

 Open access • Journal Article • DOI:10.1007/S12571-018-0860-X

Exploring the contribution of alternative food networks to food security. A comparative analysis — [Source link](#)

Pedro Cerrada-Serra, Ana Moragues-Faus, Tjitske Anna Zwart, Barbora Adlerova ...+2 more authors

Institutions: Polytechnic University of Valencia, Cardiff University, Katholieke Universiteit Leuven

Published on: 01 Dec 2018 - Food Security (Springer Verlag)

Topics: Food security and Food systems

Related papers:

- [Assembling local, assembling food security](#)
- [Linking Food Democracy and Sustainability on the Ground: Learnings from the Study of Three Alternative Food Networks in Brussels](#)
- [Building Food Democracy: Exploring Civic Food Networks and Newly Emerging Forms of Food Citizenship](#)
- [Internationally-based indicators to measure Agri-food systems sustainability using food sovereignty as a conceptual framework](#)
- [Linking alternative food networks and urban food policy: a step forward in the transition towards a sustainable and equitable food system?](#)

Share this paper:    

View more about this paper here: <https://typeset.io/papers/exploring-the-contribution-of-alternative-food-networks-to-1sld5l4sg4>

Document downloaded from:

<http://hdl.handle.net/10251/122881>

This paper must be cited as:

Cerrada-Serra, P.; Moragues-Faus, A.; Zwart, T.A.; Adlerova, B.; Ortiz-Miranda, D.; Avermaete, T. (2018). Exploring the contribution of alternative food networks to food security. A comparative analysis. *Food Security*. 10(6):1371-1388.
<https://doi.org/10.1007/s12571-018-0860-x>



The final publication is available at

<https://doi.org/10.1007/s12571-018-0860-x>

Copyright Springer-Verlag

Additional Information

1 TRANSMANGO Rebuilding Food Systems Special Section.

2 ***Exploring the contribution of alternative food networks to food security. A***
3 ***comparative analysis¹***

4

5 Pedro Cerrada-Serra² (pedcerse@esp.upv.es)
6 Department of Economics and Social Sciences
7 Universitat Politècnica de València
8 Camino de Vera, s/n,
9 46022 Valencia (Spain)
10 Tlf. (+34) 963877000 Ext. 74722
11 <https://orcid.org/0000-0002-5469-4808>

12

13 Ana Moragues-Faus (MoraguesFausA1@cardiff.ac.uk)
14 Cardiff School of Geography and Planning
15 Sustainable Places Institute, Cardiff University
16 33 Park Place Cardiff
17 CF10 3BA Wales (UK)
18 <https://orcid.org/0000-0001-7926-6394>

19

20 Tjitske Anna Zwart
21 SFERE, Department of Earth and Environmental Sciences
22 KU Leuven
23 Celestijnenlaan 200E
24 3001 Leuven (Belgium)

25

26 Barbora Adlerova
27 Cardiff School of Geography and Planning
28 Sustainable Places Institute, Cardiff University
29 33 Park Place Cardiff
30 CF10 3BA Wales (UK)

31

32 Dionisio Ortiz-Miranda (dortiz@esp.upv.es)
33 Department of Economics and Social Sciences
34 Universitat Politècnica de València
35 Camino de Vera, s/n,
36 46022 Valencia (Spain)
37 <http://orcid.org/0000-0002-6884-8927>

38

39 Tessa Avermaete

¹ Cite as: Cerrada-Serra, P., Moragues-Faus, A., Zwart, T.A., Adlerova, B., Ortiz-Miranda, D., Avermaete, T. Food Security. (2018). <https://doi.org/10.1007/s12571-018-0860-x>

² Corresponding author

40 SFERE, Department of Earth and Environmental Sciences
41 KU Leuven
42 Celestijnenlaan 200E
43 3001 Leuven (Belgium)
44

45 1. Introduction

46 Food security has featured prominently in the political and academic agenda since the 2007-08
47 food and financial crisis. Food (in)security has become a challenge not only for developing
48 economies but also for High Income Countries as a consequence of rising levels of food
49 poverty, inequalities and state retrenchment from social security and welfare services provision
50 (Arcuri et al. 2016; Moragues-Faus and Marsden, 2017). In the case of Europe, Loopstra et al
51 (2016) found economic hardship - i.e., rising unemployment and falling wages - strongly
52 associated with greater food insecurity. Morgan and Sonnino (2010, 209) summarise these new
53 and highly complex trends under the concept of the *New Food Equation*, a “response to
54 burgeoning prices for basic foodstuffs and growing concerns about the security and
55 sustainability of the agri-food system”.

56 In parallel, food scholars have actively investigated drivers, initiatives and policies supporting
57 the development of alternatives to the dominant industrialised food system and its detrimental
58 environmental and socio-economic impacts (see compilations Goodman et al., 2012; Tregear,
59 2011). An important part of this work has been developed under the term Alternative Food
60 Networks (AFNs). Although AFNs resist a consensual definition, they are generally
61 characterised by: (1) short distances between producers and consumers; (2) small farm size and
62 scale and organic or holistic farming methods; (3) the existence of food purchasing avenues
63 such as food cooperatives, farmers markets and community supported agriculture; and (4) a
64 commitment to the social, economic and environmental dimensions of sustainable food
65 production, distribution and consumption (Jarosz, 2007). However, critical scholars have
66 warned about an idealization of AFNs, since in many cases they can mask potential
67 environmental impacts and reproduce social inequalities (Moragues-Faus & Marsden 2017), for
68 example by creating exclusive landscapes for highly educated and well-off consumers, or
69 concealing exploitative labour conditions (Goodman, 2004; Guthman, 2004; Moragues-Faus,
70 2017a). Since the 2008-2009 financial and food crisis, scholars have progressively moved from
71 a celebratory analysis of AFNs - in terms of their environmental, social and economic
72 contribution to sustainable development goals – to develop more critical accounts of these
73 initiatives (Moragues-Faus and Marsden, 2017). However, to date, few studies have directly
74 addressed the contribution of AFNs to food security in the Global North, that is, how these
75 alternatives contribute to delivering healthy, culturally appropriate food for all in discursive,
76 political and material terms (Goodman et al., 2013).

77 This paper aims to establish new linkages between food security debates and critical AFNs
78 literature. For this we rely on new food security conceptualizations by mobilising a place-based
79 approach to food security (Sonnino et al., 2016), which provides a useful starting point to assess
80 AFNs’ links with food security outcomes. The place-based approach to food security strives to
81 overcome the limitations of former conceptual frameworks which “tend to be locked into fixed
82 levels of scale and generalised as well as oppositional assumptions” (p. 477) by proposing a
83 more integrated and multidimensional approach. However, this novel approach remains in the
84 realm of the theoretical and therefore it is paramount to contrast its theoretical premises with
85 empirical data. For that purpose, we conduct a comparative place-based analysis of initiatives of
86 three different European contexts –Cardiff city-region (UK), the Flemish Region (Belgium) and
87 the peri-urban area of the city of Valencia (Spain) - to identify and characterise the ways in
88 which AFNs contribute to delivering food security.

89 The remainder of the paper is organised as follows. Section two describes the conceptual
90 framework, which establishes links between recent food security debates and the AFN

91 scholarship. Section three describes the methodological design. Section four introduces three
92 case studies. We then conduct a cross-country analysis of the three cases in order to identify
93 how different AFNs contribute or hinder food security outcomes. For that purpose, section four
94 is organised into the four major components of food security: availability, access, utilization and
95 stability. Section five links the main results of the analysis with novel food security frameworks,
96 highlighting three key aspects that emerge from the analysis of the cases: i) how AFNs weave a
97 more localised socio-economic fabric that creates new relationships between food security
98 outcomes and specific territories, ii) hybridization processes within alternative but also
99 conventional systems and iii) the role of advocacy and collective action at different levels. The
100 final section of the paper contains the concluding remarks.

101

102 2. Understanding the capacity of AFNs to deliver food security outcomes

103 The concept of food security has “evolved, developed, multiplied and diversified” (Maxwell,
104 1996, 155) since the first World Food Conference in 1974, where it was originally defined
105 solely in terms of food supply. Although for a long time food security was equated to the
106 availability of enough calories to feed an increasing population, today it is generally recognised
107 as a multidimensional phenomenon (Clay, 2002). The Food and Agricultural Organization of
108 the United Nations coined in 1996 the most widely used definition of the concept today, stating
109 that “*food security [is] a situation that exists when all people, at all times, have*
110 *physical, social and economic access to sufficient, safe and nutritious food that meets their*
111 *dietary needs and food preferences for an active and healthy life*” (FAO, 2001). This definition
112 was operationalised by identifying four major components that need to be fulfilled
113 simultaneously in order to deliver food security:

- 114 - Availability: the physical existence of sufficient quality food, determined by domestic
115 food production, domestic stocks, food imports, and/or food aid.
- 116 - Access: resulting from the combination of economic endowments, physical access and
117 socio-cultural resources that allow the purchase or acquisition of appropriate food
118 products for a nutritious diet.
- 119 - Food utilization: refers to how the body utilizes various nutrients in foodstuffs as well
120 as food preparation and hygiene practices, sound eating habits, a diverse diet and proper
121 intra-household distribution of food.
- 122 - Stability of the other three dimensions over time, stressing the temporal element of food
123 security.

124 More recently, experts warned that food security necessarily requires nutrition security, that is,
125 “access to an appropriately nutritious diet, coupled with a sanitary environment, adequate health
126 services and care to ensure a healthy and active life for all household members” (Radhika &
127 Hemantha, 2017, p.35). The fundamental connections between the two terms has resulted in the
128 use of food and nutrition security (FNS), as a concept that emphasizes both the food and health
129 requirements for populations (Weingärtner, 2005).

