cases of occupation of vacant peri-urban plots for farming without the knowledge (or consent) of
130 landowners. The insecurity associated with these situations affects the farms' investment level and
131 survival strategies (Peron and Geoffriau, 2007; Piorr et al. 2011). Interestingly, it has been found
132 that in some cases farmers use private land with the permission of landowners, which leads to a
133 relationship based on personal relationships dependent on trust and shared values and interests
134 (Wekerle and Classens, 2015).

135 In short, peri-urban areas are a fuzzy meeting space of different land uses and related interests. This
136 makes PUA an arena of social and political struggle in which interests and values converge and
137 collide. Besides, this takes place in a context of fragmented governance, both multiscale –as land
138 use politics are shaped at different levels (local, regional, national, European), and multi-territorial –
139 as many land planning responsibilities in PU areas are in the hands of different municipalities that
140 compete with each other to attract new facilities and infrastructures (Allen 2003).

141 Case studies and data collection

142 Rome and Valencia are both large metropolitan areas, with more than 4 million inhabitants in Rome
143 and 1.7 m in Valencia. Both cities share the features of other large western urban centres with
144 regard to competition for land use, building sector relevance and influence and city expansion.

145 In the case of Rome, large portions of arable land are still available, even in public hands, in areas
146 often characterised by environmental and social vulnerabilities. In recent years this has led to social
147 mobilisation aimed at obtaining access to farmland units for young farmers. This initiative obtained
148 some success (two tenders and first assignments) and was also a cradle for social innovation whose
149 potential and ambition goes beyond the creation of new peri-urban farms. The agricultural
150 landscape is characterised by arable crops, olive groves, horticulture and permanent grass for sheep

151 and cattle husbandry, mainly managed by professional farmers, coexisting with a proliferation of
152 urban gardens.

153 One of the distinguishing features of Valencia's peri-urban agriculture is the large irrigated
154 agricultural area around the city, known as the *Huerta of Valencia*, which is considered the most
155 important of the few remaining agricultural systems of its type in Europe (European Environmental
156 Agency, 1995). Its production system consists of intensive horticulture and permanent crops. This
157 unique, and at the same time fragile environment, has traditionally supplied fresh food to the city,
158 besides also being an important area of commercial agriculture. However, several converging
159 processes now threaten its future and have reduced the supply of arable land. While large portions
160 of PU areas are held by public institutions in Rome, in Valencia this type of land is mostly privately
161 owned, and the supply of farmland is made up of plots that are abandoned, sold or rented out by
162 retired farmers.

163 Despite the differences, both cases have common factors. First, there is renewed interest by young
164 people in developing peri-urban agricultural initiatives, motivated by new food business
165 opportunities in response to the growing interest of urban consumers in local organically-grown
166 food and the proliferation of local alternative food networks. Although they include different
167 profiles, their promoters share some common features: they are looking for new forms of proximity
168 and direct selling pathways to urban consumers and claim to adopt agroecological farming methods.
169 Secondly, these initiatives are socially and politically embedded within broader social movements
170 engaged in food sovereignty discourses and peri-urban space protection. Many of these food
171 producers are active in the leadership of these movements. Thirdly, farming in PUA appears as a
172 viable source of income and an unemployment response for young urban dwellers. Finally, these
173 factors (growing economic demand and social movements' activism) have led local authorities
174 supporting these initiatives, in particular regarding access to land.

175 Data collection in both cases was guided by the need to harvest first-hand information through a
176 participative approach capable of grasping the key elements of processes largely based on
177 grassroots initiatives and social engagement. Beyond the initial desk analyses, interviews with
178 stakeholders and experts and personal participation in events and initiatives (sit-in, public debates,
179 and open seminars) were at the core of the process. A peculiar element of this common approach
180 was a two-session scenario workshop in each case study of the TRANSMANGO project, following
181 shared guidelines developed by a project partner with solid expertise in the field (Vervoort et al.
182 2016).

183 Informants in both case studies had different profiles: (i) farmers developing new production
184 initiatives and aspiring young ecological farmers; (ii) managers of food business initiatives (e.g.
185 selling platforms); (iii) representatives, members and activists of social organisations engaged in
186 alternative food networks and the protection of peri-urban high value areas, environmentalists; (iv)
187 consumers engaged in alternative food networks (CSA, box schemes, direct purchase); and (v) staff
188 from local and regional public bodies in charge of institutional mechanisms to access land; experts
189 from universities (social sciences, agronomists).

190 Several secondary sources were consulted in a *desk-based analysis* to obtain a wider picture of the
191 analysed topics and to better frame the information acquired from primary sources. These include
192 scientific and grey literature on the subject, internal social organisation documents, policy
193 documents, press releases of public bodies and media articles. This work led to a preliminary
194 assessment of the most relevant aspects of each case together with a historical insight into recent
195 events that led to the current situation.

196 A set of *semi-structured interviews* was then carried out between November 2015 and June 2016 to
197 collect the opinions of stakeholders and experts to acquire an understanding of the different

198 positions, objectives and visions of the reference groups. In Valencia 22 interviews were conducted
199 with key actors from different backgrounds: 9 local producers, 5 with representatives of public
200 bodies, 4 from the consumer context, 2 social organizations and 2 professional experts. The
201 interviewees were initially selected on the basis of our knowledge of the case study, followed by
202 snowball sampling from an expert-driven selection and direct contacts with farmers and producers.
203 A similar process was followed in Rome, where 14 exploratory semi-structured interviews were
204 conducted with producers and aspiring farmers, representatives of public bodies, technicians, NGOs
205 and farmers' leaders to complete this step of the research.

