

Peri-urban agriculture, social inclusion of migrant population and Right to the City

Practices in Lisbon and London

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Two main questions are addressed in this paper, namely: to what extent can urban and peri-urban agriculture (UPA) contribute to the social inclusion of migrants? And does UPA practised by urban farmers of foreign origin contribute to the expansion of biodiversity in cities? A comparative analysis of current peri-urban agriculture practices in Lisbon and London was carried out in allotment gardens and other spaces far from the centre in and on the edges of these capital cities. In both cases, a significant proportion of the migrant population is involved in two different frameworks: regulated in London and non-regulated in Lisbon. The paper concludes that patterns of social inclusion are quite city specific: urban farming communities from the Cape Verde islands maintain and strengthen community bonds through their activity but this does not necessary lead to better social integration within the wider Portuguese society. In London, migrants of foreign origin become part of an integrated communitarism on an individual basis. Concerning the contribution of peri-urban agriculture to biodiversity, evidence gathered strongly suggests that urban farmers of foreign origin do contribute to broadening biodiversity primarily in Lisbon and to a lesser extent in London. Final observations note to what extent these urban practices contribute to the Right to the City and thus if they are, more broadly, of an emancipatory and transformative nature.

Key words: urban and peri-urban agriculture (UPA), urban biodiversity, Right to the City, Lisbon, London, neighbourhoods, migration, Cape Verdeans

1. Introduction

A research project under the title ‘(Peri)urban Gardens in Lisbon and London: Generators of Social Inclusion and Urban Biodiversity’¹ explored two questions: to what extent does urban and peri-urban agriculture (UPA) contribute to the social inclusion of migrants (Section 3 of this paper)? And does urban agriculture

practised by the migrant population and the descendants of migrants contribute to the expansion of biodiversity in cities (Section 4)?

Among the various existing definitions of UPA, the one employed here and as the basis for the research was coined by Mougeot (2005, 1):

‘Urban agriculture is an industry located within, or on the fringe of a town, a city or a

metropolis, which grows and raises, processes and distributes a diversity of food and non-food products, re (using) largely human and material resources, products and services found in and around that urban area, and in turn supplying human and materials resources, products and services largely to that urban area.'

One feature of this definition is that the notion of 'urban agriculture' encompasses both intra-urban and peri-urban activities, the latter being the main focus of this paper.

Beyond the fact that both capital cities for which information is presented in this paper are European, their backgrounds are quite dissimilar in socio-economic and cultural terms, and therefore comparison has its own limitations. On the one hand, Lisbon is a capital of a semi-peripheral country (Santos 2011, 32), severely hit by the economic crisis, whilst London currently enjoys one of the highest Human Development Indexes in the world. This background difference inevitably determines different characteristics in the practice of UPA underway in each of them. In both cities, a solid presence of immigrant populations can be observed, but within two quite different frameworks that will be briefly described in the following section: non-regulated gardens in Lisbon² and regulated allotments in London.

The following neighbourhoods and cases are the empirical basis for the comparative analysis: in the Lisbon Metropolitan Area (LMA) the study was carried out in self-built neighbourhoods on occupied land of *Cova da Moura* (Amadora municipality) and *Talude* (Loures municipality), the neighbourhoods on privately owned land, of illegal origin from the *South Slope of Odivelas* (Odivelas municipality) or *Catuja* (Loures municipality) and the social housing neighbourhoods of *Casal da Mira* (Amadora municipality), *Quinta da Fonte* (Loures municipality), *Bairro Padre Cruz* (close to Carnide valley) and *Chelas* (Lisbon municipality). In London, visits took place in *Spa Hill* and *Windmills*

allotment sites, *Brockwell Gardens* and the Brixton-based *Abundance Project*.

Allotments and community gardens in Lisbon and London, a brief overview

The number and size of the sites visited are quite limited in relation to the total number of allotments and other farmed spaces existing in the two capitals but are typical of the main types of gardens that exist in each city.

In the LMA, as expressed by Martins (2012, 25, 30–31), unregulated urban agriculture has no legal status. In addition, it has neither been integrated in the regional ecological plan nor in the regular municipal plan. Nevertheless, data from Lisbon municipality, as shown in Figure 1, indicating the evolution of urban gardens in Lisbon, shows that the area covered by gardens has been decreasing from 300 hectares in 1987, to slightly more than 100 hectares up to 1995. Since that date, the situation has stabilised. Lisbon municipality carried out a more recent survey, published in 2010 (Fernandes et al. 2010, 201) that identified around 77 hectares of cultivated gardens, exclusively within the Lisbon municipal boundary (Luiz and

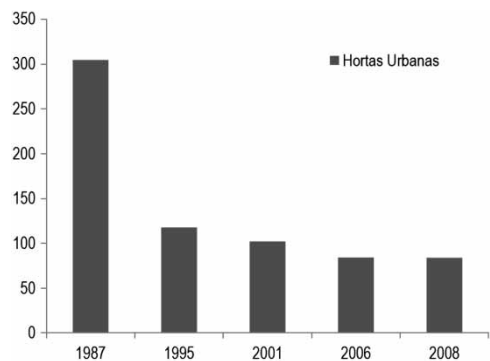


Figure 1 Evolution of urban gardens in Lisbon 1987–2008

(Source: Cardoso 2012, 28, based on information from Câmara Municipal de Lisboa, Departamento de Planeamento Urbano, Relatório do estado do ordenamento do território (REOT), 20 January 2009, first draft: <http://habitacao.cm-lisboa.pt/documentos/1238771728D1yS W7zj9Hn25NA7.pdf> [accessed 12 October 2011])

Jorge 2012, 148). However, this number is most probably underestimated, as it does not take into account the urban agriculture practices that are dealt with in this paper on non-regulated or public lands.

