Educação, Sociedade & Culturas
n.º 62, agosto 2022, pp. 1-21
https://doi.org/10.24840/esc.vi62.275

Personal proximity, disruptive dissent, and participatory urban governance as forms of climate change activism through urban agriculture: Illustrative examples in green European capitals Lisbon & Bristol

Proximidade pessoal, dissidência disruptiva e governança urbana participativa como formas de ativismo pela mudança climática por meio da agricultura urbana: Exemplos ilustrativos em capitais europeias verdes Lisboa e Bristol

Proximité personnelle, dissidence perturbatrice, et gouvernance urbaine participative comme formes d'activisme contre le changement climatique à travers l'agriculture urbaine: Exemples illustratifs dans les capitales européennes vertes Lisbonne et Bristol

Sandrine Simon*

CeiED- International Centre for Educationand Development, Universidade Lusófona de Humanidades e Tecnologias, Lisboa, Portugal

Abstract

Fighting climate change has been a long battle that is far from being won. Official climate change negotiations and agreements have been carried out for decades and targets have been set to impose reductions of greenhouse gas emissions to governments and major industries. In addition, citizens started exploring ways in which they could take part. From originally demonstrating, to attempt to put pressure on stakeholders and states that are the biggest polluters, they acknowledged that addressing climate change will realistically lead to best results if we change our economic and production systems also in our daily lives, through changing our ways of living. This article explores three types of climate change activism expressed through Urban Agriculture (UA). Through 'proximities', 'disruptive dissent' and 'participatory urban governance', this article analyses how UA, as a form of Climate Change activism on the ground, can help to act and to influence policies, taking illustrative examples from green capitals of Europe: Bristol in the UK and Lisbon in Portugal.

Keywords: alternative food systems, participatory urban governance, experiential and social learning, disruptive dissent, urban agriculture

* ***Correspondence:*** *CeiED - Universidade Lusófona de Humanidades e Tecnologias. Campo Grande, 376, 1749-024 Lisboa, Portugal.*
E-mail: *sandrine.simon.dina@gmail.com*

Resumo
A luta contra as mudanças climáticas é uma longa batalha que está longe de ser vencida. Negociações e acordos formais sobre mudanças climáticas vêm sendo conduzidos há décadas e metas foram estabelecidas para impor reduções nas emissões de gases de efeito estufa a governos e grandes indústrias. Além disso, os cidadãos começaram a explorar maneiras de participar. Depois de focar em protestos para tentar pressionar *stakeholders* e estados que são os maiores poluidores, eles reconheceram que a luta contra as mudanças climáticas levará a melhores resultados se mudarmos os nossos sistemas económicos e produtivos também no nosso quotidiano, mudando os nossos estilos de vida. Este artigo explora três tipos de ativismo de mudança climática expressos por meio da agricultura urbana (AU). Através de 'proximidades', 'dissidência disruptiva' e 'governança urbana participativa', este artigo analisa como a AU, como forma de ativismo de mudança climática no terreno, pode ajudar a agir, tomando exemplos ilustrativos de duas capitais verdes europeias: Bristol no Reino Unido e Lisboa em Portugal.

Palavras-chave: sistemas alimentares alternativos, governança urbana participativa, aprendizagem experiencial e social, dissidência disruptiva, agricultura urbana

Résumé
La lutte contre le changement climatique est une longue bataille qui est loin d'être gagnée. Des négociations et des accords officiels sur le changement climatique ont été menés pendant des décennies et des objectifs ont été fixés pour imposer des réductions d'émissions de gaz à effet de serre aux gouvernements et aux principales industries. De plus, les citoyens ont commencé à explorer les moyens par lesquels ils pourraient participer. Après s'être concentrés sur les manifestations pour tenter de faire pression sur les parties prenantes et les États qui sont les plus gros pollueurs, ils ont reconnu que la lutte contre le changement climatique conduira à de meilleurs résultats si nous changeons nos systèmes économiques et de production également dans notre vie quotidienne, en changeant nos modes de vie. Cet article explore trois types d'activisme contre le changement climatique exprimés à travers l'agriculture urbaine (AU). À travers les "proximités", la "dissidence disruptive" et la "gouvernance urbaine participative", cet article analyse comment l'AU, en tant que forme d'activisme contre le changement climatique sur le terrain, peut aider à agir, en prenant des exemples illustratifs de deux capitales vertes Européennes: Bristol au Royaume-Uni et Lisbonne au Portugal.

Mots-clés: systèmes alimentaires alternatifs, gouvernance urbaine participative, apprentissage expérientiel et social, dissidence perturbatrice, agriculture urbaine

Introduction: Urban Agriculture as Climate Change activism

The 2021 COP 26 showed it again: our climate is changing as a result of our activities and slowliness in changing our economic practices. If the targets negotiated focus on reducing CO2 emissions, it is the much more concrete set of actions that can help reduce these that can resonate for both governments, decision-makers, industrialists and the general public. This article explores such actions through forms of climate change activism.

As Rosane (2021) explains, "Climate activism is what happens when people from all over the world come together, as collectives and communities, to put pressure on national and

business leaders to take action to safeguard a liveable future" (para. 1). It evolved from being focused on environmental protection, in the 1970s, to being more focused on climate change. The first Global Day of Action, specifically on climate change, actually took place in 2005 surrounding the 2005 UN climate conference in Montreal, and demonstrations have recurred every year since. But what about more general Climate Change activism? And who is behind such actions?

Whilst feeling dis-empowered, in previous decades, regarding the possibility to personally helping to diminish GHGs emissions, the general public has recently become more pro-active in identifying what it can do in its daily life. In particular, the way in which we produce, consume and distribute our food has progressively become an important 'tangible change' to which every citizen can contribute. O'Brien et al. (2018) analysed the diverse ways in which people are challenging power relationships and political interests to promote climate-resilient futures. They highlighted that, according to the IPCC (2013), by the year 2050, children born in 2000 are likely to be living on a planet that is 0.8°C to 2.6°C warmer than in 1990. As Norris (2003, p.2) notes, "youth today may be at the forefront of those who have adapted to the newer forms of political expression, mobilization and engagement", especially through the usage of social media which can act as an important arena for climate change activism, contributing to information distribution, logistical support and "e-movements".

In this article, we explore climate change activism in the context of cities which, as the UN clearly stated[1], occupy just 3% of the Earth's land but account for 60 to 80% of energy consumption and 75 % of carbon emissions. Yip et al. (2019) explored forms of *urban activism* – i.e., "the social practices of protest and claim-making about urban affairs within specific economic and political contexts" (p. 6) – which has undergone waves of transformation in the past few decades, evolving into "sustained collective actions of claim-making in the production, governance and change of cities" (p. 26), in which citizens usually come together as a response to specific grievances. Here, we are interested in climate change as one type of grievance and urban agriculture as a form of constructive response to it.