206 *Participatory observation* was also widely used. In Valencia, we attended a series of talks related to
207 this research and we also participated in several initiatives conducted by social movements in
208 collaboration with the Valencia city council, on sustainable food and peri-urban agriculture. Two
209 local farmers' markets were also visited and we spent several working days on a small producer's
210 farm. In Rome meetings and flash-mobs organised by land access activists were attended, as well as
211 a series of seminars organised, again by a group of activists, to offer aspiring farmers information
212 on legal requirements, financial tools and technical advice on land access and peri-urban
213 agriculture. Participatory observation in Rome started even before the case study research period, as
214 part of an activity of constant interaction with land-related processes. This activity provided useful
215 insights into mobilisation dynamics and guidance for the fieldwork.

216 Two-session participatory *scenario workshops* were organized, reflecting the common methodology
217 adopted for the project case-studies. The workshops combined retrospective analysis (backcasting)
218 and narrative of exploratory scenario techniques. The workshops were also meant to provide a
219 space for open debate and suggestions for individuals and organizations involved and/or interested
220 in the initiatives. The aim was to encourage the different actors to interact and exchange ideas on
221 present and plausible future scenarios and challenges, detached from day-to-day pressures and
222 duties. In Valencia, two workshop sessions were organised (in March and May 2016) with the
223 participation of 23 and 19 people respectively. In Rome, 15 people attended the workshops (held in
224 February and April 2016).

225 A final comment needs to be made regarding the type of informants in this research. In spite of
226 having very different profiles –and often very different views on a range of issues, almost all the
227 interviewed actors were in favour of protecting PUA and setting up renewed food ties between
228 periurban producers and the city. However there are other actors who can influence the becoming of
229 peri-urban spaces (property owners, investors, building companies, land developers, or large
230 conventional farmers), who probably have different perspectives. These actors were not directly
231 interviewed, as our focus was on social mobilisation and understanding the extent to which the new
232 ways to access peri-urban land enable the development of new agricultural initiatives. This is not to
233 say these conventional actors are irrelevant in this process, for instance, they may have a role in
234 accelerating, distorting or blocking legal reforms, but their information would have been more
235 relevant if our study had included an in-depth analysis of the processes of institutional change,
236 which was not the case.

237 [A new momentum for peri-urban agriculture in Rome and Valencia](#)

238 [Public land for young farmers in Rome](#)

239 Rome is characterised by the coexistence of built-up and green areas, not only in the outskirts but
240 even close to the city centre. Green areas are sometimes utilised as gardens or leisure spaces, but
241 more often tend to be abandoned or used as rubbish dumps. In the peri-urban areas suitable for

242 agriculture, farming has often to compete with other uses with strong economic and/or social
243 pressures (housing, shopping malls, transport infrastructures), usually exercised by the powerful
244 building sector. However, this complex and contradictory urbanization process leaves large non-
245 built-up spaces, providing a great potential for the use of these public assets for a more effective
246 (agricultural) land management. This has been considered as a potential for local food system
247 diversification and, not least, for creating job opportunities for the young unemployed.

248 Starting in the late '90s, the Rome Administration launched the 1966 Municipal Master Plan
249 revision process, stressing their intention to preserve farming land in the largest agricultural
250 municipality in Italy. Economic and political struggles took place over the various options,
251 particularly over the "compensation planning system", first introduced in 1997, which rules that the
252 construction of new buildings or infrastructures can be controlled by the local council in
253 environmentally sensitive areas. When this happens, the company is allowed to build elsewhere, but
254 only if the bonded area is handed over for free to the local authority. In 2003 a new Master Plan was
255 adopted and finally approved in 2008⁵. About 700 hectares of potentially available public land
256 suitable for agriculture in Rome became available due to these "compensations". Part of the land
257 involved in these compensation measures became the object of social movements aimed at
258 triggering land assignments.

259 On the basis of these policy developments, various other grassroots initiatives have also recently
260 been instigated to grant young would-be farmers easier access to unused or inappropriately used
261 portions of land and give them the opportunity to become farmers.

262 Among these, the Coordination for Access to Land (CRAT in Italian), a network set up by a group
263 of young (existing and would-be) farmers, consisting of various farmers' and non-farmers'
264 organizations and potential beneficiaries, was particularly active in organizing a mobilization based
265 on flash-mobs, symbolic occupation of abandoned areas, public meetings, educational seminars and
266 participation in third party conferences. The catalyst for the CRAT movement was a declaration of
267 intent called "Vertenza" (literally "dispute"). This 4-page document aimed at getting the local
268 administrations to discuss and solve the problem of the adequate development of public land
269 suitable for agriculture in Rome (CRAT, 2011). The "Vertenza" described the Roman countryside
270 as characterised by biodiversity, wetlands and hills, historical heritage and modern infrastructures,
271 underlining the pivotal role that agriculture could play in its safeguard and ecologically-sound
272 development. The document expressed the need for clear and transparent procedures for assigning
273 public land to young farmers, with the aim of recovering abandoned or under-utilised plots of land
274 while establishing a new alliance between urban farmers and consumers. As direct interactions with
275 local authorities and policy makers was deemed crucial for the strategy, meetings were organised
276 with the head of the Regional Agency for the Development and Innovation of Lazio Agriculture
277 (ARSIAL), with municipal and provincial council members and with the mayor of Rome. The role
278 of some well-established cooperative farms, some of which originated from land occupation in the
279 70's, was important to provide initial suggestions and guidance, also for the existing working and
280 training collaboration between some of the young activists and these cooperatives.