130 In academic spheres, the concept of food security has been further explored and also challenged.
131 Recent contributions have pointed out the use of food security as a consensus frame (Mooney
132 and Hunt, 2009). Indeed, within the food system, actors deploy the term food security to
133 highlight different challenges in the food system and, accordingly, propose divergent solutions.
134 For example, some stakeholders stress low food production as a main concern and therefore the
135 need to intensify agricultural practices while others point out power imbalances as the

136 generators of food insecurity, thus seeking food governance changes (see for example Brunori et
137 al., 2013; Kirwan and Maye, 2013; MacMillan and Dowler, 2012). In order to progress this
138 fractured food security debate, academics have suggested exploring potential bridging concepts
139 such as justice or governance (Moragues-Faus, 2017b). Of particular interest is the Sonnino et
140 al. (2016) proposal to develop a relational approach that brings together these different
141 narratives by focusing on place-based food dynamics. This place-based approach calls for
142 greater attention to three key parameters (Sonnino et al., 2016): (i) an understanding of the
143 diversity of food security conditions as constituted by the *flows* of knowledge, materials,
144 capitals and people that take place in and between food systems; (ii) a focus on *re-localization*
145 processes that contributes to unveiling how different food initiatives can create (by active
146 horizontal and vertical network and governance building) a transformative basis for wider
147 changes in food system, and (iii) a progressive sense of place that integrates *discourses, scales*
148 *and interdependencies* between geographies as key elements configuring specific food security
149 dynamics.

150 While this new place-based conceptualization remains overly theoretical, key food security
151 practitioners are also proposing shifts on current food security definitions. A key example is the
152 joint initiative launched by OECD, FAO and UNCDF (2016), to adopt a Territorial Approach to
153 Food Security and Nutrition Policy. The drive for this shift from a national to a territorial
154 perspective within these organizations emerges from the recognition that disparities in food
155 security are increasing, both among countries and within countries, and particularly
156 concentrated in low income inner-city neighbourhoods, large metropolitan regions, and remote
157 rural regions. FAO officers Cistulli et al., (2014) state that a territorial approach – defined as
158 public intervention “which builds on local capabilities and promotes innovative ideas through
159 the interaction of local and general knowledge and of endogenous and exogenous actors” (Barca
160 et al., 2012:149) – leads to a better understanding of the diversity, cross-sectoral and context-
161 dependent nature of food security challenges and therefore provides the grounds for more
162 efficient policies and interventions. Similarly, the Civil Society Mechanism of the Committee
163 on World Food Security is championing the concept of territorial food markets as a means to
164 recognise the spaces where small-scale producers trade and their potential to address food
165 insecurity (CSM, 2016).

166 Territorial and place-based approaches to food security build partially on the contribution of
167 alternative food networks (AFNs) studies to the development of more sustainable and just food
168 systems. Indeed, according to Marsden et al. (2000), Whatmore et al. (2003) and Moragues-
169 Faus (2017a), alternative food networks are an attempt to re-socialise or re-spatialize food by
170 establishing new and shorter relationships between producers and consumers based on trust, the
171 redistribution of value in the food chain, as well as the establishment of new forms of political
172 association. These AFN have been considered as a place of resistance to the placeless,
173 unsustainable, and unjust industrialised food system (Murdoch et al., 2000; Murdoch and Miele,
174 1999). AFNs have also been considered instrumental to provide fairer returns for producers,
175 develop high quality products, minimise environmental impact of food production through
176 organics and low chemical input agricultural practices, and embed territorially food production
177 and consumption by reconnecting actors with specific territories (Ilbery and Maye, 2005;
178 Moragues-Faus and Sonnino, 2012; Renting et al., 2003; Sage, 2003).

179 AFNs research has enjoyed a privileged position at the forefront of food studies in the last
180 decades, with an ever increasing number of case studies conducted across geographies (see
181 Tregear (2011) and Goodman et al., (2012) for recent reviews). However, much of the research
182 on AFNs has concentrated on the Global North and in many cases has provided a celebratory

183 analysis of these initiatives in terms of their environmental, social and economic contribution to
184 sustainable development goals (Moragues-Faus and Marsden, 2017). For example, some AFNs
185 studies have uncritically associated ‘local’ food to sustainable development outcomes (Brown
186 and Purcell, 2005). Similarly, an excessive focus on relocalization processes has obscured key
187 interdependencies at play in agri-food systems (Lamine, 2015). Critical scholars have argued
188 that together with the ‘local’, other attributes of AFNs such as fair trade schemes or
189 environmentally friendly certifications could in fact contribute to capitalist development,
190 exclusion of vulnerable farmers and low-income consumers, and labour exploitation (Goodman,
191 2004; Guthman, 2004; Ortiz-Miranda and Moragues-Faus, 2014). Furthermore, “in many cases
192 these ‘ethical’ and ‘sustainable’ initiatives not only conceal potential environmental impacts and
193 reproduce social inequalities, but may also be fostering an infertile consumer politics by
194 deepening individualist practices and reproducing neoliberal configurations that hinder social
195 change” (Moragues-Faus, 2017a, p. 456).

196 Despite the breadth of the AFN analyses, few studies have actually assessed their contribution
197 to food security in discursive, political and material terms (Goodman et al., 2013). A notable
198 exception is the work done by Dixon and Richards (2016), who conducted a macro analysis of
199 the Australian AFNs’ contribution to food security based on previous studies on these
200 alternatives. They conclude that, in a governance context oriented to deliver cheap food,
201 domestic food security (FS) will not be addressed through the spread of AFN due to their
202 relatively small scale and their socio-cultural dynamics (that include attracting the more wealthy
203 groups). While this meta-analysis focuses on the price affordability and production of
204 foodstuffs, we argue that a holistic analysis of the AFNs’ contribution to food security needs to
205 address simultaneously all four dimensions (availability, access, utilization and stability).
206 Furthermore, given the multiplicity and hybridity of these initiatives (Sonnino and Marsden,
207 2006; Venn et al., 2006), it is important to populate the debate on AFNs and food security with
208 new empirical case studies that can provide evidence to reshape exiting initiatives as well as
209 informed food security policies, from the local to the international level. In this paper, we
210 explore how three AFNs support or hinder the delivery of food security outcomes by analysing
211 their contribution to these four dimensions. This analysis allows to identify key elements in
212 which food security debates hinge and provide new insights to ground conceptual discussions
213 on territorial and place-based food security approaches.

214

215 3. Methodology

216 Research design was driven by the need to go deeper into a topic (the contribution of these AFN
217 to food security) that has not been tackled in previous studies. The methodology was therefore
218 based on a two-step data collection process. Firstly, we collected and analysed secondary data
219 from the three initiatives. These data were instrumental in understanding the nature of the
220 AFNs, their contexts and backgrounds. Secondly, fieldwork was carried out –between April
221 2015 and May 2016- combining three complementary approaches: semi-structured in-depth
222 interviews, participatory observation and participatory workshops. The methodological steps in
223 each case study are described below.

224 In the Cardiff case study, secondary sources comprised the available data on food cooperatives
225 operating in the area. Documents examined included: The Rural Regeneration Unit’s website,
226 RRU Programme Overview 2012 – 2015, and Interim Reports: Cox 2015, Jones 2012, Elliot,
227 Parry & Ashdown-Lambert 2004. The Flemish case study reviewed the existing literature on
228 *Voedselteams* (Bauler et al., 2011; Crivits & Paredis, 2013; van Gameren et al., 2015).

229 Additionally, Voedselteams provided secondary data related to the growth of the organization
230 since its foundation in 1996. Secondary data for the Valencia case study included Regional
231 Government policy (GV 2016); the Valencia City Council action plan for agriculture; internal
232 documents: *Plataforma per la Sobirania Alimentària del País Valencià*; Fem L'horta Possible
233 inventory of initiatives (in the last 5 years); a participatory action research on food buying
234 groups (Utópika & ISF 2013); and publications that contribute to understanding the socio-
235 economic dynamics of the study area, such as Romero & Francés (2012).

236 The research was grounded on primary data collected through several common techniques of
237 qualitative social research. Semi-structured in-depth interviews were conducted in all three case
238 studies. To select the interviewees, a mix of snowball sampling and expert sampling was used.
239 In Cardiff, interviews were conducted in eight cooperatives with the lead volunteer, other
240 volunteers and customers. Two area coordinators, the general project manager and one local
241 wholesaler supplying over 70 co-ops were also interviewed. In Flanders, 34 structured
242 interviews were conducted with team coordinators. An additional set of semi-structured
243 interviews were later conducted with eight key actors (coordinators, logistical planner, farmer
244 and external experts). In Valencia, 22 interviews were conducted with key actors including:
245 local producers, local and regional policy makers, consumers (such as local buying groups and
246 promoters of local food in school canteens), civil society organizations and local experts. A
247 focus group was also organised in Valencia with members of a buying group.

248 Participant observation was also used for data collection, including attendance at the
249 Voedselteams' general assembly to present and discuss the preliminary research results;
250 participation in Cardiff's Food Policy Council and associated activities; attendance at two local
251 farmers' markets and several local food products promotional street markets in Valencia and
252 participation in the working group promoted by the Valencia Council to set up a local Food
253 Council. Researchers have also been engaged as users in some of the analysed initiatives.

254 Finally, a two-session participatory scenario workshop (following Vervoort's guidelines, 2014)
255 was organised in the three case studies. The methodology combined backcasting and the
256 construction of scenario narratives. Between 15 and 25 people with different profiles (e.g.
257 members of the AFNs, researchers, policy makers, other stakeholders) attended the workshops.

258 The selected initiatives share their ambition to improve food security at the local or regional
259 level and they are all shaped by regional conditions. A comparison of the initiatives will help to
260 identifying the key indicators for the success of such small-scaled initiatives in contributing to
261 FS. Furthermore, the role of the various stakeholders - including consumers, bridging
262 organizations, policy makers, and producers – differs across the initiatives. A comparison shows
263 the added value of the involvement of these actors in the success of the initiative, identifies
264 common bottlenecks in the initiatives and formulates policy recommendations which could
265 enhance the contribution of the initiatives in terms of delivering food security.

266

267 4. Alternative food provision initiatives in three European cities

268 In this section we analyse different AFNs in three case studies: Cardiff in the United Kingdom,
269 the Flemish region of Belgium, and the peri-urban area of the city of Valencia in Spain. These
270 AFNs present differences in terms of their origin and the objectives pursued, the role of the
271 public sector, their degree of organization and the scope of their territorial action, as outlined
272 below.