There are numerous definitions of UA, all of which converge into describing UA as the growing of plants and the raising of animals for food and other uses within and around cities (van Veenhuizen, 2006). UA also includes concepts such as aquaponics, indoor agriculture, vertical farming, rooftops production, edible walls, edible landscapes, school and community gardens, and many other forms of integrated agriculture (Skar et al., 2020). The benefits of UA to fight climate change have been demonstrated by de Zeeuw et al. (2011). As Romero-Lankao et al. (2016)explained, since the concept of ecosystem-based adaptation was officially defined by the Secretariat of the Convention on Biological Diversity (2009) as "the use of biodiversity

[1] https://www.un.org/sustainabledevelopment/cities/

and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change" (p. 41), UA has been considered as particularly useful in the field of urban climate change adaptation, leading to the development of initiatives such as the expansion of urban green and open space, vertical green and green roofs, to support temperature and water regulation in the city (Schneider et al., 2021). UA can contribute to minimising the effects of climate change by reducing the net discharge of CO2, because plants and trees capture CO2. As Deelstra and Giradert (2000) explain, "the captive capacity is [actually] at its highest in the growth phase of vegetation. Through agricultural activities in cities, urban ecosystems are kept continuously in their primary production phase" (p. 53). Much research is now also exploring how urban agro-ecology and perma-culture could help to provide citizens with healthier food (Altieri & Nicholls, 2018), in addition to combating climate change (Dubbeling et al., 2019).

Not all urban farmer or gardener can be considered a 'climate change activist'. For this reason, we will specifically focus in this article on initiatives that have been considered as such, and will explain why, in two green capitals of Europe: Bristol and Lisbon. They were respectively awarded this title by the European Commission in 2015 and 2018. In the case of Bristol, this event illustrated the recognition of the long-standing commitment of many individuals and organisations within the city, not least Bristol City Council, to reducing its carbon footprint and tackling climate change. It was also the fulfilment of an ambition first articulated in the Community Strategy adopted by Bristol's Local Strategic Partnership in 2003, followed by a series of actions including the approval of a Green Capital Action Plan by the City Council in 2007[2]. In the case of Lisbon, the jury felt that the fact that the city had started its journey towards sustainability during a period of economic crisis was an inspiration for other cities across Europe. Besides, the Expert Panel highlighted that Lisbon is particularly strong in the field of sustainable land use, sustainable urban mobility (transport), green growth & eco innovation, climate change adaptation and waste[3]. In both cases, initiatives preparing for and following the awarding of the title raised awareness on the importance of UA. In both cases too, some UA projects show the characteristics of climate change activism. In addition, some of these projects have created bridges with initiatives taken by local authorities and urban planners, helping to progressively reform urban governance and, with it, ways in which a 'sustainable city' is conceived. As a whole, such projects are helping to '*change the system, not the climate*', a statement that is representative of climate change activists' claims.

[2] https://www.bristol.gov.uk/policies-plans-strategies/bristol-green-capital
[3] https://ec.europa.eu/environment/europeangreencapital/lisbon-is-the-2020-european-green-capital-award-winner/

Methodological approach

In this article, we will focus on three types of climate change activism illustrated in UA.

1) The first one is based on the Construal Level Theory or 'CLT' (Trope & Liberman, 2003), which claims that an individual experiences a political issue on a continuum of psychological distance, from direct experience to very distant and that, as a consequence, an individual is more likely to care deeply about an issue and act on it when he/she directly experiences it. A major claim of CLT is that "the psychological distance of an issue causes the individual to construe the issue from concrete, when the issue is proximate, to abstract, when the issue is distant" (Sparks, 2021, p. 2). We will refer to this phenomenon as 'activism of proximity' or 'personal proximity' in our first part, which will examine food security crises as a practical manifestation of climate change, and UA as a way to consolidate food security whilst fighting climate change. This double objective could be used to demonstrate that activists and local authorities would benefit from working more closely together to transform cities into more sustainable ones.

2) The second one focuses on a form of climate change activism described by O'Brien et al. (2018) as *disruptive dissent*, which intends to "raise awareness about the underlying political, economic, and social drivers of climate change, and draws attention to the justice and equity dimensions, acknowledging vulnerability to multiple and interacting global processes" (p. 3). It could go as far as generating new alternative systems, new ways of doing things. In this part, we'll explore how food systems are being questioned and alternative ones being suggested, advocating alternative food networks, food democracy and circular economies that will significantly reduce climate change.

3) The third part will show how certain forms of activism targeted at climate change and UA focus on *alternative urban governance and learning*. Current approaches of urbanism stress the importance of democratizing decision-making, for instance through participation in urban planning (Ataman & Tuncer, 2021; Innes & Booher, 2004; Zientara et al., 2020). Here we explore how participation can be facilitated by urban activism (Yip et al., 2019) and UA projects. Although addressing climate change is a key issue to be considered when creating urban strategies, citizen's participation is still weak in the elaboration of these strategies. Forms of activism are addressing this weakness by advocating different types of actions to fight climate change and transform cities into more resilient and sustainable ones.

Whilst each main part of this article explores one of these types of climate change activism, illustrative information on UA is provided throughout the article, using Bristol and Lisbon as case studies. The choice of these two cities can be explained by the following core justifications. First, they were both awarded the title of Green Capital of Europe, which gives urban agriculture a growing importance and image in the context of greening cities and

providing examples to follow for other cities. Second, they both adopted specific and insightful approaches to 'disruptive dissent', each in their own way. In addition, whilst the UA initiatives found in Lisbon seem to reflect particularly well the reference made to 'personal proximity' as well as to the utility of promoting experiential and social learning, UA initiatives in Bristol tackle wholeheartedly the issue of participatory urban governance and the potentials to reform urban planning. We feel it is interesting to see how green capitals of Europe could learn from each other's experiences as well as provide insights to others.

A literature review covering both academic material but also newspaper articles, projects, web sites and municipal plans helped in putting together information that, although rarely put together, helped in comprehending UA as a form of climate change activism. Thus, UA initiatives illustrated respectively forms of 'personal proximity', 'disruptive dissent', or forms of 'participatory urban governance'. These three forms of activism, explored in the core works of Sparks (2021), O'Brien et al. (2018) and Martínez (2011), were identified as explaining particularly well how UA can actively play a role in addressing climate change and contributing to societal transformation, at the level of the city.