The eight cases visited in the LMA, even if limited in number, are, just as for London, quite representative of the range of situations currently found in the first peri-urban ring of the LMA, close to poor and fragmented peri-urban neighbourhoods, either designated as illegal origin, autonomously produced or publicly promoted (see Figure 2). Two cases are family gardens located on housing plots (*South Slope of Odivelas* and *Catuja*). Five cases are non-regulated allotments located on

occupied land either private or public (*Cova da Moura*, *Talude*, *Quinta da Fonte*, *Carnide* and *Casal da Mira*). The last case, *Chelas*, is an old non-regulated urban garden, recently regularised by Lisbon municipality.

- (1) *South Slope of Odivelas* is an example of an ‘urban area of illegal origin’ including five neighbourhoods located on sloping ground, facing north, with a population of around 7000 inhabitants, mostly Portuguese with only 14% declared as other nationalities (<http://pruvsko.cm-odivelas.pt>, accessed 24 October 2012). Some families have their gardens on their housing plots. However, tenants of

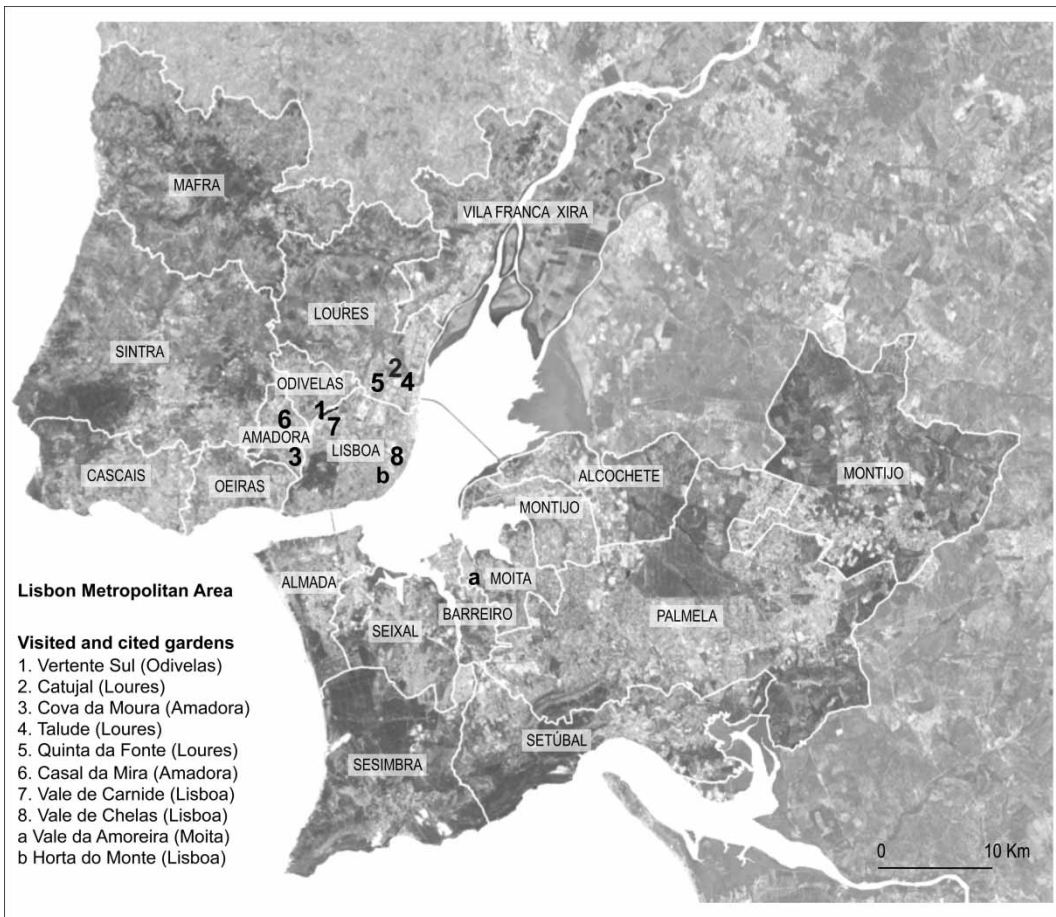


Figure 2 Location of the visited gardens in the Lisbon Metropolitan Area (Source: Author and Alexandra Martins, 2012)

foreign origin have their gardens mostly in neighbouring areas, and the land might be borrowed, rented or squatted. Urban gardens in *Catujal* are of the same type.