281 This mobilisation was one of the levers that led to the publication of two tenders for access to public
282 land for agricultural use in Rome and surrounding areas, which is analysed below.

283 [Farmland protection in the Huerta of Valencia](#)

284 The agri-food industry is a significant sector of the whole Valencia region, which has a long-
285 standing agricultural tradition and the city has been historically closely bound up with its singular
286 peri-urban *Huerta*. This man-made landscape, of high agricultural, environmental and cultural

⁵ Rome City Council Decision n.22, 12/02/2008.

287 value, has been wisely shaped through the centuries and constitutes the matrix that, in a total area of
288 23,000 hectares, brings together 44 municipalities and about 12.000 ha of smallholders' farms that
289 can provide up to three crops per year. The network of irrigation channels and ditches, built during
290 the Moorish period, is a key structural element in this landscape.

291 In the last decades the *Huerta* has experienced drastic transformations as never before, and several
292 processes threaten its continuity. Together with the abandonment of agricultural land – low
293 economic and social recognition threatens generational renewal-, the area has experienced strong
294 pressure from urban sprawl, infrastructures and communications networks, which has led to a loss
295 of productive capacity and spatial fragmentation. In 55 years, the *Huerta* area has been reduced by
296 38%, from about 19,500 ha in 1956 to 12,200 ha in 2011. The area dedicated to producing fruit and
297 vegetables has been reduced by 64% in this period (Soriano, 2015). According to PATODHV⁶, the
298 degradation of the area is aggravated by problems in the irrigation infrastructure and water
299 pollution, visual fragmentation and deterioration, and fewer farms, due to lack of generational
300 renewal.

301 However, the last 15-20 years have witnessed two processes. On the one hand, the city and
302 surrounding municipalities have seen the emergence of a strong social mobilisation in defence of
303 this agricultural space, mostly around the association “*Per L'Horta*”. As Gómez Ferri (2004)
304 explains, the germ of this association dates back to 2001 when a Popular Legislative Initiative
305 (PLI)⁷ was promoted by the “*Plataforma per un Cinturó d'Horta*” (Platform for a Huerta Belt) to
306 declare the remnants of Valencia's Huerta as a protected natural area. “*Per L'Horta*” was precisely
307 the campaign's slogan, in which around 100 different groups and associations from the whole
308 Valencia region were involved, mainly environmental groups, trade unions, neighbourhood, student
309 and cultural associations, also some political parties. Paradoxically, the presence of farmers'
310 associations was minimal, as a majority of farmers (who were also landowners) considered the PLI
311 as a potential threat to their expectations regarding urban sprawl and land revaluation. Although the
312 campaign collected more than 100,000 signatures (doubling the 50,000 signatures required for its
313 parliamentary process), the Valencia Regional Parliament voted against taking the PLI into
314 consideration. Nevertheless, the campaign succeeded in mobilizing an important part of society,
315 generating debate and public awareness. “*Per L'Horta*” became the heir to the first initiative, which
316 today continues to work for the protection and enhancement of the Huerta de Valencia.

317 On the other hand, the city has witnessed the proliferation of several food-related initiatives (CSA
318 groups, box schemes, revival of some farmers' markets, and grocery and web platform initiatives to
319 promote local fruit and vegetables). This has meant both a social revaluation of peri-urban
320 agriculture and the emergence of new food-related business opportunities. New young
321 organic/agroecological farmers are trying to reconnect with urban consumers and re-establishing
322 production-consumption proximity relations, while some already installed farmers also adopted
323 organic farming and started to explore short food supply chains (SFSC).

⁶The *Plan de Acción Territorial de Ordenación y Dinamización de la Huerta de Valencia* (Territorial Action Plan of Management and Revitalization of the Huerta of Valencia) is a long-awaited comprehensive action plan for territorial planning at metropolitan level in the Huerta area. It has received a new impetus and currently is being developed by the regional government.

⁷Popular Legislative Initiatives are meant to be a procedure of participatory democracy, a mechanism for direct involvement by citizens in policy-making, although it hardly ever leads to the adoption of an act. In the Valencia Regional Parliament at least 50,000 signatures are required to start the process.

324 These two processes have been parallel and interwoven. Some of these farmers (despite being a
325 minority) rapidly became leaders of the movement for the protection of the *Huerta*. In this social
326 movement, farmers play a fundamental role in maintaining the agricultural activity necessary to
327 preserve the territory and avoid its becoming a ‘museum’. For this, it is necessary to guarantee both
328 the profitability of agricultural activity and effective protection of the territory (through land use
329 planning regulations).

330 All these actors –who had adopted a defensive profile against the regional and local
331 administrations- witnessed how the municipal and regional elections of 2015 gave way to a new
332 government much closer to their position of protecting the *Huerta*. This has led to new policy of
333 initiatives designed to create better conditions for peri-urban farmers and other local food actors.