1. Personal proximity: UA and food security

In its summary document on Cities and Local Action to Combat Climate Change, the UN Climate Change programme[4] suggests ideas such as developing more sustainable commuting, or local solutions for sustainable energy access and transformation. It also includes actions such as producing food locally, creating wealth from waste, reclaiming green spaces and implementing the sharing economy - all of which can be integrated into the type of UA initiatives this research is focusing on. The direct link between food production and climate change is in fact being more and more documented and the meeting of one of our basic needs (food) constitutes a clear link between the human scale and 'climate change above'. The objective of the UN is clearly to involve citizens in embracing actions, at their scale, and to take part in transforming our cities into places that help to fight climate change rather than contribute to it. Although climate change activists have been keen to demonstrate against climate change and macro-economic actions that contribute to greenhouse gases emissions, although they still are willing to donate to environmental charities and sign massive petitions, whose numbers of signatures reach record numbers[5], they are also keen to move into action.

[4] https://unfccc.int/topics/education-youth/youth-engagement/global-youth-video-competition/global-youth-video-competition-2019/cities-and-local-action-to-combat-climate-change

[5] In Australia, for instance, a petition calling for the federal government to declare a climate emergency has grouped the highest number of signatures ever on the government's e-petition website, with more than 370,004 signatures (Kolowski, 2019).

The link between food production and climate change was illustrated by Dixon et al. who, already in 2009, reminded us that "food is a major user of energy and thus contributor to greenhouse gas emissions, with 15 to 20% of energy used in developed countries attributed to their food sectors" (p. 14). This proportion increases to 23% when producer emissions from energy, transport and waste are included (Larsen et al., 2008). The entire food chain is implicated, with household food preparation, organic waste disposal and car shopping trips adding a further 10% to emissions. To address this problem, civic agriculture emerged out of the environmental and food counterculture movements of the 1960s and 1970s, presenting a holistic approach to food security, directly connected to the economic, environmental and social factors that affect diet and health (Dixon et al., 2009). As the authors stressed, UA is an important aspect of civic agriculture in cities, both in developing and developed countries.

This motivation behind small-scale UA initiatives has recently been further boosted by the Covid-19 crisis which has both darkened the future prospects for younger generations (in terms of jobs, in particular) and also generated disruption in food-supply-chains, jeopardising the food security of many. In the cases of the UK and Portugal, recent studies (Garnett et al., 2020) have highlighted the fragility of both countries' food systems which rely on land located overseas for more than 60% of their food demand. The Food and Agriculture Organization of the United Nations (FAO, 2002) defined food insecurity as a socioeconomic situation that leads to limited or uncertain access to the nutritious food necessary to maintain a healthy life. Studies showed that the prevalence of food insecurity in Portugal was 17% on average (2014-2019; Gregório et al., 2018). In Lisbon, Portugal, following the first Covid-19 confinements, articles in the *Correio da Manhã* (2020) indicated that calls for help in the form of charitable food donations had increased by 50% in only a month. In the UK, Goudle and McIntyre (2021) estimated that 24% of adults were also experiencing food insecurity driven, in 23% of cases, by a lack of food supply.

Whilst UA can therefore contribute to addressing climate change, what is most urgently felt by citizens is a jeopardised food security that affects their immediate needs. This concern helps to contextualise climate change or, rather, to make some people behind UA initiatives understand the importance of UA as a way of initiating changes in the food system, itself tightly connected to climate change. This form of activism is explained through the 'psychological proximity and activism theory', which suggests that when climate change is proximate, an individual is more likely to care about it and to be motivated to act on it because they tend to perceive climate change in concrete terms and thus directly link the concrete problem to a specific action to mitigate it (Sparks, 2021, p. 1). These causal processes, in addition to the Civic Voluntarism Model – a foundational theory of political participation (Verba et al., 1995), and resource-driven activism – in which people are motivated to act with regards to the climate when they perceive the benefits of acting to outweigh the costs (Lubell

et al., 2007) – explain the logic of UA as climate change activism. As Delgado (2020) stressed,

> in a context of crisis, such as the Covid pandemic, UA is an immediate response to the needs of families devastated by the unemployment, facilitates social cohesion and has positive effects on the physical and psychology of the people involved. (p. 3)

UA initiatives in Lisbon and Bristol are good examples of such activism. Lisbon has always been famous for its "urban gardens" (Araújo & Nascimento, 2021), often created in times of hardship. A variety of UA initiatives exist throughout the city[6]. Lisbon City Council[7] states that there are 21 municipal horticultural parks and around 850 plots, in a total of 9.5 ha intended for agricultural production. In Bristol, a medium-sized town of the South-West of England well-known for its predilection for cultural activism and which has received a growing attention in the field of urban studies (Buser et al., 2013), over 200 food projects exist throughout the city (Reed et al., 2018). They have been involving thousands of people involved in environmental activism and in food debates. Thus, within a few months of the city being designated as the European Green Capital, tensions between 'green projects' arose with protesters defending the fact that certain pieces of land claimed for the development of public transport had the best quality soil for food production (Reed & Keech, 2017).

Whilst politicians and urban planners are sensitive to the multiple benefits of UA (such as fighting climate change and increasing biodiversity and green spaces in cities, amongst others), the food system was, for very long, 'a stranger to the planning field' (Pothukuchi & Kaufman, 2000). This made community gardens and other UA sites 'politically contested spaces' between gardening residents, municipal government, private developers and community and grassroots organisations, particularly as they often have competing interests and differing degrees of power on how urban land is allocated and managed. As Dixon et al. (2009) explain, "the contested nature of UA sites and a lack of appropriate institutional support presents significant challenges to UA as a response to food insecurity and climate change" (p. 16).

It is to some extent through forms of activism such as disruptive dissent and participatory urban governance (Parts 2 and 3) that UA has progressively opened a dialogue with urban planners who are now more sensitive to including UA in their strategies.

2. Disruptive dissent

[6] https://oppla.eu/casestudy/19462
[7] https://www.lisboa.pt/cidade/ambiente/estrutura-ecologica/parques-horticolas

O'Brien et al. (2018) analysed the various ways in which power relationships and political interests are being challenged to promote climate resilient futures. They distinguished *dutiful dissent* (i.e., climate activism in political parties and processes as well as in NGOs, which supports a variety of actions to reduce greenhouse gases emissions – e.g., green transport adaptation – and seldom question the underlying causes of climate change) from *disruptive*, or even *'dangerous' dissent*. In this latter case, existing political and economic structures are being questioned and activists seek to change them. As the authors stressed, "disruptive dissenters usually report that they are more interested in changing the system than working dutifully within it" (p. 4). Pushing this even further, 'dangerous dissenters' intend to "actively provide alternatives that inspire and sustain long-term transformations" (p. 6) – hence generating alternative ways of organizing society[8], through which youth can take back, strengthen their political agency, or simply question what, to others, appears to be inevitable, such as a fossil fuel–based economy, over-consumption, and increasing social inequality.