- (2) *Cova da Moura* is a good example of an autonomously produced neighbourhood from the 1950s with a population of around 6500 inhabitants, mostly of foreign origin. Non-regulated urban agriculture is practised on small patches of unused land within the boundaries of the neighbourhood and in open spaces in the vicinity such as vacant pieces of land that are ready to be developed, highway rights of way and protected zones or roundabouts (see Figure 3).
- (3) *Talude* is another typical autonomously produced neighbourhood from the 1970s essentially built by Cape Verdeans. About 130 plots located mostly on a large piece of land planned for further development are cultivated, ranging, according to Luiz (2012, 6), from 175 to 200 square metres in size.³ These plots are much larger than the average 20 square metres for backyard gardens (*quintais*).
- (4) *Quinta da Fonte* is a problematic public social housing neighbourhood (called *bairro critico* in Portuguese), built in the 1990s with around 2500 inhabitants, primarily Roma, African and other



Figure 3 Cape Verdeans' gardens on right off thoroughfares near their self-produced neighbourhood. Cova da Moura in LMA
(Photo: Marc Latapie, 2007)

low-income immigrants. The northern portion of the land is occupied by non-regulated gardens, mostly cultivated by residents of foreign descent or origin.

- (5) *Casal da Mira* is also a public social housing neighbourhood, built in the 2000s, with around 2800 inhabitants, mostly Cape Verdeans, installed near a major commercial centre and an urban highway. The large and sloped protection area of this highway has been occupied by the population practising urban agriculture. These non-regulated gardens were the subject of a municipal intervention concerning the demolition of fencing and shelters.
- (6) *Vale de Carnide* is located close to the *Padre Cruz* neighbourhood, one of the largest public social housing developments in the LMA and indeed in the country, built in the 1960s, 1970s and 1990s, with around 8000 inhabitants and also considered a problematic neighbourhood. The unregulated urban gardens look quite like English allotments, with around 100 plots cultivated on a large urban void classified as 'green area' in the municipal plan (Cardoso 2012, 10).
- (7) *Vale de Chelas* is probably the largest cultivated urban park in Portugal, covering about 15 hectares of which 6.5 hectares are gardens (see Figure 4). In a first phase 400 plots with an average area of 150 square metres were provided, most of them to families that were already cultivating, without any regulatory framework (<http://lisboaemuitagente.blogspot.com>).⁴ It is located, similarly to *Vale de Carnide* (near *Padre Cruz* neighbourhood) close to the largest low-income housing complex developed by the public sector since the 1960s.

As far as London is concerned, even if allotments, the name given to community gardens in the UK, are tending to decline in number, both in London and nationally, the last major survey carried out on behalf of the National Society of Allotment and Leisure Gardeners



Figure 4 Cultivated urban park of Vale de Chelas in Lisbon. Low-income neighbourhood at the rear (Photo: Yves Cabannes, 2010)

in 1997 indicated over 36,000 plots in 737 allotment sites, of which almost 31,000 were in outer London (GLA 2006, 38). Figure 5 indicates the numbers of allotment sites by London borough, giving a clear picture of their peri-urban location (ibid.).

The four sites visited in London are quite limited in relation to the number of existing allotment sites. However, their typology is quite illustrative of what can be found in the city:

- (1) *Spa Hill*, with 300 plots on 22 acres of land, is one of the largest allotment sites in London and is quite paradigmatic of what an allotment is (see Figure 6).
- (2) *Windmill Allotments* is much smaller in size as it has only 26 plots, 14 cultivated by men, 8 by women and surprisingly 5 were vacant in 2012, whereas, there

Number of Allotment Sites per London Borough

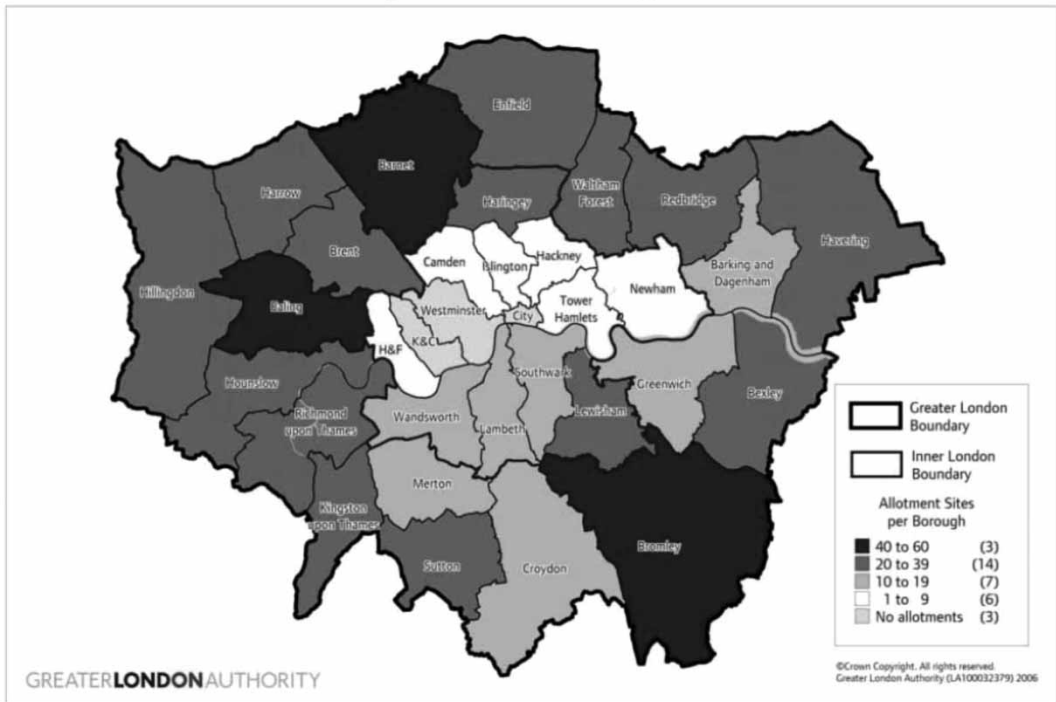


Figure 5 Number of allotment sites per London borough (Source: GLA 2006, 38)



Figure 6 Spa Hill Allotments
(Photo: Marina Chang, 2008)

is a long waiting list at the Metropolitan level to cultivate a plot (<http://windmillallotments.org.uk>, accessed October 2012).