273 Cardiff food cooperatives

274 The Cardiff case study revolves around community food cooperatives (co-ops from now on).
275 Despite the name, co-ops are not co-operatives per se, in a sense that they are not autonomous
276 enterprises democratically governed and owned by its members. Food co-ops actually operate as
277 buying groups, created at the initiative of the Welsh government with the goal of offering
278 healthy and affordable fresh produce to all –in particular more vulnerable groups-, while
279 fostering local businesses and increasing the resilience of local supply chains. The project was
280 established as a pilot programme in North and South-East Wales in 2004. Funded by the Welsh
281 Government, it has been run by the Rural Regeneration Unit (RRU), a social enterprise with
282 previous experience in running food co-ops in Cumbria, England. In the beginning, the project
283 targeted socially deprived areas included in the Community First programme,³ in order to fulfil
284 in part the governmental commitment to tackling inequalities in health (Elliot et al 2004) as a
285 report published earlier in 2004 revealed that only 41% of the Welsh population eat the
286 recommended 5 portions of fruit and veg a day (Bourne 2012). Focusing on enabling access to,
287 and encouraging consumption of, fresh produce, it also aimed at supporting local producers and
288 wholesalers both in rural and urban areas of Wales. During the years, the focus has widened
289 beyond socially deprived areas and until now, the RRU has helped to establish and support over
290 300 co-ops across Wales. At present the RRU does not establish new co-ops and instead works
291 with a main group of 140 co-ops with the aim of improving their sustainability (Moragues-Faus,
292 2016).

293 Currently, we can distinguish between two types of food co-ops, community food co-ops and
294 school food co-ops. They both run on the same basis, with two main differences: the food co-
295 ops in schools are innovatively run by the pupils themselves, with an adult as a lead volunteer.
296 They are also usually closed during school holidays, which affects the availability of fresh food
297 and related temporal sustainability of the initiative. The community food co-ops work by
298 linking volunteers in running the co-op, in most cases affiliated with an already existing
299 community initiative such as churches, community programmes or housing associations, to
300 local suppliers who may be either producers or wholesalers. Customers select their veg and fruit
301 bag from among several options and pay in advance for the order made, which is collected from
302 a stall open for a couple of hours on a designated day the following week. In 2012 food co-ops
303 also started to offer ‘Additional Welsh Produce’, linking consumers to local producers of milk,
304 eggs, meat or bread.

305 Food co-ops represent an alternative food network dedicated to deliver affordable healthy food
306 for low income families. Despite being promoted by a public programme, food co-ops have
307 progressively evolved and differ significantly from one another, with community groups taking
308 the lead in organising the meetings and procuring the food. Funding from Welsh government for
309 core support stopped in 2016 and therefore, just the more resilient co-ops - with dedicated
310 volunteers and embedded in community services and activities such as churches or social
311 services programmes – will continue their activities. Nevertheless, austerity measures have
312 resulted in cuts in social services programmes, weakening these supporting organizations and
313 therefore the social infrastructure that allows the co-ops to function. Overall, the provision of
314 affordable fresh fruit and vegetables constitutes an ongoing key challenge in the UK, where
315 there are increasing pockets of food poverty and health inequality (Oxfam and Church Action,
316 2013). However, the expansion of discounters such as Lidl puts additional pressure on

³ Communities First is a regeneration programme funded by the Welsh Government operated in the most deprived communities in Wales, according to the Welsh Multiple Deprivation Index.

317 community initiatives by offering convenient cheap food, as reported by co-ops losing members
318 in Cardiff.

319 Food teams in Flanders

320 Voedselteams (in English, food teams) were set up in 1996 in Leuven, by a group of individuals
321 working for three non-profit organizations (Zwart et al., 2016): an educational organization
322 (Elcker-Ick), an NGO focusing on food security (Wervel) and an NGO that was concerned with
323 sustainable agriculture in the Global South (Vredeseilanden). Voedselteams were inspired by
324 Japanese Seikatsu, which consist of consumer teams that organize food purchase and storage.
325 Voedselteams was thus started based on a perceived ideological need to change unsustainable
326 mainstream agro-food practices and the effects of globalization on agriculture (Hubeau et al.
327 2015). The initiative was not meant to oppose the mainstream system through lobbying or
328 protesting, but rather by making ‘sustainable’ alternatives available.

329 The first Voedselteams pilot plan ran for a year, during which consumers made contact with
330 local farmers and spaces to set up depots to deliver the produce to each team. The pilot turned
331 out to be a success. In the process of expansion, the Belgian food safety crises in 1999 and 2003
332 resulted in an increased participation. In 2015, the organization consisted of around 175 teams
333 and 2.900 members over five regions. A team is generally made up of between 12 and 30
334 households. Food purchase and delivery is jointly organized by the food teams. Although
335 Voedselteams share common values, each group has a specific way of functioning and tasks are
336 usually performed by volunteers. There is a general coordinator, a depot coordinator and a
337 financial coordinator in each food team. Members order food according to their particular needs
338 (Crivits & Paredis, 2013; Voedselteams, 2015).

339 The organization formalized in 2001 as a Not for Profit Organization (NPO). The NPO employs
340 five full-time staff. There is at least one regional coordinator in each of the five Flemish
341 provinces. Funding comes from public funds. Employees are mainly paid by subsidies received,
342 thanks to Voedselteams’ official status as a socio-cultural movement since 2005. This implies
343 that Voedselteams is now also deemed to reach a larger diversity of people and to increase
344 awareness of agricultural and short food supply chain (SFSC) issues. Over time, Voedselteams
345 has grown, matured and attracted an increasing amount of consumers. Besides the first pioneers,
346 the initiative now also includes consumers with more ‘conventional’ expectations. Some of the
347 more recent consumers are not willing to give up as much convenience and dedicate as much
348 time and energy to the practices as the first AFN pioneers. Instead, these newer consumers also
349 value efficiency, professionalism and convenience. Hence, there have been incremental changes
350 towards a re-incorporation of professionalization, specialization, efficiency and convenience.
351 The Flemish foodscape has recently strongly started to change, with many similar initiatives
352 emerging such as online platforms selling food baskets. Similarly, mainstream actors are also
353 responding to the increasing demand for SFSC offering more local, fresh and seasonal produce.

354 AFN and peri-urban agriculture in Valencia

355 The Valencia case study was made up of a diversity of AFNs that connect peri-urban farmers
356 producing mainly fruit and vegetables to urban consumers. They can be grouped as: (i) direct
357 selling of seasonal fruits and vegetable boxes by farmer to consumer –this is the main option of
358 newly initiated projects; (ii) Responsible Consumption Groups or buying groups, where long-
359 term arrangements are established between consumers and farmers providing fruit and veg
360 (sometimes also in the form of boxes); (iii) local online food platforms to fulfil a growing
361 demand for organic food – both certified or not, and not necessarily from local producers; (iv)
362 direct selling through municipal markets (17) in the city and seasonal farmers’ markets, both

363 organic and non-organic farmers participate in these events which often aim to raise public
364 awareness, and (v) specialised food shops and restaurants that have direct arrangements with
365 local producers.

366 Despite the diversity of initiatives and actors, there are three main aspects that link these AFNs
367 as a single case study. Firstly, most of these initiatives originate from new and old producers
368 who aim to maintain both traditional and agro-ecological farming practices in the Huerta of
369 Valencia⁴, including an active struggle to protect this high-value farmland (Dobris Assessment)
370 from threats and pressures such as urbanization. Secondly, most of these AFNs are closely
371 connected to each other, with producers and other actors simultaneously involved in several
372 initiatives. Thirdly, these AFNs participate in a broader socio-political movement to protect the
373 outstanding values (productive, environmental, scenic, and cultural) of the Huerta and its
374 transition towards an economically viable agro-ecological space. In this regard, they advocate
375 the promotion of institutional and political frameworks that enable the multiplication and
376 expansion of these AFNs (e.g. the development of a Participatory Guarantee System⁵, or the
377 incorporation of la Huerta produce in public procurement schemes).

378 Since there is no official census or inventory, a good indicator of the AFNs' evolution in the
379 city of Valencia and its metropolitan area is the calendar promoted by *Fem L'Horta Possible*, an
380 assembly of civil society organizations which annually lists and updates existing initiatives,
381 businesses and projects which support farming activities in the Huerta. The number of
382 initiatives listed in the calendar has increased from less than 10 in 2010 to more than 50 in 2017.

383 The peri-urban character of the Huerta shapes the development of these AFNs in multiple ways.
384 For example, in many cases access to land is difficult and results in most of these initiatives
385 relying on small and usually scattered rented plots. Furthermore, with a growing population of
386 over 1.5 million surrounding this agricultural space, the Huerta suffers constant pressure of
387 urbanization processes and development of transport infrastructures. Nevertheless, the high
388 population pressure also present opportunities to increase their consumer base. At the moment,
389 these local producer-consumer linkages are still rather weak, with most city dwellers accessing
390 their daily food without regard to this valuable and highly productive landscape despite its
391 vicinity. The precariousness and lack of support of most new initiatives makes them very
392 vulnerable and subject to the local and regional political setting. AFNs are experiencing a more
393 favourable moment since the political change after the 2015 elections that has placed the food
394 issue in the local and regional agenda for the first time, facilitating rebuilding links between
395 local producers in the Huerta and its surrounding area and urban consumers. For example, the
396 Municipality of Valencia is implementing a plan to protect and revitalise la Huerta by
397 addressing key challenges such as the generational turnover and the development of new forms
398 of proximity and direct selling pathways. Other related actions include the promotion of organic

⁴ In the 8th century the Moors created a complex network of irrigation ditches (Guinot 2008). Although the Huerta is an agricultural space with high cultural, landscape and environmental values, this landscape is now shrinking fast, and has been reduced to about 12,200 hectares, of which only 5,200 ha would correspond to horticulture surface (Soriano, 2015).

⁵ Participatory Guarantee Systems (PGS) represent an alternative to third party certification, especially adapted to local markets and short food supply chains. As defined by the International Federation of Organic Agriculture Movements (IFOAM - Organics International), "*PGS are locally focused quality assurance systems. They certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange*". <http://www.ifoam.bio/en/organic-policy-guarantee/participatory-guarantee-systems-pgs> (last accessed September 2017).

399 food in school canteens and campaign to raise consumer awareness on the positive impacts of
400 local food.

401 Table 1 below, summarises the main characteristics of the three case studies involving locally-
402 rooted food initiatives forging direct relationships between consumers and producers. While
403 their origins, goals and available resources are diverse, they share a commitment to building
404 sustainable, resilient, diverse and inclusive food systems and weaving more cooperative and
405 sustainable communities. In this paper we will analyse the mechanisms these initiatives deploy
406 to deliver food security and critically discuss their overall contribution to developing more
407 secure food systems.