Some forms of UA initiatives relate to disruptive dissent in that, in addition to addressing the need for food *provision*, they also question a fundamentally political issue, that of *food democracy*. Originally introduced by Tim Lang (in the 1990s) in response to the increasing corporate control of *food systems*, this concept has been enhanced by Hassanein (2003) who explains that "[it] means that all members of an agro-food system have an equal and effective opportunity for participating in shaping that system, as well as knowledge about the relevant alternative ways of designing and operating the system" (p. 83). It emerged from a critique of corporate control and of the need to move beyond food as a commodity and people as consumers (Johnston, 2008). They encourage a "transformative learning process implying a fundamentally new definition of citizenship and *food citizenship*" (Renting et al., 2012, p. 294), leading to the creation of more *sustainable food systems* - "in which the food production chain ensures food and nutrition security in terms of quantity and quality, accessing food for all, while promoting a healthy environment, economic dynamism, social cohesion and public health" (Oliveira & Morgado, 2016, p. 5).

Thus, the reflexion on UA goes beyond individual UA and has extended to the creation of *alternative food production networks* (AFNs) – that is, "newly emerging networks of actors that embody alternatives to the more standardised industrial mode of food supply" (Renting et al., 2003, p. 394). The significant recent revival of interest in AFNs (Goodman et al., 2012) reflects them going against mainstream food production (Lang, 2010) and contributing to more inclusive food systems (Kretschmer & Kollenberg, 2011) that are resilient because leading to a reduced reliance on a small number of large, international food suppliers in the event of unexpected environmental or economic shocks (Carey, 2013).

[8] For instance, setting up an alternative local currency that does not rely on existing financial institutions.

Transformative activism and social cohesion in multi-cultural cities

The political dimension of AFNs and UA thus integrates a new form of *transformative activism*. Initially associated with *guerilla gardening* – a movement born in New York in the 1970s[9], UA is fundamentally engaged. As Araújo and Nascimento (2021) explain, informal urban cultivation spaces, or *landscapes of disorder*, advocate an agroecological change based on the communitarian foundations of fellowship and allegiance to nature. The 'transformative activism capacity' of UA has been energised by the fact that UA has shown the ability to strengthen community enhancement, cohesion and inclusivity (Brown & Jameton, 2000).

In Lisbon, the actions undertaken by movements opposed to the global neoliberal food system have found their expression in small farms, food cooperatives and Community Neighbourhood projects. They are calling for greater food autonomy for those who produce, food security, social justice and dignity, a reconnection with nature, the rejection of unsustainable practices and involvement in environmental planning. Portuguese artist Angela Ferreira, through her photographs of illegal farms ('Motorway vegetable gardens' exhibited at the Neo-realism Museum) highlighted concepts such as survival, community, economy, territory and appropriation and presented these vegetable gardens as individual protests that echo the ambitions of an urban agrarian reform. As Araújo and Nascimento (2021, p. 113) emphasised, "despite efforts by the authorities to put an end to such horticultural activities, people persist in reinventing spaces and finding alternatives that work around the law, thus demonstrating an extraordinary vitality that arises from the need for survival".

Although the informality of UA has been a topic of great relevance, UA initiatives in Lisbon have both multiplied and managed to communicate their message to local authorities who, progressively also aligned theirs with European ambitions to improve food security and diet. UA has therefore become an activity organized and regulated by some municipalities, although much UA still exists in precarious conditions. Local authorities thus created horticulture parks, urban farms and projects for farming and gardening lands. The creation of these infrastructures was followed by the development of a *Regulation for the installation and operation of urban agriculture areas* (Matos, 2010) in which four types of urban farms for Lisbon were defined, each with its own specific objectives (social or community; leisure; pedagogical; and dispersed urban farms), areas of implementation, the kind of people allowed to grow products and the destination of the products to be grown. This resulted in the revision of the Municipal Master Plan in 2011, which now suggests that UA should be encouraged in

[9] https://www.greenguerillas.org/history

the city green spaces to increase local food production and self-sufficiency, city resilience and the cohesion of urban communities (Câmara Municipal de Lisboa, 2016).

Similarly, initiatives started by migrants' communities took a more political, engaged characteristics and spread to wider communities to finally impact on town or even national policies. Thus, the SEEDs project, presented by the *Museu de Lisboa* (Araújo & Nascimento, 2021) originally consisted in people coming from other countries collecting seeds from 'home' in view of cultivating them in Lisbon, as a way to maintain a relationship with their original culture and gastronomy. They then shared their know-how concerning cultivation techniques with communities in allotment gardens. The focus on seeds adopted a more political tone, criticizing the fact that seeds, from originally being freely accessible, are now mostly controlled by large multinationals (Biel, 2016). As shown in Araújo and Nascimento (2021), on this basis, and within the scope of the European Green Capital Lisbon 2020 programme, a partnership was created between Lisbon City Council and a Portuguese seed variety association to survey regional varieties found in Lisbon's vegetable gardens.

Curtin (2021) described other cooperative, community projects around UA in Lisbon, including Rizoma (https://www.rizomacoop.pt) – a community-operated grocery store based on social, ecological and collaborative values, which encourages local production – and *Muita Fruta* (www.muitafruta.org) – a social-service community garden project coordinated by *Cozinha Popular da Mouraria*, in partnerships with the association LOCALS and *Colégio F3* maps, restores and cares for fruit trees and values them as environmental, cultural, social and economic heritage. *Muita Fruta* is a BIP/ZIP founded project[10] – BIP-ZIP being a Portuguese acronym designing Priority Intervention Neighbourhoods (*Bairros*, in Portuguese) and Zones.

UA initiatives associated with disruptive dissent have therefore progressively enabled dialogues with local authorities and various types of partners, leading to practical (if a bit slow) institutional transformations. As Delgado (2020) concluded,

> It is [now] argued that Territorial Planning should consider UA as an instrument for strengthening the urban and peri-urban fabric through the permanent or temporary use of unbuilt urban voids, in a perspective of transforming urban voids into what we call "Agricultural Zones of Social Inclusion". (p. 1)

In Bristol, UA has also been encouraged as factor of community enhancement, cohesion and well-being, which strengthens a sense of pride and belonging (Hetherington, 2016), generates more equal communities and improve neighborhoods' quality of life (Brown & Jameton, 2000). The two most socially-focused UA projects, Golden Hill Community Garden

[10] https://www.edcities.org/en/proyectosf/lisbon-bipzip-program/ The program is a model of participatory government focused on the development of actions implemented by the civil society itself in the BIPs/ZIPs, with the financial and technical support of the City Council.

and Elm Tree Farm, are thus concerned with bringing about positive social outcomes. The two most commercially-focused projects; Purple Patch and Grow Bristol, focused on improving the local economy. Both contributed to creating a healthy community. In Bristol, many UA initiatives initially opposed the state and "had little need of it to constitute their social movement" (Goodwin & Jasper, 2009, p. 3), ensuring that new forms of knowledge can lead to changes that make a city smart from the bottom up. As Reed et al. (2018) showed, the creation of a local food and urban food network has been in part stimulated by the presence of the *Transition Town network* but also by the will to alleviate poverty and to create new communities as forms of resistance to capitalism (Sonnino, 2016). Other UA initiatives progressively got connected to local authorities, with AFN creating tighter links with urban governance processes.