334 Different modalities and institutional frameworks to access peri-urban 335 farmland

336 As stated above, peri-urban farmland in both Rome and Valencia has been under considerable
337 pressure due to urban sprawl in the last decades. This is so despite the supposedly rigid and long-
338 term regulatory regime. Indeed, zoning regulations determining peri-urban land uses and land
339 development potentials are defined in municipal master plans: the *Piano Regolatore Generale* (PRG,
340 from 2008) in Rome and the *Plan General de Ordenación Urbana* (PGOU from 1988) in Valencia.
341 These are long-term land use plans from 1966 in both cases. This makes evident, as Zasada (2011)
342 points out, how large-scale public planning is not capable of addressing small-scale functional
343 changes that together are able to transform the agricultural landscape.

344 The private supply of farmland has been strongly conditioned by the land development expectations
345 of landowners, which confirms the point made by Opitz et al. (2016) regarding the interim features
346 of PUA. In Rome, the so-called ‘*agricoltura di attesa*’ (which could be translated as ‘waiting
347 agriculture’), voids farming business plans, as the landowners act as *rentiers* waiting for those areas
348 to become suitable for urbanisation. The capacity of the regional and municipal administrations to
349 find land available for farming, environmental and social functions has generally been limited by
350 the persistence of illegal land occupation and the difficulty of obtaining an equitable
351 acknowledgement of informal rights (Gallico & Groppo, 2015). In Valencia, the several abandoned
352 plots (due to farmers’ retirement and the low profitability of small-scale conventional farming) are
353 rarely sold or legally rented (which requires minimum periods of renting), as sometimes landowners
354 (and their heirs) expect the future revaluation of the land.

355 Yet, some residual land tenure dynamics remain in both PU areas, which maintain relevant farming
356 potential making them attractive for new entrepreneurial initiatives. The two cases under analysis
357 illustrate different modalities to access farmland.

358 In Italy, two recent national Decrees⁸ gave public authorities owning arable and agricultural land
359 the permission to assign allotments to young would-be farmers with the aim of “giving new life to
360 state-owned land suitable for agriculture, transforming them into a job opportunity for the new
361 generations”⁹. Nevertheless, the rationale of the acts –as witnessed by the role played by the
362 Ministry of Economy and Finance (MEF), is less oriented towards land access policies than towards

⁸ The Decree on Liberalizations (DL, Decretolegge 24/01/2012, n. 1) and the Decree “*Terre vive*” (living lands), approved in 2014.

⁹ Extracted from <http://www.agenziademanio.it/opencms/it/terrevive/>. Accessed July 2017.

363 harvesting financial resources to reduce the public deficit, as two farmer-activists reported during
364 the research interviews.

365 In any case, at local level, this new regulatory framework, together with the pressure exerted by the
366 Coordination for Access to Land, gave rise in 2014 to the publication of two tenders for the
367 agricultural use of public land in the land around Rome: one promoted by ARSIAL, the other
368 directly by the Rome City Council.

- 369 • *The ARSIAL-Regional tender.* The first tender was issued by the ARSIAL in February 2014.
370 It had two main objectives: enhancing access for young farmers to agricultural land and
371 protecting the quality of the land owned by the Region while using it for economic and
372 social purposes (Gallico & Groppo, 2015). A total of 320 hectares for the main part in the
373 province of Rome (290 ha) and in the province of Viterbo (30 ha) were made available to
374 farmers for 15 (renewable) years alongside overall financial resources of €650,000.
- 375 • *The Municipal tender.* The second tender was issued in May 2014, with four allotments to
376 be assigned in the municipal territory. The tender was meant to be the first step of a wider
377 policy of land distribution whose header "*Roma, città da coltivare*" (Rome, a city to
378 cultivate) expresses the idea that taking care of Rome also means promoting agriculture and
379 farming. The size of the four areas identified for the assignments ranged from 14 to 33
380 hectares, with a total of 97 hectares. A rural building was available for use (at least partially)
381 by the assignment holders in all of them.

382 In both cases, the criteria for selecting farmers in the tenders reflected some of the ideas promoted
383 by the social movements, for example with regard to the priority for young farmers (maximum 40
384 years old) and 'green' production methods. In the municipal tender, bids were evaluated against
385 seven parameters, ranging from the applicant's agricultural competence to the robustness of his/her
386 proposal and the foreseen use of renewable energy. The seven conditions also included the adoption
387 of organic farming methods, which was one of the highest-rated parameters, scoring 15/100 points.
388 The four selected proposals were finally chosen out of a group of 104, of which 80% were
389 submitted by young farmers and 34% by women: all the assignees had presented business plans
390 grounded on organic farming.

391 The Vertenza stated "*We imagine the Agro Romano and the urban agricultural land being managed*
392 *with the creativity, the vitality [...] the enthusiasm and the openness to the future of the young*
393 *agricultural entrepreneurs*". Ten individual young farmers and cooperatives set up new farms. In
394 most cases, the new farmers aimed at establishing short chains and direct contact with consumers in
395 a social business perspective and at relying upon organic production methods as a condition for
396 sustainability and as a marketing lever. As stated by one interviewed activist (a young female
397 farmer, who had not taken part in either tender), "*the engagement point was no longer the mere*
398 *access to land, but food policies centred on local food systems and food sovereignty*".