408

Table 1. Summary of case studies

Aspect	Cardiff	Flanders	Valencia
Place-based contingency	<ul style="list-style-type: none"> • Low overall consumption of fruit and vegetables of British public • High prices of fruit and veg, but changing with arrival of discounters • Lack of local fruit and vegetable producers • Support for communities and community activities by governmental programmes diminishing • Need for affordable fruit and veg 	<ul style="list-style-type: none"> • High pressure on prices of raw foods • There is market opportunity, especially around cities, with people willing to pay more for local tasty food • Supermarkets increasing their supply of local, fresh and seasonal produce 	<ul style="list-style-type: none"> • Producers are embedded in a highly productive Huerta, whose viability and existence are compromised. Its defence is a binding element for the different actors involved in the AFN model • The peri-urban character of la Huerta shapes AFNs potential and limitations • The new political setting is now favourable for the development of AFN
Initiators	Policy and community driven	Consumer driven	Social movements and farmer driven
Primary purpose	Mainly food poverty alleviation and improve health and wellbeing. Also to contribute to local economic development and community cohesion	Accessing local and organic food from small-scale producers	Local food to maintain a viable farming activity and protect peri-urban agricultural heritage (agriculture as a political device, a transformative driving force)
Territorial scale	City-region	Regional	Peri-urban
Type of organization	Independent groups supported by a publicly funded social enterprise	Formalised network (Voedselteams)	Multiple small-scale initiatives with informal linkages
Public support	Coops are supported by a public social enterprise	Subsidies	Weak and recent policy attention
Social engagement	Volunteers	Volunteers	Activists

409

Source: Authors' elaboration.

410 5. RESULTS

411 Availability

412 The analysis of these three case studies shows that the main contribution of AFNs in terms of
413 food availability is the revitalization of local food production by linking consumers to local
414 farmers. Furthermore, these changes in the local food system can have a positive spill-over
415 effect, for example creating new economic activities alongside the food chain, and social
416 implications by increasing social construction and trust. A key aspect of these AFNs is the type
417 of foodstuffs that are made available, mainly fruit and vegetables, which constitute an essential
418 element of healthy diets and therefore contribute to nutritional security aspects.

419 While AFNs literature emphasises the quality aspects of food produce around organic, local,
420 territorially embedded and seasonal attributes (Moragues-Faus and Sonnino, 2012; Renting et
421 al., 2003), our case studies develop hybrid food chains to deal with demand requirements. This
422 is particularly the case around the seasonality and origin of products. For example, in the case of
423 Voedselteams, local production cannot provide a sufficient supply during the winter, but
424 consumers also demand foodstuffs from other countries. In this particular case, Voedselteams
425 members solved these tensions by agreeing that globally traded products (e.g. pineapples,
426 chocolate or coffee) could be offered provided that they were organic and fairly traded. While
427 local agri-environmental conditions allow producers in Valencia's peri-urban Huerta up to three
428 vegetables crops per year, some non-local products are sold in farmers' markets to increase
429 diversity of the offer. Food co-op users, on the other hand, seek to provide cheap fruit and
430 vegetables to cater for low income families and therefore their interest in the origin of foodstuffs
431 is relatively low. Food co-ops rely on a mixture of Welsh, British and international producers.
432 In this case, this diversity in the origin of produce also responds to the lack of fruit and
433 vegetable producers in the city-region (and Wales as a whole) and to reduced product
434 availability during the 'hungry gap' period in spring due to weather conditions.

435 In the case of Valencia and Flanders, these AFNs are promoting particular agricultural practices.
436 Specifically, the agro-ecologic/ organic producers involve the use of polyculture techniques and
437 aim to maintain or even recover traditional varieties. Some of the foodstuffs that these producers
438 sell cannot be found within mainstream channels, remaining in many cases unknown to new
439 generations of consumers (e.g. some tomatoes varieties in the Valencia region). The
440 preservation and use of traditional varieties provides additional resilience⁶ to food production
441 activities, since they are adapted to their local environment and foster biodiversity. With 75% of
442 the genetic diversity of agricultural crops lost in the 20th century (FAO, 1998) the role of these
443 AFNs in preserving and providing open-access to seeds constitutes a key contribution to
444 building resilience and delivering food security in the long term. In many cases, these varieties
445 also have an outstanding gastronomic value for their organoleptic quality. However, having a
446 diversified production poses a challenge for producers and processors, who need to find the
447 balance between offering an attractive wide range of different products and the higher
448 production costs it entails. An additional challenge is to introduce new products to consumers
449 who usually feel more comfortable buying only foodstuffs that they recognize and know how to
450 cook. Furthermore, these high-quality products are usually more expensive.

⁶ Resilience is the "ability of a system and its component parts to anticipate, absorb, accommodate or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration or improvement of its essential basic structures and functions" (IPCC, 2012) https://www.ipcc.ch/pdf/special-reports/srex/SREX-Annex_Glossary.pdf

451 These AFNs offer raw vegetables and fruits but also transformed products. In Valencia, peri-
452 urban small-scale processors are transforming local raw produce into jams, vegetable preserves
453 and non-dairy drinks. For its part, the offer of processed food through Voedselteams includes
454 dairy and fruit and veg (e.g. soups, quiches and sauces) from local but also globally-sourced
455 ingredients. In 2012 food co-ops also started to offer “Additional Welsh Produce” linking
456 consumers to local producers of milk, eggs, meat or bread.

457 Access

458 In order to understand how these initiatives provide access to healthy food we need to consider
459 economic barriers, socio-cultural resources and physical access. First, the economic dimension
460 of accessibility mainly revolves around prices. High prices have been identified as the main
461 barrier for not buying organic food (Padel and Foster, 2005) and therefore excluding a
462 significant sector of the population from participating in many AFNs. While some “organic”
463 and specialized stores or supermarkets target those with high purchasing power, there is an
464 increasing number of AFNs working to provide quality foodstuffs at affordable prices.

465 Food co-ops especially improve this economic access dimension of food security by providing
466 affordable fresh fruit and vegetables for less-favoured communities. On the other hand,
467 Voedselteams members are willing to pay higher prices than in conventional channels to gain
468 access to healthy local food. Higher prices, inherent in the fact that Voedselteams rely on
469 organic products, prevent those with lower budgets from entering the food teams, resulting in
470 Voedselteams failing to include lower income households up to now.

471 Similarly, in the case of Valencia, conventional market channels usually offer cheaper produce
472 than agro-ecological peri-urban initiatives⁷. However, specific foodstuffs sometimes are cheaper
473 and there are often big price differences between conventional supermarkets. In the Valencia
474 case, the change from official organic certification to a participatory guarantee system is
475 contributing to lower prices, together with direct selling mechanisms.

476 Second, socio-cultural resources also play an important role in providing access to healthy food.
477 In the case of food co-ops, they integrate the preference and needs of different ethnic groups, as
478 long as the produce has an affordable price. However, ethnic minorities, especially immigrant
479 groups, seldom participate in Voedselteams. Conscious efforts are required by these initiatives
480 to expand the current offer to include diverse styles of eating patterns, not least by changing
481 traditional local produce to include new crops demanded by different cultural backgrounds.

482 Finally, the physical dimension of accessibility is addressed differently by the three initiatives.
483 For example, in rural areas where shopping options are more limited the infrastructure created
484 by food co-ops is particularly important. As a new sourcing outlet, it potentially gives the
485 community a choice of the food they eat. In the case of Flemish Voedselteams and AFNs in
486 Valencia, consumers are granted access to certain foodstuffs which are seldom available in
487 mainstream channels, increasing the diversity of their food options. Nevertheless, buying
488 through food co-ops, Voedselteams or food baskets and responsible consumer groups’
489 initiatives such as the ones in Valencia generally requires investing more time and planning to
490 participate in these AFNs. For example, participants wait days between placing the order and
491 receiving delivery. Moreover, the collection of the produce usually happens at a designated day,
492 time and place which may represent a constraint for those consumers with tighter agendas.

⁷ A rough non-exhaustive price comparison was made for a common list of fresh vegetables. Web sites of large distribution groups operating in Valencia were examined and prices were compared with those on the web sites of local producers and with those in the recommended price list of a farmers’ market.

493 The analysis of the three cases reveals that some of the main challenges faced by AFNs
494 regarding accessibility is related to logistics. The AFNs analysed show problems of inefficiency
495 and high logistic costs, mainly due to managing relatively small volumes and dispersed
496 distribution. Farmers' strategies to cope with these distribution challenges are diverse. Some
497 producers set up their individual infrastructure, which involves some difficulties, mainly
498 investing time that could be dedicated to farming activities, and the need for a refrigerated van.
499 Others have addressed the problem through collaboration, grouping their respective orders and
500 placing them in the same delivery route. Another alternative includes outsourced transportation
501 to an external firm. This is the case of Voedselteams, where a transport company manages all
502 the orders in the region, collects them from the farmers, and delivers the produce to each team.
503 Ensuring suitable food collection points constitutes another challenge. For example, food depots
504 generally require complying with food safety regulations which result in expensive rents or
505 administrative processes (see below). In many cases such as the case of buying groups, AFNs
506 operate in an *alegal* form, constituting a category of activity that has not yet been regulated, and
507 therefore have a high degree of flexibility (Moragues-Faus, 2017a).

508 Utilization

509 The AFNs studied shape the utilization dimension of food security by affecting consumers'
510 eating habits and the diversity of their diets. Of particular interest are Cardiff's food co-ops
511 which emphasize the importance of changing food habits and provide affordable and healthful
512 foodstuffs. Nonetheless, the three cases analysed provide a specific selection of foodstuffs,
513 mainly fresh fruit and vegetables, which shape participants habits and provide a more nutritional
514 diet. In the cases of Valencia and Cardiff, veg boxes and buying groups establish a predefined
515 and pre-selected offer of products (local and seasonal) and its quantity. This has several
516 implications regarding food utilization.

517 Consumers' inability to modulate the amount or type of products they wish to receive is linked
518 to food waste in different ways. Some consumers interviewed consider this an opportunity to try
519 new products and recipes; indeed, the limited and seasonal range of available products is argued
520 to be an advantage as it, for example, encourages innovation and creativity in cooking practices
521 (Crivits & Paredis, 2013). For others, standard veg boxes create several disadvantages; on the
522 one hand, consumers may need to keep buying the same products through other channels to
523 adapt the quantity to their household needs. On the other hand, there is also a need to adapt
524 some everyday practices: vegetables need to be prepared, cleaned and eventually precooked to
525 preserve them.