3. Reforming urban governance and social and territorial learning as forms of activism

As Dubbeling and de Zeeuw (2011) stress, there is a growing recognition of UA as an important strategy for CC adaptation and it is clear that metropolitan, municipal and other local government institutions can play a proactive and coordinating role in enhancing urban food security and cities resilience (for instance by including UPA in social housing and slum upgrading programmes, or by developing a municipal urban agriculture and food security policy and programme). However, they do not systematically do so, or else, do it in very different ways – depending on, for instance in Lisbon, different municipal plans (PDM). Individual groups or communities therefore take over, making suggestions locally or suggesting ways of proceeding to local authorities. This has been done through two 'avenues' in Lisbon and Bristol: reforming urban planning and promoting experiential and territorial learning approaches.

Participatory urban planning

One type of urban activism – in addition to other movements such as '*rights to the city*', which incorporate the spatial claims expressed by particularly deprived groups (Yip et al., 2019) – has been described by Martínez (2011) as '*participatory urban governance*'. As Martínez explains, the problem is that participation in urban governance has become very moderate and institutionalised, very frequently reduced to a legitimation of ready-made policies and that so-called radical urban movements are not often invited to take part. However, sometimes non-institutional protests may have some effects in urban policies.

From an urban governance perspective, UA could be integrated so that land is being allocated for it in view of increasing food security and fighting climate change (de Zeeuw et al., 2011). The governance of meeting food needs, at the city scale, leads to questioning planning processes and to suggest alternative ones. As Isabel Rodrigo (in Araújo & Nascimento, 2021) explains, bottom-up governance networks ensure a share in the decision-making powers and practices of planning and regulation between municipal bodies and citizens.

In Bristol, the emergence of UA gave rise to reflexions on urban food governance. Tackling the governance issue has been a particularly remarkable achievement because the administrative structure is very complex and not coherent at the level of the great Bristol. Innovative networks had to be created to by-pass administrative paralysis or indifference, to manage better food systems at city level, and to encourage collaboration with local authorities (Morgan, 2015). All these efforts led to the creation of a strategic platform for discussion on the resilience of the city and its citizens, encouraging a sustainable supply of basic food products, a diversity of food retail in the city, active engagement with food by citizens, and closed food systems that reduce waste (Carey, 2013). It became the platform for a Food Policy Council (involving local food industries, Bristol City Council, Bristol Food Network, universities and grassroots bodies), and acted as a forum to influence planning and policy. It encouraged a multitude of initiatives spreading across the city (Morgan, 2015) and inspired, as Reed and Keech (2017) highlighted, other UK municipal food policies (London Food in 2004, Sandwell Healthy Urban Development Unit in 2008).

Although many UA initiatives have had to adapt to an initially unsupportive institutional context, attempts to change the economic and political climate were never off the table (Hetherington, 2016). In Bristol, UA activists actually managed to engage average citizens, sowing the seeds of an *edible transformation* through various outreach initiatives; school programs, food festivals and environmental awards. The case study on UA in Bristol highlights the central role that food now plays in the increasingly interrelated fields of climate, water, land, labour and health (Hetherington, 2016): food activism is also climate change activism. "Through horizontal networking, (...) urban food activists have raised significant questions about how cities are governed and (...) are looking to a future controlled by a democratic impulse rather than the technocracy of professional city managers" (Reed et al, 2018, p. 1).

Like in the case of Bristol, UA initiatives in Lisbon were strongly influenced by 'networks'. However, they were originally ecological and designed as 'green corridors' connected throughout the city. Advocated by Portuguese landscape architect Gonçalo Ribeiro Telles, their creation led to important changes, with Lisbon Municipal Assembly ruling that its *Plano Director Municipal* had to incorporate a *Green Plan* (Plano Verde de Lisboa, 2012). It also led to new urban plans (Master Development Plan 2012; Biodiversity 2020 strategy; Biodiversity Action plan 2016), which contributed to environmental policies to mitigate and adapt to

climate change (Delgado, 2020) and the creation of 108 ha of new green areas, between 2008 and 2013. Since then, 75 ha of green spaces were added, spread over 6 green corridors (https://oppla.eu/casestudy/19462).

UA networks of knowledge

Another type of networking, based on linking productive activities in view of encouraging a more circular type of economy and of minimising waste, could help in positioning UA initiatives at the core of the economic transformation of the city. In terms of territory, the city could grow as a more autonomous entity, part of a group of interconnected local production units, with UA at the core of the overall food system. For this to happen, the 'territory' on which food systems are being considered needs changing. As Oliveira and Morgado (2016) explain, "strategies for food security in cities have highlighted the need to re-localize production-consumption systems and to find innovative approaches in urban planning" (p. 7). It is only in 2021 that research focused on the potentials for a food strategy (Serra, 2021). However, examples of 'connected' food systems exist and are promising. In fact, in Lisbon, UA is very much associated with innovations, circular economy, social economy and 'social entrepreneurship' – a concept that emerged when Portugal was hit by a dramatic economic crisis (2008-2011), and led to the first social economy law in 2013 (Delgado, 2017). In direct relation with it, short-food chains initiatives have been emerging. Amongst them is Isabel Soares, mentor and current CEO of consumers cooperative *Fruta Feia* (a national project created in 2013 and ran by the Gulbekian, and now a cooperative which works with local farmers, encourages changes in consumption patterns and challenges market inefficiency). PROVE, promoted by ADREPES (a national association managed by professionals and activists which use of internet to generate sales of fresh local products), and Nam Mushrooms (https://nammushroom.com/en/pages/sobre-nos), created in 2017, which, every month, transforms 500kg of used coffee ground into 100 kg of mushrooms and organises workshops on circular economy, are two other examples.

These initiatives are in line with larger networks (e.g., the Cost Urban Allotments Gardens in European Cities (2012-2016; Bell et al., 2016) and the *Milan Urban Food Policy Act* (2015), on sustainable urban food systems. Although the contribution of food networks into the overall design of a circular economy still needs improving (Cavaco, 2016), networks of knowledge in UA have had an impact on reforming learning about ecological urban transitions.