399 Part of the public land available for tenders was provided by private companies as a consequence of
400 the implementation of the already mentioned "compensation planning system", which brought new
401 environmentally sensitive areas under the management of the Municipality.

402 The situation is different in Valencia, where land property is mainly private, so the access
403 mechanisms mostly depend on private agreements and initiatives. Different modalities were
404 identified in the interviews:

- 405 - In some cases, new entrants to farming accounted for family land. It is not infrequent in
406 metropolitan Valencia that –particularly elder people- still own plots of land in the
407 surroundings. This has allowed younger generations to start farming activity using these
408 plots, as well as the associated assets (equipment, practical knowledge, networks).
- 409 - Those without land need to resort to tenancy agreements with landowners. There is still
410 some land available, though in the form of small scattered plots owned by retired farmers or
411 their heirs¹⁰. However, renting is expensive, particularly close to the urban fringe, as was
412 learned from one of the interviewees, a young already installed farmer recalling his initial
413 stages: “*I was sharing a rented plot with a friend in Picanya [7 Km from Valencia city
414 centre] (...). It was a disaster (...) the cost of the land was very high, about three times the
415 price of the best field you can find in Liria [nearly 30 Km from Valencia city centre]*”. In
416 addition, new farmers complain that many landowners are reluctant to formalise renting
417 contracts¹¹. Another young organic producer interviewed estimated that 9 out of 10 renting
418 contracts were informal. Landowners’ distrust of newcomers (especially those adopting
419 ‘alternative’ production methods) and the possibility of taking advantage of potential
420 revaluation options explain their reluctance to formalise tenancy agreements. As a matter of
421 fact, this informality could also benefit producers (by avoiding taxation). However,
422 informality is detrimental for medium-term crop planning, investments in irrigation
423 infrastructures or initiating the conversion process to organic farming for certification
424 purposes.
- 425 - Municipal authorities are also trying to mediate between owners of vacant farmland and
426 those willing to initiate or expand their farming activity. In some cases, municipal
427 authorities (e.g. in Pobla de Vallbona, within the Huerta) took the initiative of allowing the
428 occupation of plots of land owned by banks or other private actors, who had not initiated the
429 process of urbanisation. In other cases, municipalities try to mediate by creating land banks.
430 Under this modality, landowners can offer their plots to be included in a municipal register
431 that is offered to farmers looking for new land. The municipality aims to reduce transaction
432 costs and to give security to the parties (particularly landowners). However, although some
433 land banks have been formally created, they are not yet effective, as a young would-be
434 farmer complained. Two interviewees, from the administration and university, argued that
435 many owners are reluctant to cede their land to these intermediate entities and distrust the
436 new farmer to whom it is granted. Furthermore, there is no inventory of abandoned plots,
437 which would allow the local administration to act in specific cases. In addition, some land
438 banks cover several municipalities (e.g. the *Pactem Nord Consorcio*). The potential
439 advantage of a larger scale operation collides with coordination problems between different
440 municipal administrations. “*It is a supra-municipal institution, which complicates the
441 process*” (agricultural administration expert).

¹⁰ The drop in the price of citrus fruits –one of the main crop in the study area- also contributed to farmers leaving the land.

¹¹ Formal contracts are regulated under the Agricultural Renting Law that stipulates minimum contract periods and a number of guarantees for tenants.

442 Discussion: comparing social mobilisation and land access and tenure in 443 Rome and Valencia

444 The comparison of two case studies conducted in Rome and Valencia highlights some common
445 elements that deserve attention.

446 First, both cases are the expression of the new and growing opportunities that are emerging for local
447 organic food producers, in a framework of transition (at least for certain segments of the population)
448 towards alternative and differentiated food system configurations. This shapes a new and potentially
449 enabling setting for want-to-be or already installed farmers. Nevertheless, new agricultural ventures
450 are severely constrained by the difficulties of access to land in these peri-urban contexts, where
451 urban development (buildings, transport infrastructures, space-demanding manufacturing or
452 commercial sites, leisure spaces, etc.) complicates the access to an appropriate farmland base (high
453 land prices and market rigidity, fragmented plots, long term tenancy insecurity, basic infrastructure
454 availability).

455 Access to land is closely interrelated with access to other productive assets. For instance, in Rome
456 some new farmers had organisational and technical problems due to the poor state of the soil
457 (following decades of abandonment or illegal use), unsuitable irrigation infrastructures, and even
458 the impossibility of using rural buildings, as foreseen in the assignment contract, due to delays in
459 the refurbishment of the structures. These barriers were raised by the assignees during the scenario
460 workshops, when they called for licences from the administration for refurbishment and full
461 operationalisation of the areas. Access to credit also becomes a problem, as new farmers may have
462 no collateral or do not comply with the criteria to be granted public rural development aids for the
463 setting up of agricultural activities. Informal land tenancy agreements also hamper funding
464 possibilities. In Valencia, access to water is also an additional constraint (high price of groundwater,
465 or inability to adapt to the communal rules governing water use).