526 Indeed, different types of knowledge play a key part in assuring that the utilization dimension of
527 food security is fulfilled. Our research shows the close relationship between using food
528 efficiently -i.e. reducing food waste- and the knowledge of participants on different produce and
529 cooking options (e.g. brining, canning, and use of non-eatable parts of the vegetables, i.e. to
530 prepare seasonings). AFNs studied work as a site for learning but at the same time certain types
531 of knowledge are required to participate. For example, consumers are sometimes faced with
532 unfamiliar products which pose challenges in terms of taste and preparation. This challenge is
533 also an opportunity to learn about local and seasonal produce and create stronger links between
534 participants. Interviewees from the three initiatives highlighted different forms of knowledge
535 sharing, for example, by providing recipes in the food basket, giving cookery classes or having
536 direct contact with the producer in the farmers' market. Dissemination and expansion of food
537 knowledge can also occur through other means and spaces. As was noted in Welsh food co-ops,
538 they have progressively invested fewer resources in raising awareness of cooking and healthy

539 eating since there is an increasing amount of food-related information in the UK media.
540 Furthermore, stakeholders such as the public sector and civil society organizations are running
541 campaigns.

542 Food safety constitutes another key aspect of food security that requires consideration and that
543 poses several challenges to the AFNs studied. While aiming to ensure safe diets and an adequate
544 utilization of food, the current European hygiene assurance standards also act as a major
545 constraint to some small producers and processors. Indeed, in some countries, AFNs have the
546 same legal requirements as bigger food enterprises and consequently bear high costs for small
547 operations. The European hygiene regulations allow certain flexibility in their application to
548 small-scale structures and short food supply networks. However, countries interpret the
549 European regulations differently. For instance, a frequent complaint of AFNs in Valencia
550 revolves around the lack of adaptation of the hygiene regulations to small-scale initiatives. In
551 the same line, food safety is an issue for Voedselteams' food depots. If these teams were forced
552 to register at the official food safety body, operational costs both for food teams and supplying
553 farmers would increase and the latter would also be required to comply with stricter rules and
554 regulations that might threaten their existence.

555 Stability

556 The temporal element of food security, that is, the delivery of the other three dimensions over
557 time presents specific challenges for AFNs.

558 First, some of the initiatives studied depend on voluntary work. Volunteers are vital to the
559 functioning of food co-ops and Voedselteams. While this can be considered a positive aspect
560 that allows to reduce operating costs, there is an inherent risk related to volunteers' burnout or
561 drop-out that raises important questions around the viability of these initiatives. For example,
562 data collected from Voedselteams shows that voluntary engagement is a major problem. Some
563 interviewees argued for a different system including compensations -free goods or services- to
564 volunteers in exchange for their work. However, as previously recognised in the food movement
565 around the value of non-waged labour (Ekers et al., 2015), reliance on voluntary work can also
566 contribute to community strengthening and social movement building which can conversely
567 have a positive impact on building resilience.

568 The comparative analysis of the three cases also revealed how over-reliance on public subsidies
569 and on other organizations can compromise the financial sustainability of AFNs and their food
570 security outcomes. In this sense, the food co-ops and Voedselteams, the two more "formalised"
571 cases, are more dependent and potentially vulnerable. For example, at the moment the
572 Voedselteams model is financially unsustainable without external support. The initiative
573 receives subsidies due to its status as a socio-cultural organization. In the case of food co-ops,
574 they rely on one hand on the support of the RRU which is publicly funded by Welsh
575 government; and on the other hand, they benefit from other organizations' resources such as
576 free venues and lower running costs. The co-ops dynamics show that their success and
577 sustainability are largely dependent on their embeddedness in other local initiatives and the
578 extent to which they are networked. In contrast, the Valencian AFNs initiatives depend entirely
579 on their own capacity to remain economically sustainable which, among other factors, has
580 resulted in a relatively high rate of appearance and disappearance of initiatives. These AFNs
581 seem to be more vulnerable to changes in consumer habits and therefore, stable customers'
582 engagement is a critical element. According to the interviewees, it is equally important for the
583 sustainability of these networks to improve the effectiveness of their operations such as increase
584 in size and work in grouped farms. A local expert forecasts a horizon of farm expansion coupled

585 with “casualties along the way” for the organic/agro-ecological agriculture within the area.
586 Farmers’ mutual assistance groups play a relevant role in increasing their sustainability. In this
587 line, efforts to strengthen collective action among agro-ecological farmers in Valencia initially
588 gave rise to the *Ecollaures*⁸ association, which quickly evolved towards *SPGEcollaures*,
589 founded in 2012 as the first Participatory Guarantee System operating in the Region. Similarly,
590 since 2014 Voedselteams co-organize the annual Farmers’ Forum (*Boerenforum*),⁹ a space that
591 helps to build resilience among farmers by increasing trust, knowledge-sharing and social
592 cohesion. Since 2015, Voedselteams have also put in place a PGS for all regions. This
593 participatory certification system constitutes a mechanism to assess producers’ practices,
594 promote and refine sustainability measures and select new entrant producers.

595 Finally, the interviewees highlighted the motivations of AFN participants as a key aspect of
596 their stability. For example, participants in Valencia’s buying groups show a commitment to
597 promote social change through the act of buying food. A Participatory Action Research 2012-
598 2013 study (Utópika & ISF, internal report) concluded that buying groups in the city of
599 Valencia had a common socio-political project that coalesced around the struggle for food
600 sovereignty (see Moragues-Faus, 2017a). This broader political project also included specific
601 criteria to select products and producers, such as organic, local and seasonal. Other criteria not
602 necessarily shared by all groups include: agro-ecological products; foodstuffs from small-scale
603 producers; direct contact with the producer; fair prices for both farmers and consumers; being a
604 cooperative organization with fair working conditions; from producers involved in projects such
605 as the defence of the Huerta or protection of heritage varieties. These supporting practices are
606 also observed in Voedselteams. Although the most important aim of joining a food team is to
607 gain access to healthy and local food, the importance of social aspects was also emphasized
608 during the interviews. Reasons often mentioned to enter a food team were the setting up of
609 direct ties between consumers and producers and the creation of social cohesion; the support of
610 local farmers; the increase of transparency along the food chain; and the improved access to
611 healthy, local and fair food¹⁰. In the case of Cardiff food co-ops, over and above their function
612 of providing affordable, fresh, and local produce, supporting the local community was also
613 mentioned as an important motivation for getting involved.

614 Table 2 summarises the main characteristics of the contribution of the AFN to FS in the three
615 case studies.

616

⁸ Small-scale farmers’ networks in the Huerta area originally were created to give mutual support to their members and coordinate common objectives, such as the defence of agricultural territory, the promotion of agro-ecological farming and local consumption, and fostering producer-consumer relations based on social justice. In 2012 it became *SPGEcollaures*, a Participatory Guarantee System, whose main purpose is social transformation.

⁹ The *Boerenforum* has been organized annually since 2014 by Voedselteams together with Wervel, a Belgian organization that focuses on the right to healthy and fair agriculture and food. The forum provides a voice to those alternative farmers who are not members of any of the mainstream farmers’ unions.

¹⁰ There are however, substantial differences between teams and regions in the importance placed to each of these aspects. In East-Flanders, for example, Voedselteams members are quite strict about their values compared to the other regions. The stronger engagement in this region is explained by a significant development of SFSC and sustainability initiatives which provided Voedselteams with a network to build on.

Table 2. Summary of the contribution of the analysed AFN on the FS dimensions

	<i>Availability</i>	<i>Access</i>	<i>Utilization</i>	<i>Stability</i>
Cardiff	<ul style="list-style-type: none"> Engages partially with local growers and enterprises key in the supply chain Local is not highly regarded Need to open the food source from other regions and countries to counterbalance scarce number of local producers and climate conditions Raw fruit and veg plus regional produces: eggs, meat or bread 	<ul style="list-style-type: none"> Affordable fresh fruit and veg for less favoured communities Integrate the preferences and needs of different ethnic groups Provide healthy food within the community and linked to community activities as spaces Important in rural areas where shopping options are limited 	<ul style="list-style-type: none"> Preselected offer of products requires cooking skills and product knowledge and to adapt some everyday practices Set bags, potential to generate more food waste. In order to avoid this, food co-ops started cookery classes and recipes to avoid waste 	<ul style="list-style-type: none"> Reliance on public subsidies and other organizations' resources and dependence on volunteers Not for profit venture. Dependence on offering low price food to maintain number of participants Importance of the social aspect (building communities and social networks)
Leuven	<ul style="list-style-type: none"> Focus on local organic vegetables, though also offers dairy, meat and fish and processed foods Since local production is insufficient to provide sufficient supply during winter and consumers demand other products, food is also sourced from other latitudes 	<ul style="list-style-type: none"> Prices of products (organic) are higher than in conventional channels Ethnic minorities seldom participate due to higher prices and not integrating their eating patterns Professionalization of online order system and of the delivery system, though there is room for much improvement 	<ul style="list-style-type: none"> Hygiene assurance normative for producers and local depots is under pressure of food safety control Cooking skills are needed. Preparing unprocessed food might lead to healthier food patterns Waste reduction schedule for summer / holiday periods 	<ul style="list-style-type: none"> It is not financially sustainable. It depends on government subsidies and relies on voluntary work Competition with growing organic supermarkets and online food shops
Valencia	<ul style="list-style-type: none"> Agronomic conditions allow up to 3 annual harvests of fruit and veg Recent rapid spread of this type of initiative Need to find the balance between a wide-range attractive offer and production costs Some processed products are available and non-local products can be incorporated to increase the offer 	<ul style="list-style-type: none"> Prices are usually higher than in conventional channels AFN provide access mechanisms to fresh local, organic and seasonal food Consumers are granted access to some foodstuffs not easily accessible through conventional retailers 	<ul style="list-style-type: none"> New food access pathways may affect everyday practices Preselected offer of products requires cooking skills and product-knowledge Health/hygiene assurance standards are a problem for small scale processors 	<ul style="list-style-type: none"> Sustainability is compromised by disappearance of producers, who endure several constraints for their development and viability Importance of building social capital Adoption of regulatory changes at several scales and in several domains need to be considered

620 6. Discussion

621 The initiatives analysed are strongly rooted in the set of ecological, socio-economic, cultural
622 and political dynamics linked to their particular place. This is a common aspect shared amongst
623 a variety of local food projects, that is, the territorial embeddedness of these initiatives shapes
624 their characteristics and in turn these projects contribute to distinct place-making processes
625 (Moragues-Faus and Sonnino, 2012). This highlights the importance of taking a territorial and
626 place-based approach in understanding the contribution of specific initiatives to food security at
627 different levels. Despite the local specificities, the cross-national comparison has provided us
628 with addition insights regarding the potential contribution of AFNs to food security outcomes.