UA as experiential and territorial learning

Research carried out on Education for Sustainability in Portugal has highlighted a general lack of integration of national strategies in higher education institutions with regards to the goals of the UN DESD 2005-2014 (Farinha et al., 2018). It concluded that, in order to grasp the practical dimensions of what makes a territory sustainable, one has to understand better the territorial context within which sustainability is to be operationalised and acquire skills. Away from top-down approaches, Territorial Education (TE) "focuses on the collective influence and responsibility in creating inclusive and responsive public spaces" (Costa & Ioannidis, 2017, p. 53). Through this, the local territory both becomes an educational agent and content.

This relatively new focus on the territory accompanies what Courlet and Pecqueur (2013) described as a crisis in the notion of 'Nation State' within which liberalism, globalisation and growth models are being questioned and the dogma of 'homogeneous space' is being contested. It also encourages innovation and 'new proximities' in a territory – a 'complex system' aligned with challenges such as recycling and energy saving. Besides being 'territories of debate and objection', "Urban gardens [can therefore] serve as learning platforms for creating territorial forms of socio-political, economic, cultural and environmental organisation in the city" (Araújo & Nascimento, 2021, p.149). In the examples of TE applied to UA projects and trans-disciplinary agro-ecology educational projects, systemic (Bawden, 1991) and experiential (Kolb, 1984) learning is fundamental because "agriculture, a human-natural system, includes a range of biological and social dimensions, life-cycle analysis and long-term impacts" (Francis et al., 2011, p. 226). It is on these bases that students from the Lisbon University of Science initiated the Horta FCUL project, focused on demonstrating permaculture practices through educational workshops[11] (Araújo & Nascimento, 2021). The Permalab, a laboratory for permaculture practices in urban spaces, hosts a number of research projects on UA's performance and efficiency. In addition, the *Bela Flor Respira* project and its Campolide Agroforest are promoting the community's agro-ecological transition using an abandonned plot of land (Araújo & Nascimento, 2021). Based on an agroforestry system's methodology, which reconciles sustainable food cultivation with the recovery of forest areas, the project is rooted in the Transition Network[12]. Experiential learning has also been promoted through the COproject Living learning lab by young entrepreneur Leyla Acaroglu, UN Champion of the Earth in 2016[13]. Her approach to alternative education developed through her 'un-school of disruptive design', which created farm-based immersive learning experiences in sustainable living and innovative design. Beside these, it is noticeable that a third of Lisbon

[11] https://hortafcul.wixsite.com/home/workshops-cursos--eventos; https://ciencias.ulisboa.pt/en/node/10664
[12] https://www.transicaoportugal.net/iniciativas-de-transicao/portugal/tu-fcul/
[13] https://www.leylaacaroglu.com/disruptive-design-method

UA projects focus on mandatory training, education or capacity building programmes (Delgado, 2017).

Conclusion

In this article, three approaches of climate change activism were explored and illustrated through the practice of urban agriculture (UA) in Lisbon and Bristol. If the first one (personal proximity) helped to explain why UA is a form of activism, motivated by the proximity of the effects of climate change felt through jeopardised food security, the concepts of 'disruptive dissent' and 'participatory urban governance' explained further how this form of activism is contributing to fighting climate change and whom it involves. While, through disruptive dissent, alternative ways of doing things are being suggested, reflecting a dissatisfaction with how matters are being conducted (i.e., in our case how food is being industrially produced), these suggestions haven't been necessarily rejected or opposed to by urban planners and local authorities who are keen to improve ways of fighting climate change and make cities more sustainable. In parallel, research on 'social, more participatory' forms of urbanism is taking much more importance and, to that extent, reformed urban governance is progressively being perceived as needing to go well beyond mere 'public consultation'. The last form of climate change activism, 'participatory urban governance', is therefore, to some extent, helping disruptive dissenters to have their perspectives taken into account by local authorities, who see the 'down-to-earth', 'proximate' immediate needs of citizens linked to larger-scale objectives they are seeking to meet in the urban planning strategies.

The illustrative examples provided through UA initiatives in Lisbon and Bristol showed that, in terms of urban governance, Lisbon might benefit from the lessons learnt in Bristol and that, conversely, Bristol might want to put more emphasis on the various forms of learning that UA can stimulate. Both cases, both Green European capitals, show to what extent small-scale activist initiatives, when used as a source of debates and learning, can contribute to improving urban governance and the identification of targets to make cities more sustainable.

Acknowledgments: *This work is based on the preparatory work for a PhD thesis on the subject to be submitted to the PhD Program in Urban Planning of the Universidade Lusófona. My warm thanks go to my supervisor, Carlos Smaniotto Costa, my colleagues from the CeiED, and the FCT who offered my PhD grant.*

Funding: *This PhD is being funded by the FCT (grant UI/BD/150716/2020).*

References

Altieri, Miguel, & Nicholls, Clara (2018). Agroecología urbana: Diseño de granjas urbanas ricas en biodiversidad, productivas y resilientes. *Agro Sur, 46*(2), 49-60. https://doi.org/10.4206/agrosur.2018.v46n2-07

Araújo, Daniela, & Nascimento, Mário (Coords). (2021). *Lisbon vegetable gardens: From Middle Ages to the 21st century*. Museu de Lisboa, EGEAC.

Ataman, Cem, & Tuncer, Bige (2021). Urban interventions and participatory tools in urban design processes: A systematic review and thematic analysis (1995-2021). *Sustainable Cities and Society, 76*. https://doi.org/10.1016/j.scs.2021.103462

Bawden, Richard (1991). Systems thinking and practice in agriculture. *Journal of Dairy Science, 74*(7), 2362-2373. https://doi.org/10.3168/jds.S0022-0302(91)78410-5

Bell, Simon, Fox-Kämper, Runrid, Keshavarz, Nazila, Benson, Mary, Caputo, Silvio, Noori, Susan, & Voigt, Annette (Eds.). (2016). *Urban allotment gardens in Europe*. Routledge.

Biel, Robert (2016). *Sustainable food systems: The role of the city*. UCL Press.

Brown, Kate, & Jameton, Andrew (2000). Public health implications of urban agriculture. *Journal of Public Health Policy, 21*(1), 20-39. https://doi.org/10.2307/3343472

Buser, Michael, Bonura, Carlo, Fannin, Maria, & Boye, Kate (2013). Cultural activism and the politics of place-making. *City, 17*(5), 606-627. https://doi.org/10.1080/13604813.2013.827840

Carey, Joy (2013). Urban and community food strategies: The case of Bristol. *International Planning Studies, 18*(12), 111-128. https://doi.org/10.1080/13563475.2013.750938

Cavaco, Cristina (Coord.). (2016). *Habitat III: National Report Portugal*. Direção Geral do Território.