466 Second, in both case studies, the fieldwork found that the new entrants' motivations and profiles,
467 their choice regarding farming and business models, the modalities of access to land and the
468 institutional responses, are part of a broader framework of social and political mobilisation
469 revolving around food system models and urban development. In other words, access to peri-urban
470 land for food production cannot be dissociated from the socio-political transformative aim of the
471 actors involved. The active role played by civil organisations in Rome (e.g. CRAT) and Valencia
472 (e.g. *Perl'Horta*) has been crucial in forming a favourable social climate for these initiatives and an
473 enabling institutional framework. For this aim, these actors have argued their legitimacy (e.g.
474 heritage and environmental protection, youth employment or participatory governance), and have
475 claimed supportive political agendas, which, as the interviewees acknowledge, are highly dependent
476 on the changing political contexts and on the personal commitments of policy makers and local
477 authorities, who are only in office for a limited period.

478 The political dimension of these networks and actors is also linked to the search for a different city
479 model, urban planning, and urban-peri urban relationships. It is also related to the defence of the
480 *Huerta's* historical and cultural heritage, somehow paralleled by the 'campagna romana' (roman
481 countryside) environmental, landscape and historic relevance. For these organisations, alternative
482 local food systems are instrumental in achieving this aim. In other words, the protection of the PU
483 areas could not be achieved simply by means of traditional land use regulations (zoning and
484 restrictions), but requires the active presence of a population of professional farmers with viable
485 businesses.

486 Table 1 summarises and compares the main features of the two case studies and shows how, despite
 487 the differences regarding land access mechanisms, they are just two pieces of a single story. The
 488 similarities of farmers’ motivations and the business models they aim to adopt, the constraints they
 489 confront, the way they are committed and engaged in larger socio-political movements aspiring to
 490 food system transition, are all expressions of individual and collective initiatives that are taking
 491 place in many peri-urban areas in Europe and beyond. Local and regional administrations seem to
 492 be adopting (at least in the two case studies) a supportive approach to these individual and
 493 collective claims. Yet, facilitating access to farmland to give rise to new modes of city region food
 494 systems constitutes a totally new and complex issue, which clashes with the inertia of
 495 administrative structures and traditional modes of policy intervention.

496

497 Table 1. Common features of access to farmland in peri-urban Rome and Valencia

	Rome	Valencia
Land ownership	Public	Private
Access mechanisms	Public allotments	Access to family farmland, land renting (with or without a formal contract) and municipal land banks
Tenancy security	High (15 year-contracts)	From high (family land) to low (non-registered renting, occupation)
Newcomers’ motivations	Employment and eco-social business	Employment and ideology motivations (e.g. agroecological commitment)
Farmers’ entrepreneurial models	Individual / Cooperatives	Individual
Productive orientation	Organic vegetables	Organic vegetables
Marketing practices	SFSC	SFSC, though some are accessing export niche markets
Lacking or limited assets	Knowledge/Training Machinery Financial credit	Knowledge/Training Machinery Financial credit
Farmers’ political engagement	Land & food sovereignty movements	Huerta heritage protection and agroecological and food sovereignty movements
Socio-political legitimacy	Landscape safeguard Fresh food delivery Public land management in times of budget constraints Youth employment Neighbourhood encouragement	Landscape and heritage safeguard Environmental-friendly production methods Youth employment
Local Administrations’ attitude	Erratic, but generally supportive	More supportive since last local and regional elections, but too soon to assess real impact

498 Source: Authors’ elaboration.

499 Conclusions

500 The outcomes of the parallel research activities and the subsequent reflections suggest some
 501 conclusive remarks as regards future opportunities and critical issues for the development of a rich
 502 and diverse PUA supported by clear and democratic procedures for land access.

503 The cases of Rome and Valencia provide different entry points to the common issues of land access,
504 as in the first case we deal with public land, whereas private land is at stake in the second. However,
505 the role of public bodies is crucial in both cases. Similarly, the activists' ability to promote and
506 discuss their visions and interests with local authorities is a key factor for the success of the land
507 access and PUA initiatives, yet still on a limited scale.

508 Indeed, political will or ability to support the agricultural use of land is crucial to overcome the
509 strong competition from non-agricultural uses, both when land is in public and private hands. The
510 low priority given in the past to land access and PUA by local administrators, fragmentation of
511 competences and interventions, dependence on changing political conditions and personal
512 commitments, and speculative private interests are among the main critical issues in this regard.
513 How to make more farmland available – and successfully cultivable - for new/aspiring farmers? If
514 in public hands, a public interest vision accompanied by full identification of the available
515 allotments and the design of tenders by clear and democratic procedures is recommended. If in
516 private hands, the administration could help overcome the reluctance of ownership in the
517 formalization of contracts and to mediate in disputes, and increase taxation on idle lands to penalize
518 their owners. Moreover, in both cases the needs and abilities of small/young players beyond land
519 access should trigger public supportive initiatives if an economically and socially sustainable UPA
520 is to be developed, e.g. training, access to credit, and facilitating direct selling.