629 Firstly, the three case studies represent local food initiatives that promote new ways of
630 producing consuming and distributing food, building closer relationships between producers,
631 consumers and other food actors in the vicinity, and therefore creating local food networks.
632 While each of these initiatives have specific goals and different organization models, they all
633 contribute in different ways to weaving a more localised socio-economic fabric aimed at
634 establishing new **relationships between food security outcomes and specific territories**. Food
635 is mobilised as a means of reconnecting people and stimulating new forms of social cohesion
636 and business models. These AFNs display characteristics of the territorial approach to food
637 security championed by the OECD/FAO/UNCDF (2016), who recognise the need for a
638 paradigm shift in addressing food security policies. The inclusion of the regional and context-
639 specific nature of food security is considered critical to deliver appropriate long-term responses
640 to food insecurity challenges.

641 The three case studies build on their territorial constraints and advantages differently. For
642 example, Welsh community food co-ops aim to deliver healthy and affordable fresh produce for
643 all, relying on a mixture of Welsh, British and international products handled by local suppliers.
644 Although customers and volunteers generally show little interest in local food, the project helps
645 to build more resilient food chains in the region by a top-down emphasis on engaging local
646 suppliers, both wholesalers and actual producers. Whereas co-ops in South Wales are supplied
647 by wholesalers because of the lack of suitable producers nearby, co-ops in North and West
648 Wales are mostly supplied by growers, who can also be wholesalers, growing veg and buying-in
649 fruit (and veg out of season). This territorial differentiation shows how the same initiative (food
650 co-ops) supported equally by governmental programmes can evolve into different networks of
651 actors and activities - as well as related food security impacts - due to different territorial
652 characteristics.

653 Flemish Voedselteams aim to support locally-based organic producers and processors through
654 fairer prices in exchange for healthy local food. For some of these suppliers, Voedselteams
655 means taking the first step in SFSC initiatives, allowing them to establish direct contact with
656 consumers and to gain control over prices. Although the weight of farmers' sales to
657 Voedselteams is very diverse (ranging from 5% to more than 50%), an increasing number of
658 farmers seek to participate in this new selling channel. This increased interest responds to
659 smaller farms struggle to compete with larger farmers, which offer lower prices and
660 consequently, many farmers seek for new and innovative marketing outlets to avoid squeezing
661 further their incomes. For many producers, Voedselteams is an opportunity to create added
662 value for their products. However, the stagnation of demand in some locations and its seasonal
663 fluctuations prevent some farmers from abandoning conventional chains.

664 With regards to the AFNs in Valencia, the proliferation of food-related initiatives in the city
665 shows both a social revaluation of peri-urban agriculture and the emergence of new food-related

666 business opportunities. New organic/agro-ecological farmers are trying to reconnect with urban
667 consumers and forge closer production-consumption relations, while some older farmers are
668 also adopting organic farming and starting to explore SFSC. The implementation of new
669 programmes to protect and promote agricultural production in the area has also fostered a new
670 regulatory landscape that among others supports long-term farmers' investments and reduces
671 challenges posed by urbanization processes. These changes to the policy and governance
672 dimensions of places show the interdependencies between territorial characteristics and the
673 delivery of food security outcomes.

674 The second element that emerges from the analysis is the **hybridization of these initiatives**, as
675 AFNs aim to scale-up, increasing their capacity to deliver food security. Growth and viability
676 requirements sometimes involve using methods associated with conventional channels. These
677 hybridization processes relate to Ilbery and Maye's (2005, p. 828) findings, who identify a
678 "considerable blurring of the boundary between conventional and alternative systems" and
679 describe how strong economic imperatives drive " 'alternative' producers to regularly 'dip in
680 and out' of different conventional nodes" (ibid, p.840). This "conventionalization" can be
681 observed in Valencia and Flanders and translates into several practices. For instance, in order to
682 become more attractive to consumers, both Voedselteams and Valencia's peri-urban producers
683 incorporate non-local and out of season produce in their offer. In the same line, to enhance
684 market possibilities, many agro-ecological producers participating in the local PGS also
685 embrace official third-party organic certification, despite clashing with their values. Some
686 initiatives in Valencia also reported a reduction of the range of products offered and a trend
687 towards specialization to increase their competitiveness. While a very diverse offer could be
688 expected to attract growing number of consumers, the fact is that most consumers do not feel
689 comfortable buying products that they cannot recognize and do not know how to cook.
690 Voedselteams, on the contrary, has broadened their supply over the years in response to
691 consumers' requests. Fish, meat and a variety of dairy products were added to their supply.

692 Another common hybridization example is the reliance on transport agencies to distribute
693 foodstuffs. This is particularly important for Voedselteams, where they regularly outsource the
694 transport of produce. Moreover, as the projects grow and the produced volume increases, these
695 initiatives expand their markets beyond the local area, which implies higher selling prices. Some
696 interviewed participants argue for the need to reach bigger and specialized markets -such as
697 school canteens- to bring economic stability to existing initiatives and to scale the phenomenon
698 upwards and outwards, for which additional infrastructure such as a purchasing centre and a
699 distribution platform would be required. For the farmers this might entail losing direct contact
700 with the consumer and accepting an external crop production schedule.

701 The case studies also revealed a process of "alterization" of the conventional food supply chain
702 within their territories. Supermarkets seek to take advantage of new consumer demands met by
703 AFNs and therefore integrate some of these characteristics – local, organic, etc. - within their
704 market repertoires. The boundaries between alterization and conventionalization are
705 increasingly blurred. Indeed, from a place-based perspective the three case studies show how
706 AFNs are conditioned but also modify their context, by reinforcing the creation of new
707 consumer demands which are progressively met by different actors. These processes of
708 hybridization developing in multiple directions are highly contextual and therefore benefit from
709 adopting place-based perspectives that contest dichotomic classifications of
710 alternative/conventional (see also Sage 2003 and Renting et al., 2012) Similarly to Gibson-
711 Graham's (2006) diverse economies approach, this place-based perspective opens the possibility

712 to account for transformations towards food security and sustainability that might be invisible
713 under more classic political economy approaches.

714 Finally, the third key element arising from the analysis revolves around **the advocacy capacity**
715 of these AFNs, which could encourage a multi-level governance approach that contributes to the
716 implementation of food security strategies and policies and promotes a bottom-up approach for
717 scaling AFNs upwards and outwards. This activist dimension is more central to Valencia's
718 AFNs and to some extent is also present in Voedselteams. Both seek to transform the current
719 food system by pushing to change policies and consumers' behaviour.

720 Agroecology and food sovereignty are the key political discourses underpinning many of the
721 new farmers' initiatives in Valencia to change food relationships. The socio-political
722 movements in which many of these initiatives are embedded are integrated into the regional
723 food sovereignty platform, *Plataforma Per la Soberania Alimentaria del País Valencià*, which
724 increases the connectivity between initiatives operating at different scales and gives greater
725 visibility and advocacy capacity to its members. The movement is undergoing a new
726 momentum with the new local and regional administrations, which are implementing new
727 measures under the signature of the Milan Urban Food Policy Pact,¹¹ such as the creation of a
728 food council that gathers key actors in the city to guide local food policies.

729 Voedselteams combine both profit and non-profit making activities and has an overall objective
730 of contributing to societal benefits. Dedeurwaerdere et al. (2015) argue that Voedselteams have
731 an "ideological" dimension, aiming to also become a social movement transcending the local
732 scale where they operate. Instead, it functions on a regional or national scale, where it strives to
733 promote a transition towards sustainable agro-food systems. In this way, Voedselteams might
734 contribute to wider changes in the food system through combined action at different levels, e.g.,
735 by offering non-profit services and representing an alternative to mainstream marketing
736 channels or by seeking synergies with other similar initiatives. Moreover, through advocacy
737 actions (e.g. Voedselteams inspired the strategic plan on SFSC of the Flemish Government)
738 they can also have an impact beyond their immediate context. However, the interviewees
739 described political alliances and collaborations as few and difficult. In addition, the members'
740 engagement in advocacy action was regarded as weak. Furthermore, Voedselteams' dependence
741 on government subsidies may compromise its real capacity to challenge the regime, although
742 the interviewees acknowledged the potential for a stronger engagement within the organization
743 and identified two main avenues for this purpose: (1) expanding the Farmers' Forum beyond a
744 farmers' network to increase small-scale farmers' bargaining power and (2) increasing
745 collaboration with other similar regional organizations, which could strengthen the influence of
746 these organizations in political spaces and the public debate.

747 Finally, the users of Welsh food co-ops display a lower degree of political engagement,
748 however, the RRU, co-op facilitators and organizations supporting their activities (such as
749 communities' first centres) have been active in different policy forums such as the Cardiff Food
750 Policy Council or the Wales Food Poverty Alliance. These spaces of deliberation actively
751 promote exchanges of good practice and seek policy reform. However, they do not subscribe to

¹¹ The Milan Pact is an international protocol concerning food at municipal level. Signatory cities undertake to "work to develop sustainable food systems that are inclusive, resilient, safe and diverse, that provide healthy and affordable food to all people in a human rights-based framework, that minimise waste and conserve biodiversity while adapting to and mitigating impacts of climate change" <https://www.milanurbanfoodpolicypact.org/text/> (last accessed January 2018).

752 a specific social movement such as the Valencia participants in their struggle for food
753 sovereignty.