Câmara Municipal de Lisboa. (2016). *Parques hortícolas*. Câmara Municipal de Lisboa. https://www.lisboa.pt/cidade/ambiente/estrutura-ecologica/parques-horticolas

Correio da Manhã. (2020, avril 28). *Crise. Au Portugal, un nombre croissant de familles au bord de la famine*. Courrier international. https://www.courrierinternational.com/article/crise-au-portugal-un-nombre-croissant-de-familles-au-bord-de-la-famine

Courlet, Claude, & Pecqueur, Bernard (2013). *L'économie territoriale*. PUG.

Curtin, Rory (2021, april 23). *Exploring food systems resilience in Lisbon*. Medium. https://medium.com/resilience/exploring-food-systems-resilience-in-lisbon-portugal-a12c2a67b330

Delgado, Cecília (2017). Mapping urban agriculture in Portugal: Lessons from practice and their relevance for European post-crisis contexts. *Moravian Geographical Reports, 25*(3), 139-153. https://doi.org/10.1515/mgr-2017-0013

Delgado, Cecilia (2020). A crise como oportunidade para repensar o ordenamento territorial: Potenciar os vazios urbanos para a prática de agricultura urbana. *Revista Jatobá*, *2*. https://doi.org/10.54686/revjat.v2i.65645

Deelstra, Tjeerd, & Girardet, Herbert (2000). Urban agriculture and sustainable cities. In Sabine Gundel, Marielle Dubbeling, Henk de Zeeuw, Nico Bakker, & Ulrich Sabel-Koshella (Eds.), *Growing cities, growing food: Urban agriculture on the policy agenda* (pp. 43-66). Deutsche Stiftung fur internationale Entwicklung (DSE).

de Zeeuw, Henk, van Veerhuinzen, René, & Dubbeling, Marielle (2011). The role of urban agriculture in building resilient cities in develping countries. *The Journal of Agricultural Science*, *149*(S1), 153-163. https://doi.org/10.1017/S0021859610001279

Dixon, Jane, Donati, Kelli, Pike, Lucy, & Hattersley, Libby (2009). Functional foods and urban agriculture: Two responses to climate change-related food insecurity. *New South Wales Public Health Bulletin*, *20*(1-2), 14-18. https://doi.org/10.1071/nb08044

Dubbeling, Marielle, & de Zeeuw, Henk (2011). Urban agriculture and climate change adaptation: Ensuring food security through adaptation. In Konrad Otto-Zimmermann (Ed.), *Resilient cities. Local sustainability* (Vol. 1). Springer. https://doi.org/10.1007/978-94-007-0785-6_44

Dubbeling, Marielle, van Veenhuizen, René, & Halliday, Jess (2019). Urban agriculture as a climate change and disaster risk reduction strategy. *Field Actions Science Reports*, *20*, 32-39. https://journals.openedition.org/factsreports/5650

Food and Agriculture Organization of the United Nations. (2002). *The state of food insecurity in the world 2001*. Food and Agriculture Organization of the United Nations. http://www.fao.org/3/y1500e/y1500e.pdf

Farinha, Carla, Azeiteiro, Ulisses, & Caeiro, Sandra (2018). Education for sustainable development in Portuguese universities.International *Journal of Sustainability in Higher Education*, *19*(5), 912-941. https://doi.org/10.1108/IJSHE-09-2017-0168

Francis, Charles, Jordan, Nicholas, Porter, Paul, Breland, Tor, Lieblein, Geir, Salomonsson Lennart, Sriskandarajah, Nadarajah, Wiedenhoeft, Mary, DeHaan, Robert, Braden, Indi, & Langernart, Vibeke (2011). Innovative education in agroecology: Experiential learning for a sustainable agriculture. *Critical Reviews in Plant Sciences*, *30*(1-2), 226-237. https://doi.org/10.1080/07352689.2011.554497

Garnett, Philip, Doherty, Bob, & Heron, Tony (2020). Vulnerability of the UK's food supply chains exposed by Covid-19. *Nature Food*, *1*, 315-318. https://doi.org/101038/s43016-020-0097-7

Goodman, David, DuPuis, Melanie, & Goodman, Michael (2012). *Alternative food networks: Knowledge, practice and politics*. Routledge.

Goodwin, Jeff, & Jasper, James (2009). *The social movements reader* (2nd edition). Wiley Backwell.

Goudle, Shona, & McIntyre, Zoe (2021). *A crisis within a crisis: The impact of Covid-19 on*

household food security. Food Foundation.

Gregório, Maria João, Rodrigues, Ana, Graça, Pedro, Sousa, Rute, Dias, Sara, Branco, Jaime, & Canhão, Helena (2018). Food insecurity is associated with low adherence to the Mediterranean diet and adverse health conditions in Portuguese adults. *Frontiers in Public Health, 6*. https://doi.org/10.3389/fpubh.2018.00038

Hassanein, Neva (2003). Practicing food democracy: A pragmatic politics of transformation. *Journal of Rural Studies, 19*(1), 77-86. https://doi.org/10.1016/S0743-0167(02)00041-4

Hetherington, Ema (2016). *Exploring barriers to and opportunities for urban agriculturein Bristol, United Kingdom* [Master thesis, University of Groningen]. Student Theses Faculty Spatial Sciences. https://frw.studenttheses.ub.rug.nl/id/eprint/657

Innes, Judith, & Booher, David (2004). Reframing public participation strategies for the 21st century. *Planning Theory and Practice, 5*(4), 419-436. http://doi.or/10.1080/1464935042000293170

Johnston, Josée (2008). The citizen-consumer hybrid: Ideological tensions and the case of Whole Foods Market. *Theory and Society, 37*, 229-270. https://doi.org/10.1007/s11186-007-9058-5

Kretschmer, Fabian, & Kollenberg, Malte (2011, July 22). *Can urban agriculture feed a hungry world?* Spiegel International. https://www.spiegel.de/international/zeitgeist/vertical-farming-can-urban-agriculture-feed-a-hungry-world-a-775754.html

Kolb, David (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.

Kolowski, Marc (2019, October 12). *Petitions are back in vogue. How they work (and are they effective?)*. The Sydney Morning Herald. https://www.smh.com.au/environment/climate-change/petitions-are-back-in-vogue-how-do-they-work-and-are-they-effective-20191002-p52x1k.html

Lang, Tim (2010). Crisis? What crisis? The normality of the current food crisis. *Journal of Agrarian Change, 10*(1), 87-97. https://doi.org/10.1111/j.1471-0366.2009.00250.x

Larsen, Kirsten, Ryan, Chris, & Abraham, Asha (2008). *Sustainable and secure food systems for Victoria: What do we know? What do we need to know?* (VEIL Research Report No. 1). Victorian Eco-Innovation Lab, Australian Centre for Science, Innovation and Society, University of Melbourne.