521 However, focusing on land access transparency and democracy is not enough: as argued by Franco
522 et al (2015) democratic control of farming land (and land in general) cannot be politically separated
523 from the broader idea of an alternative (food) system. This is clear from the initiatives and the
524 vision of activists in both cases. Perspectives like food sovereignty, agroecology and sustainable
525 food chains are present as elements in a desired future, but also as mobilisation catalysts and
526 communication levers. As stated in the Roman *Vertenza*, small farms play a key role in
527 safeguarding the territory re-launching local markets, with the creation of short food supply chains
528 and the revaluation of local agro-biodiversity (Vertenza, p.2; CRAT, 2011). Democratic access to
529 land is key factor in these processes. In this respect, “*land access back in the policy agenda remains*
530 *a political success (...) for a movement looking for the social function of land to be guaranteed*”, as
531 emerged in an interview with one farmer activist (a young woman who did not take part in land
532 assignments, but confirmed the political importance of the movement). This means that the success
533 of these initiatives is linked to their ability to trigger processes of food system rebuilding at the local
534 (urban and peri-urban) level. These processes entail new configurations, or new assemblages, of
535 spaces, actors and resources, requiring critical bottom-up mobilisation on one side, but also
536 adequate governance and institutional support on the other.

537 Indeed, some areas for improvement in this regard can be identified on the political side. A need
538 arises to improve horizontal and vertical coordination at municipal and regional levels to achieve
539 common strategies for all issues related to urban agriculture, food policy, land planning, public
540 health and social welfare. In Rome and Valencia these fields are currently covered by different
541 governing bodies inefficiently communicating with each other. Developing metropolitan planning
542 and legal instruments is essential (especially important in Valencia where there are over 40 different
543 municipalities within the *Huerta* area).

544 Food and land-related activists aspire to becoming the necessary partners of local administrators
545 willing to promote a more sustainable and socially valuable use of peri-urban land in times of public
546 budget constraints. Conflicts certainly arose when strategic decisions, such as those related to the

547 use of a scarce resource like land, are at stake. However, these are stratified levels of conflicts, with
548 contrasts at a certain level but also re-composition at other levels. Even the building sector could
549 profit, for example, from the presence of better managed green spaces and by the availability of
550 social and ecological services offered by peri-urban farms, which could make peri-urban areas more
551 attractive to new dwellers.

552 The claim for responsible land tenure regulations and practices can be an element of a wider
553 transition towards more democratic and sustainable local food systems, as well as an ideological
554 glue for activists and other committed stakeholders. Shared endeavours, even from different
555 individual points of view, and collective engagement are key to overcoming the limits imposed by
556 the small scale of most of the actors in terms of lobbying capacity, ability to gain public attention
557 and, last but not least, ability to meet the increasing consumer demand.

558 The more successful these pioneer initiatives are, the more diffuse small and medium urban and
559 peri-urban farms will become, with the possibility of operating as outposts of activism scattered
560 throughout the peri-urban territory. If this happens, these farms could create a sort of "neural
561 network" (a metaphor suggested in the Roman scenario workshop) able to connect different
562 initiatives and promote new relations between urban dwellers and the peri-urban countryside. Upon
563 these new cross-boundary relations connecting market and society, communities and nature, food
564 and land issues, food systems could be, at least partially, rebuilt towards more differentiated and
565 sustainable configurations. In this respect, social movements around food and agriculture,
566 particularly when matched by a positive predisposition of the administration, can act as catalysers
567 for a more profound reordering of priorities, power relations, business opportunities and practices.

568 The comparative reading of the research findings in the areas of Rome and Valencia highlights the
569 importance of land access for the development of initiatives capable of triggering this
570 transformation of the food systems. Adequate rules and governance capable of identifying and
571 encouraging seeds of change and innovative practices can transform this potential bottleneck into a
572 lever of systemic transition and rebuilding.

573 Acknowledgments

574 This research is part of the project "Assessment of the impact of global drivers of change on
575 Europe's food security" (TRANSMANGO), granted by the EU under 7th Framework Programme;
576 theme KBBE.2013.2.5-01; Grant agreement no: 613532.

577 Conflict of Interest

578 The authors declare that they have no conflict of interest.

579 References

- 580 Allen, A. (2003). Environmental planning and management of the periurban interface: Perspectives
581 on an emerging field. *Environment and Urbanization*, 15(1), 135–148.
- 582 Badami, M. G., & Ramankutty, N. (2015). Urban agriculture and food security: A critique based on
583 an assessment of urban land constraints. *Global food security*, 4, 8-15.
- 584 Blay-Palmer, A., Santini, G., Dubbeling, M., Renting, H., Taguchi, M., & Giordano, T. (2018).
585 Validating the City Region Food System Approach: Enacting Inclusive, Transformational City
586 Region Food Systems, *Sustainability*, 10(5), 1680.

587 Borrás, S.M, jr., Seufert, P, Backes, S, Fyfe, D, Herre, R, Michele, L, & Mills, E. (2016). *Land*
588 *Grabbing and Human Rights: the Involvement of European Corporate and Financial Entities in*
589 *Land Grabbing outside the European Union*. European Union, Policy Department, Directorate-
590 General for External Policies. doi:10.2861/26

591 CRAT (2011). Vertenza per la salvaguardia dell'Agro Romano - Terre pubbliche ai giovani
592 agricoltori. <http://www.aiab.it/images/stories/UfficioStampa/vertenzagroromano.pdf>. Accessed
593 July 2017.

594 European Environmental Agency (1995). *Europe's Environment - The Dobris Assessment*.
595 Copenhagen.

596 Duke, J. & Aull-Hyde, R. (2002). Identifying public preferences for land preservation using the
597 analytic hierarchy process. *Ecological Economics*, 42, 131–145.

598 Eigenbrod, C., & Gruda, N. (2015). Urban vegetable for food security in cities. A review. *Agronomy*
599 *for Sustainable Development*, 35(2), 483-498.