- (3) *Brockwell Gardens* with its limited number of plots is managed as a charity and part of a low-income tenement complex.
- (4) The Brixton-based *Abundance Project* was developed on a derelict piece of land at the foot of a housing tenement building (see Figure 7). This latter was built and is managed by the Guinness Trust Fund, a private foundation of the Guinness brewing company.

2. Non-regulated (peri) urban agriculture in Lisbon and regulated (peri) urban agriculture in London

Non-regulated gardens in Lisbon

Urban farming usually practised in Lisbon is considered here as non-regulated urban agriculture, instead of labelling it as clandestine, informal or illegal. The idea of ‘clandestine’ urban gardens (*hortas urbanas*⁵) in common language and as used by the media, is too simplistic and not useful to capture and understand local reality. The notion of ‘informal’, generally used to address popular forms of occupation and management of productive spaces (Cancela 2010, 17), is not used here



Figure 7 *Abundance Project*, Guinness Estate, Brixton
(Photo: Robert Biel, 2009)

either, as it refers to models shaped by current official standards, highlighting what they are lacking without giving any value to their rationality and potentialities. ‘Informal’ may also presuppose an ethnocentric and urban-centric viewpoint that ignores the quality and favours the tabula rasa focus of existing practices.

‘Illegal’, the term commonly used in urban planning and building codes⁶ is not used here either to refer to UPA planning and practices

in Lisbon. In order to be legal, urbanisation and building must be in line with legal and urban planning instruments. However, as far as urban agriculture is concerned, its practice does not represent any act that infringes legality, or that is forbidden by a specific decree and subject to penalties. It is therefore a 'non-regulated practice', tolerated by the authorities in Portugal, which goes along with late industrialisation, the persistence of rural and agricultural practices and the slow process of urbanisation, filling urban voids and 'non-places', transforming them into 'spaces of place', production, subsistence, seclusion, leisure and sociability.

Due to the lack of public policies in this regard, non-regulated urban gardens in the LMA are cultivated mainly by low-income families, primarily first- or second-generation urban dwellers with a high percentage of migrants from other parts of Portugal and from foreign countries, including from Portuguese-speaking Africa and predominantly from the Cape Verde islands.

The absence of specific regulations on urban gardens opens up a space of freedom for gardeners to cultivate at will. Some cultivate a piece of land on their housing plot (private gardens) or a small empty urban void close by, often on private land. This practice is common among neighbourhoods of illegal origin, as in the *South Slope of Odivelas* or *Catuja*, where residents own the plots where they frequently build a single-family house without a permit. Those who live in self-produced neighbourhoods such as *Cova da Moura* or *Talude* or in social housing neighbourhoods such as *Casal da Mira*, *Quinta da Fonte* or *Carnide* frequently cultivate urban voids, on private but mostly public land, under the tolerant eye of the authorities. According to current urban plans, these areas are either planned for roads or urban development or are non-built land, such as protected areas, frequently along highway or viaduct embankments or at roundabouts.

In the case of non-regulated agricultural occupation, urban farmers, mostly

immigrants, do not hold any certainty regarding their right of use, and their activity can be terminated at any time by a political decision, generally for infrastructural works or new urban development projects. The status of the land determines the degree of precariousness, with implications also for the cultivation techniques applied, but this does not hamper the strong dedication of their occupants. At *Talude*, despite being cultivated for decades, this land does not fall under any regulation, as the urban plan is still under revision. The cultivated areas face the same threat as the illegal houses where the Cape Verdean farmers live. Organisational capacity of the community and their ability to attract the academic community, in order to defend their rights, represent a decisive factor for the continuity of gardens, even if and when the urban renewal plan is implemented.

In *Casal da Mira*, the non-regulated gardens of residents from the social housing neighbourhood next to a highway were partially demolished in order to expand the sewerage network. The urban gardens in *Vale da Amoreira*, a neighbourhood included just as *Cova da Moura* in the public Critical Neighbourhoods Initiative (2005) for an urban-improvement programme, faced a similar forced eviction threat (<http://blog.stress.fm/2012/05/hortas-do-vale-da-amoreira-follow-up.html>, accessed 10 July 2012).

Regulated allotments in London

Urban farming in London is quite different as allotments are spaces highly regulated and integrated into the established planning system. Most of them are classified as statutory and cannot be sold or used for other purposes without the consent of the Government. Despite being historically recognised and protected, the number of allotments sites is steadily decreasing. According to Greater London Authority (GLA 2006, 15), between 1987 and 1997 they declined from 796 to 737.

Of direct interest in this paper is that urban agriculture in London is practised by a large mix of nationalities, arguably one of the most ethnically and culturally diverse of the world capitals. Information on the *Brook Farm Allotment and Horticultural Society* mentions that: ‘Currently our membership includes around 40% of non-British origin, predominantly southern European but including a number of African origin’ (GLA 2006, 14). Another association insists upon and values the diversity of plot holders and the benefits that result from it: ‘The diversity of our community is a wonderful benefit. We all profit by the regular exchange of horticultural practice, plants, recipes and philosophies between all members of this community’ (East Barnet Allotments Association, *ibid.*).