Lubell, Mark., Zahran, Sammy, & Vedlitz, Arnold (2007). Collective action and citizen responses to global warming. *Political Behaviour, 29*, 391-413. https://doi.org/10.1007/s11109-006-9025-2

Martínez, Miguel (2011). The citizen participation of urban movements: A comparison between Vigo and Porto. *International Journal of Urban and Regional Research, 35*(1), 147-171. https://doi.org/10.1111/j.1468-2427.2010.00956.x

Morgan, Kevin (2015). Nourishing the city: The rise of the urban food question in the Global North. *Urban Studies*, *52*(8), 1379-1394. https://doi.org/10.1177/0042098014534902

Matos, Rute (2010). *A reinvenção da multifuncionalidade da paisagem em espaço urbano: Reflexões* [Tese de doutoramento, Universidade de Évora]. Repositório Universidade de Évora. http://hdl.handle.net/10174/4304

Milan Urban Food Policy Pact (2015). https://www.milanurbanfoodpolicypact.org/wp-content/uploads/2020/12/Milan-Urban-Food-Policy-Pact-EN.pdf

Norris, Pipa (2003, November 27-28). *Young people and political activism: From the politicsof loyalties to the politics of choice?* [Paper presentation]. Council of Europe symposium "Young people and democratic institutions: From disillusionment to participation", Strasbourg, Belgium.

O'Brien, Karen, Selboe, Elin, & Hayward, Bronwyh (2018). Exploring youth activism on climate change: Dutiful, disruptive, and dangerous dissent. *Ecology and Society*, *23*(3), 42. https://doi.org/10.5751/ES-10287-230342

Oliveira, Rosário, & Morgado, Maria (2016). Planning the urban food system of the metropolitan area of Lisbon: A conceptual framework. In R. Roggema (Ed.), *Agriculture in an urbanizing society: Proceedings of the sixth AESOP Conference on sustainable food planning* (pp. 7-29). Cambridge Scholars Publishing.

Pothukuchi, Kameshwari, & Kaufman, Jerome (2000). The food system: A stranger to the planning field. *Journal of the American Planning Association*, *66*(2), 113-124. https://doi.org/10.1080/01944360008976093

Reed, Mathew, & Keech, Daniel (2017). The 'Hungry Gap': Twitter, local press reporting and urban agriculture activism. *Renewable Agriculture and Food Systems*, *33*(S6), 558-568. https://doi.org/10.1017/S1742170517000448

Reed, Mathew, Mettepenningen, Evy, Swagemakers, Paul, Dominguez Garcia, M., Jahrl, Ingrid, & Koopmans, Marlinde (2018). The challenges of governing urban food production across four European city-regions: Identity, sustainability and governance. *Urban Agriculture & Regional Food Systems*, *3*(1), 1-10. https://doi.org/10.2134/urbanag2016.11.0006

Renting, Henk, Marsden, Terry, & Banks, Jo (2003). Understanding alternative food networks: Exploring the role of short food supply chains in rural development. *Environment and Planning*, *35*(3), 393-411. https://doi.org/10.1068/a3510

Renting, Henk, Schermer, Markus, & Rossi, Adanella (2012). Building food democracy: Exploring civic food networks and newly emerging forms of food citizenship. *The International Journal of Sociology of Agriculture and Food*, *19*(3), 289-307. https://doi.org/10.48416/ijsaf.v19i3.206

Romero-Lankao, Patricia, Gnatz, Daniel, Wilhelmi, Olga, & Hayden, Mary (2016). Urban sustainablity and resilience: From theory to practice. *Sustainability*, *8*(12), 1224.

https://doi.org/10.3390/su8121224

Rosane, Olivia (2021, November 22). *How to save the world: Everything you need to know about climate activism*. Ecowatch. https://www.ecowatch.com/climate-activism-guide-2655772029.html

Schneider, Philipp, Ariane, Walz, Christian Albert, & Torsten Lipp (2021). Ecosystem-based adaptation in cities: Use of formal and informal planning instruments. *Land Use Policy, 109*, 105722. https://doi.org/10.1016/j.landusepol.2021.105722

Serra, Alberto (2021). *Lisbon food strategy: A guide to approach food systems*. CCDR-LVT.

Skar, Siv, Pineda-Martos, Rocío, Timpe, Anton, Pölling, Bernd, Bohn, Katrin, Külvik, Mart, Delgado, Cecília, Pedras, Celestina, Paço, Teresa, Ćujić, Mirjana, Tzortzakis, Nikos, Chrysargyris, Antonios, Peticila, Adrian, Alencikiene, Gitana, Monsees, Hendrik, & Junge, Ranka (2020). Urban agriculture as a keystone contribution towards securing sustainable and healthy development for cities in the future. *Blue-Green Systems, 2*(1), 1-27. https://doi.org/10.2166/bgs.2019.931

Costa, Carlos, & Ioannidis, Konstantinos (Eds.). (2017). *The making of the mediated public space: Essays on emerging urban phenomena*. Edições Universitárias Lusófonas.

Sonnino, Roberta (2016). The new geography of food security: Exploring the potential of urban food strategies. *Geographical Journal, 182*(2), 190-200. https://doi.org/10.1111/geoj.12129

Sparks, Aaron (2021). Climate change in your backyard: When climate change is proximate, people become activists. *Frontiers in Political Science, 3*, 666978. https://doi.org10.3389/fpos.2021.666978

Trope, Yaccov, & Liberman, Nira (2003). Temporal construal. *Psychological Revue, 110*(3), 403-421. https://doi.org/10.1037/0033-295x.110.3.403

Verba, Sidney, Schlozman, Kay, & Brady, Henry (1995). *Voice and equality: Civic voluntarism in American politics*. Harvard University Press. https://doi.org/10.2307/j.ctv1pnc1k7

van Veerhuizen, René (Ed.). (2006). *Cities farming for the future: Urban Agiriculture for green and productive cities*. IIRR; RUAF; IDRC.

Yip, Ngai, Martinez Lopez, Miguel, & Sun, Xiaoyi (Eds.). (2019). *Contested cities and urban activism*. Palgrave Macmillan.

Zientara, Piotr, Zamojska, Anna, & Cirella, Giuseppe (2020). Participatory urban governance: Multilevel study. *PLoS ONE, 15*(2), e0229095. https://doi.org/10.1371/journal.pone.0229095