600 FAO (2014). *Growing greener cities in Latin America and the Caribbean*. A FAO report on urban
601 and peri-urban agriculture in the region. Rome.

602 Forster, T. & Getz-Escudero A (2014). *City Regions as Landscapes for People, Food and Nature*.
603 EcoAgriculture Partners, on behalf of the Landscapes for People, Food and Nature Initiative.
604 Washington, DC

605 Franco, J., Monsalve, S. & Borrás, S. (2015). Democratic land control and human rights, *Current*
606 *Opinion in Environmental Sustainability*, 15, 66-71.

607 Galli, M., Lardon, S., Marraccini, E., & Bonari, E. (Eds.) (2010). *Agricultural management in peri-*
608 *urban areas*. FeliciEditore. Ghezzano, Italy.

609 Gallico, L. & Groppo, P. (2015). VGGT as a Tool for Improving Access to Land and the
610 Responsible Management of Natural Resources: Based on the Experience of Lazio Region and
611 Rome Municipality. FAO - Land and Water Division (NRL), Rome.

612 Gómez Ferri, J. (2005). Los movimientos ciudadanos de defensa y activación del patrimonio en
613 Valencia: los casos del barrio del Cabanyal y la ILP per l’Horta. In *Coordinadora de defensa del*
614 *Rincón-Ecologistas en Acción. Experiencias sociales innovadoras y participativas. El Rincón +*
615 *10*. (pp. 157-205).

616 Knowd, I., Mason, D., & Docking, A. (2006). Urban agriculture: the new frontier. *Changing City*
617 *Structures*, 23.

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

620 Munton, R. (2009) Rural land ownership in the United Kingdom: changing patterns and future
621 possibilities for land use. *Land Use Policy*, 26, S54-S61.

622 Opitz, I., Berges, R., Piorr, A., & Krikser, T. (2016). Contributing to food security in urban areas:
623 differences between urban agriculture and peri-urban agriculture in the Global
624 North. *Agriculture and Human Values*, 33(2), 341-358.

625 Paül, V. & McKenzie, F.H. (2013). Peri-urban farmland conservation and development of
626 alternative food networks: Insights from a case-study area in metropolitan Barcelona (Catalonia,
627 Spain). *Land Use Policy*, 30(1), 94-105.

628 Péron, J.Y., & Geoffriau. E. (2007). Characteristics and sustainable development of peri-urban
629 vegetable production in Europe. *Acta Horticulturae*, 762, 159–170.

630 Piorr, A., Ravetz, J. & Tosics I. (Eds.) (2011). *Peri-urbanisation in Europe: Towards European*
631 *policies to sustain urban–rural futures*. Copenhagen: University of Copenhagen, Forest and
632 Landscape.

- 633 RUAF (2017). European case studies on governance of territorial food systems - project GouTer.
634 [https://www.ruaf.org/sites/default/files/European%20case%20studies%20on%20governance%20](https://www.ruaf.org/sites/default/files/European%20case%20studies%20on%20governance%20of%20territorial%20food%20systems%20Gouter-RUAF%20final.pdf)
635 [of%20territorial%20food%20systems%20Gouter-RUAF%20final.pdf](https://www.ruaf.org/sites/default/files/European%20case%20studies%20on%20governance%20of%20territorial%20food%20systems%20Gouter-RUAF%20final.pdf)
- 636 Schmid, O., Moschitz, H., Dubbeling, M., Fritschi, R., Jahrl, I. & Wiskerke, H. (2015). Governance
637 for urban food systems – Recommendations from SUPURBFOOD project. [http://archive.harper-](http://archive.harper-adams.ac.uk/events/ifsa-conference/papers/5/5.6%20Schmid.pdf)
638 [adams.ac.uk/events/ifsa-conference/papers/5/5.6%20Schmid.pdf](http://archive.harper-adams.ac.uk/events/ifsa-conference/papers/5/5.6%20Schmid.pdf). Accessed July 2017.
- 639 Sonnino, R. (2009). Quality food, public procurement, and sustainable development: the school
640 meal revolution in Rome. *Environment and Planning A*, 41, 425–440.
- 641 Soriano, V. (2015). *La huerta de Valencia un paisaje menguante*. Amazon.
- 642 Soulard, C. T., Valette, E., Perrin, C., Abrantes, P. C., Anthopoulou, T., Benjaballah, O. et al.
643 (2017). Peri-urban agro-ecosystems in the Mediterranean: diversity, dynamics, and
644 drivers. *Regional Environmental Change*, 1-12.
- 645 Vervoort, J., Helfgott, A. & Lord, S. (2016) TRANSMANGO Deliverable 3.2: Scenarios
646 Methodology Framework and Training Guide.
- 647 Wästfelt, A. & Zhang, Q. (2016). Reclaiming localisation for revitalising agriculture: A case study
648 of peri-urban agricultural change in Gothenburg, Sweden. *Journal of Rural Studies*, 47, 172-185.
- 649 Wekerle, G. R. & Classens, M. (2015). Food production in the city: (re) negotiating land, food and
650 property. *Local Environment*, 20(10), 1175-1193.
- 651 Zasada, I. (2011). Multifunctional peri-urban agriculture—A review of societal demands and the
652 provision of goods and services by farming. *Land use policy*, 28(4), 639-648.
- 653