A similar situation could be verified at the sites visited during the research: *Spa Hill Allotments*, for instance, has become a semi-public space where different nationalities coexist within pre-established management rules. Peer learning might happen, but apparently on a much more limited scale, and the different nationalities are diluted within the urban farmer community. Such highly regulated spaces, limited in number and decreasing through the years, have generated a long waiting list in different parts of the city. As a consequence, insurgent practices such as the self-nominated *Guerilla Gardening* are emerging, mostly on an individual basis, to plant and cultivate empty plots, and similar spaces to those cultivated, as a community, by Cape Verdeans in Lisbon.

Urban farmers’ organisations in Lisbon and London in perspective

One central difference between the cities as far as urban farmers are concerned is the nature of the way they organise. Londoners cultivating allotments are for the most part members of the National Society of Allotment and Leisure Gardeners (NSALG),

which upholds the interests and rights of allotment-holders across the UK. This organisation was formalised in 1930 although its origin dates to 1901 as a member’s co-operative. At the same time, the NSALG is a member of the International Office of Allotment and Leisure Gardens (Office International du Coin de Terre et des Jardins Familiaux—OICTJF), a European-wide not-for-profit organisation founded in 1926 and counting today over 3.5 million members in 15 countries (www.jardins-familiaux.org).

Nothing similar exists in Portugal, even for urban farming practised on legalised land. The OICTJF has no branch in the country and the reasons why such a radical difference exists would deserve a paper in itself. However, in recent years urban agriculture has been growing in importance in the media, primarily as a potential solution to mitigate the economic crisis. At the same time, some community-based organisations are inserting urban agriculture into their working agenda.

This has occurred in the visited areas (*Moinho da Juventude* in *Covva da Moura* or the AMRT in *Talude*). In the same period, environmental groups inspired by the Transition Towns Movement are occupying space for urban farming, considering them spaces of resistance. This is the case for instance in *Horta do Monte* (Monte Gardens), located in Graça Neighbourhood (www.hortadomonte.blogspot.com). Another illustration of the growing level of organisation is taking place at the national level coming out of the Portuguese urban agriculture network. Even if still informal, it is emerging as a national forum, organising three national meetings since 2010 (www.portau.org).

This said, bonds of sociability, solidarity and mutual support are common and will be addressed at a later stage for the cases visited. They are mostly based on customary neighbourhood practices in the case of gardeners of foreign origin or of foreign descent. In *Talude* and *Cova da Moura*, however, the local residents’ associations

support their members at technical and legal levels and defend urban gardening practices within the neighbourhood and outside on non-regulated land. For these organisations the Right to Housing and resistance struggles prevail over local struggles for the Right to Produce. In the social housing neighbourhood, *Casal da Mira* or *Carnide*, some kind of framework from city or parish councils is emerging, more normative and top down than bottom up and more repressive than supportive (destroying fencing and storage), even if in some cases they defend ‘associativism’ (Cardoso 2012, 79–80).

3. Social inclusionary value of UPA for populations of foreign origin

This section examines to what extent peri-urban agriculture practised in both London and Lisbon has contributed to a better inclusion of citizens of foreign origin. One of the clear conclusions of the fieldwork in Lisbon is that in both *Talude* and *Cova da Moura* self-built neighbourhoods, the population practising urban agriculture is essentially of Cape Verdean origin. The farming process is individual, family based or collective but in any case strong social bonds unite the Cape Verdean community. According to the interviews, urban agriculture has played, and continues to play, an inclusionary role within the Cape Verdean community, primarily for newcomers.

Cape Verdeans in *Talude* and *Cova da Moura* settled from the 1960s on, first as ‘invited workers’. They were followed by the arrival of the ‘returnees’ (*retornados*) in the aftermath of independence in 1975 and, later on, by returnees’ families or by labour migrants. Both neighbourhoods became, and still are, a hub for those migrants who subsequently migrated to other European countries such as the Netherlands or Luxemburg, or even the USA, in search of better-paid jobs.

One clear conclusion of the observation is that despite the fact that farming itself takes place on an individual or family basis, it has

been a way, largely expressed in testimonies and participatory planning sessions, of establishing or re-establishing and strengthening social and cultural bonds within the community in the broader sense. A major conclusion from the visits was that UPA is more a factor of social cohesion within a segregated community than a driver of social inclusion of this community within Portuguese society.

One of the research questions was whether the spaces cultivated were playing an integrative role either *among* the Luso-African communities, namely, of Cape Verdeans, Angolans, Mozambicans or Guineans or *between* Cape Verdeans and urban farmers of European Portuguese origin.