754

755 7. Conclusions

756 This paper analyses three European case studies in order to understand how different AFNs
757 contribute to deliver food security outcomes. This analysis has allowed us to identify key
758 elements where food security debates hinge and provide new insights to ground conceptual
759 discussions on territorial and place-based food security approaches. We summarize our
760 contribution to these debates following the three key elements championed by place-based
761 approaches (Sonnino et al., 2016), mainly, a focus on: re-localization processes; flows of
762 knowledge, materials, capitals and people that take place in and between food systems; and a
763 progressive sense of place that integrates discourses, scales and interdependencies between
764 geographies.

765 First, when compared to conventional mainstream food players, these AFNs are small both in
766 numbers and size, and therefore represent a small share of the food system in quantitative terms,
767 as previously warned by Dixon and Richards (2016). However, the role that AFNs play may be
768 important when evaluating its capacity to ensure food security and facilitate changes in the
769 currently unsustainable food system. Considering that food security dimensions are relevant to
770 all levels of human organization, from the global to the individual and household scale, today,
771 AFNs can play a significant part when we focus on the micro-level. Of particular importance is
772 the example of food co-ops in Wales that have developed a network of community members,
773 wholesalers and producers to provide affordable healthy food to low income households. By
774 and large, all initiatives contribute to increase availability of produce and utilization dimensions,
775 by championing local production and nutritious food and establishing new connections between
776 local actors. Consequently, they *contribute to re-localization processes* identified by place-
777 based approaches to food security as providing a transformative basis for wider changes in the
778 food system. Furthermore, AFNs can also fulfil individual food preferences that are generally
779 overlooked in conventional food channels. Preferences in terms not only of types of food (e.g.,
780 traditional varieties usually with outstanding gastronomic value) but also in terms of
781 “acceptability”, where social and cultural aspects are considered as well as the individual
782 capacity to promote change in the food system through a conscious buying. These preferences
783 might, however, produce exclusive landscapes for middle classes or focus on particular socio-
784 cultural backgrounds that can hinder the delivery of food security outcomes particularly for
785 vulnerable groups.

786 Second, the cross-comparative analysis of these three case studies shows active *flows* of
787 material, capitals and, particularly, knowledge within AFNs. AFNs play a key a role in
788 disseminating information and sharing knowledge, which are both exchanged during market
789 transactions but through social relations nurtured through these collective initiatives.
790 Knowledge enables to improve capacity-building, e.g. food utilization skills that make a
791 positive impact reducing food waste and ameliorating the gastronomic culture. Besides, by re-
792 connecting production and consumption AFNs stimulate social re-linking and raising awareness
793 of consumers about food system unbalanced relationships and the origin of their food that is a
794 prerequisite leading to change in their consumption and shopping habits. These flows of
795 knowledge, capital and materials are not only restricted to alternative initiatives but are
796 increasingly activated with conventional food players. Our cases show how AFNs undergo
797 different hybridization process mainly with the aim to scale up and increase their stability.

798 Furthermore, the AFNs studied showcase new relationships between different types of food
799 outlets, such as the transfer of food co-op consumers to discounters such as Lidl. While some of
800 these changes might reinforce some of the AFN traits linked to food security outcomes – e.g.
801 improve accessibility of healthy food – it might hinder others, such as re-localization processes.
802 Nonetheless, the vulnerability that the three cases showcase in terms of economic viability,
803 reliance on public funds and/or voluntary labour and exposure to changes in the wider context
804 (e.g. cheap prices by competitors), highlights the need to reflect on current flows and
805 interdependencies within and beyond these AFNs, particularly in material terms. Key questions
806 include how these flows could be re-engineered to deliver long-lasting food security outcomes
807 and who are the actors and what are mechanisms that can assist these changes. A deeper
808 understanding of the place contingent interdependencies of diverse food initiatives – with
809 conventional outlets, government programmes or productive landscapes - will contribute to
810 devise effective tools and interventions to deliver food security in particular contexts.

811 Finally, the analysis of the three cases show how these AFNs are *shaped by particular places*,
812 in terms of their opportunities but also limitations. The Welsh food co-ops develop initiatives to
813 sell cheap vegetables in the context of rising levels of food poverty and amidst a placeless
814 foodscape where local foods are less valued. Contrastingly, the Valencian initiatives focus on
815 their centenary agricultural activity in a city where access to healthy food is not portrayed as a
816 problem, rather the focus is on the livelihoods of farmers. These discourses and practices
817 portray particular visions of places that might exclude other dynamics at play, such as
818 increasing levels of unemployment and poverty in non-agricultural sectors of Valencia or the
819 capacity to re-connect consumers with their foodscape in Cardiff. This restricted vision of place
820 prevents to establish more productive linkages to the multiplicity of *discourses, scales and*
821 *interdependencies* between geographies that result in different levels of food insecurity. The
822 advocacy activity displayed by some of these AFNs shows one mechanism to encourage
823 connections amongst different governance levels to develop food security strategies and
824 policies. For example, the regional food sovereignty platform in Valencia and Voedselteams
825 network in Flanders have fostered collaboration across scales and give greater visibility to its
826 members and activities. These processes have helped to raise the local policy support required
827 to modified rules and regulations. However, these networking activities remain restricted and
828 seldom interact with the diverse discourses, needs and multi-sectoral and scalar
829 interdependencies that hinder food security in particular places.

830 Our cross-comparison has shown the potential of AFNs in delivering food security outcomes,
831 but also the relatively small impact of individual initiatives and their capacity to fulfil the needs
832 of only particular social groups –e.g. low income groups in Cardiff or middle class families in
833 Leuven. Furthermore, current material flows and low integration of discourses and
834 interdependencies showcased by these initiatives reveals important weaknesses that affect the
835 viability of AFNs in the context on increasing food security challenges. These limitations call
836 for *a relational and place-based approach to food security that explores further how food*
837 *initiatives are connected to each other and what is their collective impact in providing good*
838 *food for all in specific places*. Developing tools to understand better the disconnections and also
839 synergies between food networks and how they modify food security outcomes constitutes the
840 necessary next step. These conceptual tools will be instrumental to ground theoretical territorial
841 and place-based approaches that inform effective practical and policy recommendations.

842 Acknowledgments

843 This research is part of the project “Assessment of the impact of global drivers of change on
844 Europe’s food security” (TRANSMANGO), granted by the EU under 7th Framework
845 Programme; theme KBBE.2013.2.5-01; Grant agreement no: 613532. Dr. Ana Moragues-Faus
846 also acknowledges the funding of the European Commission and the Welsh Government that
847 currently supports her Sêr Cymru fellowship. These results reflect only the authors’ view; the
848 funders are not liable for any use that may be made of the information contained therein.

849 Conflict of Interest

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

851 References

- 852 Arcuri, S., Brunori, G., Galli, F., 2017. Insights on the role of private and public actors in food
853 assistance provision: A literature review for High Income Countries. *Economia agro-*
854 *alimentare*, <https://doi:10.3280/ECAG2017-001006>
- 855 Clay, E., 2002. Food Security; concept and measurement. Paper for FAO Expert Consultation
856 on Trade and Food Security: Conceptualising the Linkages. Rome
857 <http://www.fao.org/docrep/005/y4671e/y4671e06.htm>
- 858 Barca, F., McCann, P., Rodríguez-Pose, A., 2012. The case for regional development
859 intervention: Place-based versus place-neutral approaches. *J. Reg. Sci.*
860 <https://doi:10.1111/j.1467-9787.2011.00756.x>
- 861 Bauler, T., Mutombo, E., van Gasteren, V., Crivits, M., Paredis, E., Boulanger, P., . . . Ruwet,
862 C., 2011. Construction of scenarios and exploration of transition pathways for sustainable
863 consumption patterns. Brussels: Belgian Science Policy
- 864 Brown, J.C., Purcell, M., 2005. There’s nothing inherent about scale: political ecology, the local
865 trap, and the politics of development in the Brazilian Amazon. *Geoforum*,
866 <https://doi:10.1016/j.geoforum.2004.09.001>
- 867 Brunori, G., Malandrin, V., Rossi, A., 2013. Trade-off or convergence? The role of food
868 security in the evolution of food discourse in Italy. *J. Rural Stud.*
869 <https://doi:10.1016/j.jrurstud.2012.01.013>
- 870 Cistulli, V., Rodríguez-Pose, A., Escobar, G., Marta, S., Schejtman, A., 2014. Addressing food
871 security and nutrition by means of a territorial approach. *Food Secur.*
872 <https://doi:10.1007/s12571-014-0395-8>
- 873 Cox, I., 2015. Interim Report: Adding Value and demonstrating sustainable development in the
874 Community Food Co-ops in Wales, EcoStudio
- 875 Crivits, M., Paredis, E., 2013. Designing an explanatory practice framework: Local Food
876 Systems as a case. *Journal of Consumer Culture*, <https://doi:10.1177/1469540513484321>
877 joc.sagepub.com
- 878 CSM, 2016. Connecting small-holders to farmers: an analytical guide.
- 879 Dixon, J., Richards, C., 2016. On food security and alternative food networks: understanding
880 and performing food security in the context of urban bias. *Agric. Human Values*,
881 <https://doi:10.1007/s10460-015-9630-y>
- 882 DuPuis, E.M., Goodman, D., 2005. Should we go “home” to eat?: toward a reflexive politics of
883 localism. *J. Rural Stud.* <https://doi:10.1016/j.jrurstud.2005.05.011>
- 884 Elliott, E., Parry, O., Ashdown-Lambert, J., 2004. Evaluation of community food co-ops,
885 Working Paper 85, Cardiff School of Social Sciences, Cardiff University