No evidence could be gathered to substantiate integration between communities and essentially Cape Verdean urban farming communities are self-contained with their own codes and practices. However, recent research work, posterior to the Lisbon–London exchange, indicates that ‘*Hortas*’ in Lisbon municipality are essentially cultivated by poor white Portuguese, with a minority of Cape Verdeans (Cardoso 2012, 78–79). In this specific case, various integrative and social events *are* observed and *do* play an inclusionary role, bringing the communities closer together, that are felt to have positive impacts by both European and African descendants. Another case that would need further exploration was found in *Vale da Amoreira*, located in Moita municipality on the outskirts of the LMA, where apparently various Luso-African communities, predominantly Angolans, were cultivating *hortas* on a significant scale.⁸

Urban farming, from space of production to spaces of freedom for excluded migrant communities in Lisbon

Urban farming in Lisbon is primarily carried out for reasons of need or income—for food security—now accentuated because of the deep financial and economic crisis, quite

understandable considering the high proportion of poor and jobless: the food produced is consumed mainly by the families that produce it, with any surplus either exchanged or sold at local markets to increase household income: 'Pensions provide for the rental home, to pay for water, electricity, gas and little leftover to eat. This [own production] will give a few things to fill the dish' (old gardener in *Carnide Valley*, interviewed by Cardoso 2012, 82).

The interviews reveal however, in addition to economic and social dimensions, a whole cultural, leisure and mental health dimension of urban farming in Portuguese as well as in immigrant gardeners: 'As I have no money to go for a walk and for tourism I entertain myself here' (old Portuguese gardener in *Carnide Valley*, interview by Cardoso 2012, 82).

At *Carnide Valley*, where, as mentioned above, the majority of gardeners are migrants from the north and centre of Portugal and 20% immigrants from the Cape Verde islands, interviews reveal the importance of gardens both for agricultural production and for recreation. Here most of the urban farmers are elderly (75% are over 65 years old), illiterate (45%) or with basic levels of primary education (45%), retired from construction or government service with low qualification levels, living on less than two minimum wages (between 300 and 700 euros a month).⁹

At *Talude Garden*, mostly involving people from the Cape Verde islands and their descendants,¹⁰ the motivations for cultivating indicated in interviews is in the following order: to increase available food (78%) and decrease food expenditure (72%), to combat stress (32%) and for entertainment and leisure (17%): 'We people need *horta*. We need to sow, we need to eat [and] it helps to relax and rest. This is my distraction' (interview with a Cape Verdean gardener by Luiz and Jorge 2012, 130). *Talude Garden* is considered a space of freedom and a link with the land of origin: 'I feel I am in Cape Verde' (133).

Collective practices: production, consumption and resistance

Urban and peri-urban farming practised by Cape Verdeans in Lisbon is a subtle mixture between individual and collective modes of production and consumption. Interestingly enough, on Saturdays and for special occasions and parties, beans produced by the Cape Verdeans will be cooked as the traditional '*feijoada cachupa*', a bean-based culinary classic, which is eaten collectively in a simple shed. It goes without saying that local *rum*, distilled from locally produced sugar cane, will produce the party spirit.

Just as important is the collective resistance to evictions and closing of the *horta*, all the stronger because of the various collective actions that are part of the local production of food.

Lisbon vs. London

In this sense, practices in Lisbon are of a radically different nature from what could be observed in *Spa Hill Allotments*. Allotments are formally recognised and the rights of urban farmers of foreign origin are the same as those of long-time Londoners. The community of urban farmers visited in London were probably more multicultural and pluri-ethnic than in Lisbon. However, urban agriculture seems to be much more a space of integration of individuals into the British lifestyle, rather than an enhancement, or at least the recognition of collective traditions from their country of origin. This corresponds to becoming assimilated into British values, essentially of individualistic nature and not, as in Lisbon, to the development of collective values and practices brought from the country of origin.

4. Contribution of UPA to biodiversity in cities

This section explores the extent to which urban agriculture practised by urban

farmers of foreign origin contribute to the expansion of biodiversity in Lisbon and in London.

One remarkable finding of the research was the identification of at least four types of bean (*pedra*, *sapatinha*, *bonje* and *bongolom*) that were introduced and still are cultivated by Cape Verdean communities primarily in *Talude*. These are part of the normal diet in the Cape Verde islands and part of one of the national dishes, *Feijoada* (*Cachupa*) *Cabo Verdiana*. Another species that was introduced and is largely cultivated on the periphery of Lisbon is sugar cane, and one remains puzzled to discover such an alien species to Lisbon, of sugar cane fields coexisting with olive trees. It must be noted though that Portuguese cultivate sugar cane on Madeira.

In London, similar practices of the introduction of non-native species were observed but on a much more limited scale and essentially on an individual, rather than on a community basis. For instance, a Portuguese farmer at *Spa Hill Allotments* is cultivating three different types of grapes from his country of origin. The testimony from Xiaomei, gathered by Marina Chang (2010, 16–17) during field visits at Brockwell Park Community Greenhouses, is quite illustrative of how and why she is cultivating native vegetables in London:

‘Xiaomei came to London eight years ago with the family from Fujian province, South China [...] She showed me the Chinese cabbage, spinach, Chinese leek, bitter melon, and many more home vegetables for which we don’t know the English names in her greenhouse. I asked permission to taste her vegetables. She instructed me to pick up the young leaves. “So delicious!” I almost screamed. She was delighted to see my satisfaction [...]. She secretly told me the main motivation for her to grow food was to give her something to do outside the house. She didn’t have to speak English, she just had to work in the garden. As a much more experienced food grower, she gained a lot of admiration from less experienced gardeners. She felt a sense of wellbeing and cultural

connectedness to her Chinese roots. The garden not only acts to replicate memories of home but as a sanctuary and place of cultural expression.’ (Chang 2010, 17)

These direct observations simply confirm results that we have gathered in cities around the world. Urban gardens cultivated by Italians in Brussels are easy to identify as they usually have a beautiful fig tree that they successfully introduced. Gardens belonging to Polish coal miners in the coal-mining belt of northern France were again distinctive for the typical cabbages they used to grow and those cultivated by Portuguese migrants on the periphery of Paris are similarly usually easy to identify because of the tall cabbages grown. The situation is similar in some African and Latin American cities: in Accra, Ghana, grass cutters locally called ‘*agoutis*’ and raised for the delicate taste of their meat were relatively recently introduced by Ghanaians from more northern provinces and in Argentina, migrants from northern provinces with hot climates recently introduced and are cultivating papaw in the temperate climate of Rosario.