- 886 Ekers, M., Levkoe, C.Z., Walker, S., Dale, B., 2015. Will work for food: agricultural interns,
887 apprentices, volunteers, and the agrarian question. *Agric. Human Values*
888 <https://doi:10.1007/s10460-015-9660-5>
- 889 FAO, 1998. Report: Sustaining agricultural biodiversity and agro-ecosystem functions.
890 <http://www.fao.org/sd/EPdirect/EPRe0080.htm>.
- 891 FAO, 2001. Report: The state of food insecurity in the world.
892 <http://www.fao.org/docrep/003/y1500e/y1500e00.htm>
- 893 Gibson-Graham, J.K., 2006. *A postcapitalist politics*. University of Minnesota Press, Minnesota.
- 894 Goodman, D., DuPuis, E.M., Goodman, M.K., 2013. Engaging Alternative Food Networks:
895 Commentaries and Research Agendas. *Int. J. Sociol. Agric. Food* 20, 425–431.
- 896 Goodman, D., DuPuis, E.M., Goodman, M.K., 2012. *Alternative Food Networks: Knowledge,
897 Place and Politics*. Routledge, Oxon, New York. ISBN: 9780203804520
- 898 Goodman, M.K., 2004. Reading fair trade: political ecological imaginary and the moral
899 economy of fair trade foods. *Polit. Geogr.* <https://doi:10.1016/j.polgeo.2004.05.013>
- 900 Guthman, J., 2004. *Agrarian dreams: The paradox of organic farming in California*. University
901 of California Press, Berkeley. ISBN-10: 0520240952
- 902 Hubeau, M., Coteur, I., Mondelaers, K., & Marchand, F., 2015. *Systeembeschrijving van het
903 Vlaamse Landbouw- en Voedingssysteem: een nulmeting*. Merelbeke, België: ILVO
- 904 Ilbery, B., Maye, D., 2005. Alternative (shorter) food supply chains and specialist livestock
905 products in the Scottish - English borders. *Environ. Plan.* <https://doi: 10.1068/a3717>
- 906 Jarosz, L., 2007. The city in the country: Growing alternative food networks in metropolitan
907 areas. *Journal of Rural Studies*, <https://doi.org/10.1016/j.jrurstud.2007.10.002>
- 908 Jones, I., 2012. Evaluation of the Community Food Co-operative Programme in Wales, BMG
909 Research, Welsh Government Social Research 22/2012
- 910 Kirwan, J., Maye, D., 2013. Food security framings within the UK and the integration of local
911 food systems. *J. Rural Stud.* <https://doi.org/10.1016/j.jrurstud.2012.03.002>
- 912 Lamine, C., 2015. Sustainability and Resilience in Agrifood Systems: Reconnecting
913 Agriculture, Food and the Environment. *Sociol. Ruralis*, <https://doi:10.1111/soru.12061>
- 914 MacMillan, T., Dowler, E., 2012. Just and sustainable? Examining the rhetoric and potential
915 realities of UK food security. *J. Agric. Environ. ethics*, <https://doi:10.1007/s10806-011-9304-8>
- 917 Marsden, T., Banks, J., Bristow, G., 2000. Food Supply Chain Approaches: Exploring their
918 Role in Rural Development. *Sociol. Ruralis*, <https://doi/10.1111/1467-9523.00158>
- 919 Maxwell, S., 1996. Food security: a post-modern perspective. *Food Policy*.
920 [https://doi.org/10.1016/0306-9192\(95\)00074-7](https://doi.org/10.1016/0306-9192(95)00074-7)
- 921 Mooney, P.H., Hunt, S.A., 2009. Food Security: The Elaboration of Contested Claims to a
922 Consensus Frame. *Rural Sociol.* <https://doi/10.1111/j.1549-0831.2009.tb00701.x>
- 923 Moragues-Faus, A., 2016. Participative Action Research: Transforming Cardiff's food system
924 through students' live projects. Report available at [http://foodcardiff.com/wp-
925 content/uploads/2016/10/Report-live-projects-2016-cut-.pdf](http://foodcardiff.com/wp-content/uploads/2016/10/Report-live-projects-2016-cut-.pdf)
- 926 Moragues-Faus, A., 2017a. Emancipatory or Neoliberal Food Politics? Exploring the “Politics
927 of Collectivity” of Buying Groups in the Search for Egalitarian Food Democracies.
928 *Antipode*, <https://doi:10.1111/anti.12274>
- 929 Moragues-Faus, A., 2017b. Problematizing justice definitions in public food security debates:
930 Towards global and participative food justices. *Geoforum*,

- 931 <https://doi:10.1016/j.geoforum.2017.06.007>
- 932 Moragues-Faus, A., Marsden, T., 2017. The political ecology of food: Carving “spaces of
933 possibility” in a new research agenda. *J. Rural Stud.*
934 <https://doi:10.1016/j.jrurstud.2017.08.016>
- 935 Moragues-Faus, A., Sonnino, R., 2012. Embedding Quality in the Agro-food System: The
936 Dynamics and Implications of Place-Making Strategies in the Olive Oil Sector of Alto
937 Palancia, Spain. *Sociol. Ruralis*, <https://doi:10.1111/j.1467-9523.2011.00558.x>
- 938 Morgan, K., Sonnino, R., 2010. The urban foodscape: world cities and the new food Equation.
939 *Cambridge Journal of Regions, Economy and Society*. <https://doi:10.1093/cjres/rsq007>
- 940 Murdoch, J., Marsden, T., Banks, J., 2000. Quality, Nature, and Embeddedness: Some
941 Theoretical Considerations in the Context of the Food Sector. *Econ. Geogr.*
942 <https://doi:10.1111/j.1944-8287.2000.tb00136.x>
- 943 Murdoch, J., Miele, M., 1999. “Back to Nature”: Changing “Worlds of Production” in the Food
944 Sector. *Sociol. Ruralis*, <https://doi:10.1111/1467-9523.00119>
- 945 OECD, FAO, UNCDF, 2016. Adopting a Territorial Approach to Food Security and Nutrition
946 Policy. Paris. <https://doi:10.1787/9789264257108-en>
- 947 Ortiz-Miranda, D., Moragues-Faus, A.M., 2014. Governing Fair Trade Coffee Supply:
948 Dynamics and Challenges in Small Farmers’ Organizations. *Sustain. Dev.*
949 <https://doi:10.1002/sd.1570>
- 950 Oxfam and Church Action, 2013. Walking the Breadline: The Scandal of Food Poverty in 21st-
951 Century Britain. [http://policy-practice.oxfam.org.uk/publications/walking-the-breadline-
952 the-scandal-of-food-poverty-in-21st-century-britain-292978](http://policy-practice.oxfam.org.uk/publications/walking-the-breadline-the-scandal-of-food-poverty-in-21st-century-britain-292978). Accessed 19 August 2014.
- 953 Padel, S., Foster, C., 2005. Exploring the gap between attitudes and behaviour:
954 Understanding why consumers buy or do not buy organic food, *British Food Journal*,
955 <https://doi.org/10.1108/00070700510611002>
- 956 Renting, H., Marsden, T.K., Banks, J., 2003. Understanding alternative food networks:
957 exploring the role of short food supply chains in rural development. *Environ. Plan.*
958 <https://doi:10.1068/a3510>
- 959 Renting, H., Rossi, A., 2013. Building Food Democracy: Exploring Civic Food Networks and
960 Newly Emerging Forms of Food Citizenship. *Int. J. Sociol. Agric. Food* 19, 289–307.
- 961 Romero, J., Francés, M. (Eds), 2012. *La Huerta de Valencia. Un paisaje cultural con futuro
962 incierto*. Valencia, Publicaciones de la Universitat de València
- 963 Sage, C., 2003. Social embeddedness and relations of regard: alternative “good food” networks
964 in south-west Ireland. *J. Rural Stud.* [https://doi:10.1016/S0743-0167\(02\)00044-X](https://doi:10.1016/S0743-0167(02)00044-X)
- 965 Sonnino, R., Marsden, T., 2006. Beyond the divide: rethinking relationships between alternative
966 and conventional food networks in Europe. *J. Econ. Geogr.* <https://doi:10.1093/jeg/lbi006>
- 967 Sonnino, R., Marsden, T., Moragues-Faus, A., 2016. Relationalities and convergences in food
968 security narratives: towards a place-based approach. *Trans. Inst. Br. Geogr.*
969 <https://doi:10.1111/tran.12137>
- 970 Soriano i Piqueras, V. (2015). *La huerta de Valencia un paisaje menguante*. Amazon. ISBN-
971 13: 978-1512009231
- 972 Stanners, D. and Bourdeau, P. 1995. *Europe’s Environment: The Dobris Assessment*.
973 Copenhagen: European Environmental Agency.
- 974 Tregear, A., 2011. Progressing knowledge in alternative and local food networks: Critical
975 reflections and a research agenda. *J. Rural Stud.* <https://doi:10.1016/j.jrurstud.2011.06.003>
- 976 Valencia city council. Department of Agricultura and Huerta (ongoing review). Pla d’acció

- 977 integral per a la promoció de l'activitat i el territori agrícola municipal.
 978 <http://valenciacapitalsostenible.org/wp-content/uploads/2017/07/PlanAgricola-VAL.pdf>.
 979 Accessed January 2018.
- 980 Van Gameren, V., Ruwet, C., & Bauler, T., 2015. Towards a governance of sustainable
 981 consumption transitions: how institutional factors influence emerging local food systems
 982 in Belgium. *Local Environment: The international journal of justice and sustainability*,
 983 <https://doi.org/10.1080/13549839.2013.872090>
- 984 Venn, L., Kneafsey, M., Holloway, L., Cox, R., Dowler, E., Tuomainen, H., 2006. Researching
 985 European “alternative” food networks: some methodological considerations. *Area*,
 986 <https://doi:10.1111/j.1475-4762.2006.00694.x>
- 987 Vervoort J., Thornton PK., Kristjanson P. et al. (2014). Challenges to scenario-guided adaptive
 988 action on food security under climate change. *Global Environmental Change*,
 989 <https://doi:10.1016/j.gloenvcha.2014.03.001>
- 990 Weingartner L. 2005. Paper I. The concept of food and nutrition security. In: Klennert K, editor.
 991 *Achieving food and nutrition security: actions to meet the global challenge: a training*
 992 *course reader*. Feldafing: German Society for International Cooperation; p. 3–28. ISBN 3-
 993 937235 -71-X
- 994 Radhika Ch., Hemantha U., 2017. Research study on nutrition security and equity in its access
 995 in watershed development programmes. Research Reports Series 107. National Institute of
 996 Rural Development & Panchayati Raj. ISBN 978-93-84503-81-9
- 997 Whatmore, S., Stassart, P., Renting, H., 2003. What's alternative about alternative food
 998 networks? *Environ. Plan.* <https://doi:10.1068/a3621>
- 999 Zwart, T.A., Mathijs, E., Avermaete, T. 2016. Can Alternative Food Networks contribute to a
 1000 transition towards sustainability in Flanders : Assessing the marketing functions of
 1001 Voedselteams. Report available at
 1002 http://ageconsearch.umn.edu/record/245069/files/BioeconWP_2016_04_submitted.pdf