Farmers of foreign origin, or from different parts of the same country, contribute to broadening urban diversity and to the introduction of a great variety of new species. This is particularly clear in Lisbon, probably due to the proactive attitude of Cape Verdean communities to occupy available vacant or otherwise unused land, in a non-regulated context. Such a scale would, however, be quite difficult to attain under current social and political conditions in London. One should observe at that level introducing new species in new environments could bring ecological danger, particularly if the species were to spread through self-seeding. However, it has not been observed in the cases studied here.¹¹

Farming systems and techniques

One of the unexpected findings of the research was the richness and wealth of farming

techniques practised in Lisbon by Cape Verdean communities in order to produce food on left-over spaces and urban voids. They have acquired in their country of origin a unique capacity to grow food in very dry and arid areas, on steep slopes of volcanic land, with thin, stony arable soils. As a result, they are not afraid of trying to cultivate steep slopes in Lisbon, usually spurned by Portuguese urban farmers and as a result they truly optimise the use of available land and complement existing farming patterns. Shallow farming associated with terraces instead of deeper ploughing helps avoid erosion.

They brought with them skills in soil reclamation and soil conservation techniques that are interesting to consider, as could be observed in *Casal da Mira* or *Vale da Amoreira*. Rocks and larger stones are removed to make very small walls and micro terraces that retain moisture and allow growing even in dry periods. At the same time, this reduces the need to water the plants, as no water is available in most of the urban voids, which they occupy. Keeping moisture in the soil is therefore essential, and the techniques of the Cape Verdeans are quite effective for this. The tradition of optimising rainwater from their original islands was essential to transform *Talude* and other gardens into productive spaces, far from any water networks. One of the community dreams is to have access to piped water, even if they would have to pay for it. As it is not available, they dig open rainwater reservoirs and small dams and look for ground water (quite difficult to access in most of the hills around Lisbon). When water is too scarce they bring it from home and keep it in drums or any other available container such as an old bathtub or smaller bins.

Even if some of the urban farmers interviewed used chemical fertilisers, some others said that they recycle organic waste and leaves as fertilisers as a way to increase and/or maintain soil moisture and improve soil quality.

In addition to introducing techniques that allow them to cultivate otherwise barren

land, one remarkable finding was transmitted by one of the urban farmers who explained how, over 15 years, good farmers tested the best soils to introduce sugar cane in Lisbon. Some of the soils were exposed to too much sun and had to be abandoned, others were too windy, yet others were too readily drained and did not retain enough moisture. The beautiful sugar cane fields visited are very impressive and worth a visit. However, the main conclusion was the extraordinary capacity of the excluded and the oppressed to experiment and adapt new species to new lands, far from any support from 'scientific knowledge' and the national school of agriculture or any other universities that at best have ignored them.

It seems that traditional knowledge systems, strong communities and non-regulated urban agriculture were key to understanding why in around 30 years various tropical species could be successfully introduced to Lisbon, without, until recently, any political support, incentive or subsidy. The threat that these might be destroyed and the farmers evicted while the country is facing a deep economic crisis and creeping impacts of climate change is difficult to understand. There is a need for more support from municipalities instead and of regularisation of existing non-regulated cultivated lands.

5. Lessons and concluding remarks

Relations between urban biodiversity and cultural biodiversity

Higher rates of freedom to occupy and cultivate land in Lisbon have led to the following: (i) introduction of new cultivated species including sugar cane and various types of beans; (ii) new agricultural techniques; (iii) new forms of production as a result; and (iv) increase in biodiversity. The Lisbon case suggests that biodiversity resulting from urban agriculture practices is not limited to the environment field, but extends to the

social and cultural ones in the same way. The proposed finding and theoretical conclusion of the research is that ethnic and cultural diversity in urban farming brings biodiversity to the city and multiplication of living species. At the same time, biodiversity in cities depends upon solid cultural biodiversity to become sustainable and resilient. This is an important area to explore for the future of cities in order to re-establish a more harmonious relation between nature and people in a world where living species, primarily in rural areas, are vanishing under the pressure of industrial agriculture.

Shifting scale

One commonality of urban agriculture practised in Lisbon and London so far is their extremely limited scale, both in number of plots and in the quantity of food produced. The practices of different regions and nationalities and their contribution to environmental, social and cultural biodiversity in the cities is, however, qualitatively valuable and significant. One final reflection of the research was to explore how to go further, essentially shifting from residual scales to a more integrated neighbourhood scale and from just a few neighbourhoods to the city as a whole.

Environmental concerns are emerging in Portugal's recent housing and urban policies, such as the aforementioned Critical Neighbourhoods Initiative. In both LMA neighbourhoods *Cova da Moura* and *Vale da Amoreira*, sustainable urban gardens were included as a leading dimension of sustainable development. However, none of these proposals have been implemented so far as a consequence of bureaucratic hurdles. Nevertheless, other experiments involving pedagogical, communitarian or social gardens are being promoted by local associations or educational institutions, sometimes with the support of parish councils as in *Carride Valley* near *Padre Cruz* neighbourhood (Cardoso 2012, 83–84), or conducted by the municipality itself. The experience of *Chelas Valley*

carried out by Lisbon municipality with the transformation of unregulated gardens in a nicely landscaped urban park cultivated by the original illegal farmers has to be highlighted as a successful case of local government support to urban agriculture.

Other initiatives have been promoted in Lisbon, with the support of universities, such as FAUTL¹² in *Cova da Moura*, which have been implemented in close collaboration with local associations and low-income people mostly Cape Verdean and African descendant communities (see Figure 8) for the improvement of non-regulated local agricultural practices (Colombo and Lorenzi 2012, 11). The driving concept is that UPA, under its multiple dimensions and spaces (Latapie 2007, 1–3), has a crucial role to play in the improvement of self-built neighbourhoods and in the radical challenge of the dominant functionalist and 'tabula rasa' paradigm (Raposo 2012, 112–115).

In London, the inclusion of urban agriculture as a strategic goal in urban spatial planning has been leading to the emergence of concepts such as *Continuous Productive Urban Landscape* (CPUL), as proposed by Viljoen and Bohn (2011), where continuous productive urban landscapes are intertwined with the urban built environment, facilitating the interaction between urban and rural spaces as well as built and non-built environments. Equally in Lisbon, the promotion by the municipality of urban allotments inside a Municipal Ecological framework (*Estrutura Ecológica Municipal*) can be understood under the CPUL concept and is part of the strengthening of environmental protection strategies within and around the city.

Transformative value of urban farming practices in the perspective of the Right to the City

Reflecting upon these limited practices leads to more fundamental questions: to what

extent do they challenge the capitalist production of space, and to what extent are they part of constructing the Right to the City? These cultivated spaces or 'space of places' as Manuel Castells (2008) describes them, are being produced through *participation to the oeuvre*, in Lefebvre's sense, and *appropriation* by the producers themselves (in these cases, in part, by populations of foreign origin), these being the two pillars of the Right to the City in Lefebvre's theory (1968).

A first contribution of urban agriculture is to transform cities into productive spaces, challenging their conventional role as a space of consumption of wealth produced in rural areas or in different countries. In doing so, it challenges as well the logic of the city as a place of generalised spectacular consumption denounced by Guy Debord (1967) and the *International Situationists* as generating essentially alienation instead of freedom.

A second contribution is that Cape Verdean communities in Lisbon are using the city, or, to take Lefebvre words, '*appropriating*' it, as opposed to '*owning*' it, in a conventional sense. The positive transformation, by one of the most excluded groups in Lisbon, of idle lands into green and productive spaces echoes the concept of '*contribution to the oeuvre*', meaning a city that does not return to the past but creates a city never built before. These elements suggest



Figure 8 Meeting between residents of Cova da Moura neighbourhood and FAUTL team discussing local agriculture
(Photo: Yves Cabannes, 2012)

that strong migrant communities cultivating unregulated lands echo the radical ideals of the Right to the City.

The remaining question to be addressed (Biel and Cabannes 2009) then is to explore and define strategies to develop the transformative potential of these practices at a significant scale and not merely on the fringes and interstices of cities.

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Notes

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- 2 Over recent years, several municipalities in the LMA have been increasingly involved in the regulation of urban gardens. However, this text focuses on unregulated gardeners' practices, which were the most common case until very recently.
- 3 Interview by authors with Juliana Luiz, November 2012.
- 4 Lisboa é Muita Gente. Associação de defesa da estrutura ecológica, do ambiente, do património cultural, da reabilitação, interculturalidade e da solidariedade social, em Lisboa. Information available at: http://lisboaemuitagente.blogspot.com/2010_11_01_archive.html
- 5 *Hortas urbanas*, literally 'gardens', are the common name for patches of land cultivated for food, on interstitial or non-built spaces, within the city limits.
- 6 This discussion is particularly present in the LMA in areas qualified as *areas of illegal origin* (Raposo 2012: 110) and where several self-produced neighbourhoods still remain on occupied land.

- 7 Some journalists call these urban farmers 'roadside farmers'.
- 8 Fieldwork by authors with students, Lisbon Summer School, July 2012. ISCT and Coimbra University.
- 9 Survey amongst 20 gardeners in a sample of 100 (Cardoso 2012, 77).
- 10 According to an inquiry amongst 60 gardeners conducted by Juliana Luiz, 75% of the 80 families interviewed have a garden: <http://www.ces.uc.pt/investigacao/posters/Juliana%20Luiz.pdf> (accessed 22 August 2012).
- 11 The danger of contamination of local seeds as expressed by the Portuguese Network for Local Species, SEMEAR, and expressed by Diogo Martins (interview, November 2012) comes primarily from genetically modified seeds introduced in the country through transnational companies or through the introduction of a monoculture of species such as Eucalyptus that caused devastating effects in Portugal.
- 12 Conducted by GESTUAL from Faculdade de Arquitectura de UTL, between January and June 2012. The initiative is now under the control of one of the local associations.

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- PORTAU—Portau da Agricultura Urbana e Periurbana. <http://www.portau.org/>

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