



An International Journal for Critical Geographies

From Leisure to Necessity: Urban Allotments in Alicante Province, Spain in Times of Crisis

Ana Espinosa Seguí

Department of Human Geography
University of Alicante, Spain
Ana.Espinosa@ua.es

Barbara Maćkiewicz

Institute of Socio-Economic Geography and Spatial Management
Adam Mickiewicz University, Poznań, Poland
basic@amu.edu.pl

Marit Rosol

Department of Geography
University of Calgary, Canada
marit.rosol@ucalgary.ca



Abstract

Based on a comprehensive study of allotment gardens in the province of Alicante, this article enhances research on urban agriculture in two ways. First, we explain the specific histories of urban allotments in Spain that differ from the well-rehearsed stories of North America and also Northern Europe. Second, we show that a focus on urban allotments can provide a better understanding of changes in the economy, in land-use and in urban-rural relations in times of crisis. After two decades of Spain's "urbanization tsunami", in the mid 2000s a new way of combining urban life with agricultural functions emerged: through allotments, municipalities intended to promote environmentally-oriented leisure activities, enhance urban green landscapes, and revive traditional vegetable gardens (*huertas*). At first, these projects catered mostly to pensioners, including foreigners coming from countries with long traditions of urban allotments. As the economic recession intensified in 2009, allotments had to re-define their goals in a social environment now defined by high unemployment and impoverishment. Today, most of the projects target people at risk of poverty and social exclusion and their primary functions are productive, therapeutic and educational. We also show that the global economic crisis of 2008 in a way contributed to the revaluation of agricultural land use, although the spectre of land-speculation is still very present.

Keywords

Urban agriculture; Spain; allotment gardens; urbanization; deagrarianization; agriculture; housing bubble

Introduction

Spain has been drastically impacted by the current global economic recession. After fourteen years of continuous economic growth, the country fell into one of the deepest and most dramatic crises ever experienced. The specific conditions of the Spanish economic growth model, amongst others, the heavy reliance on the construction sector, mainly caused this collapse (Romero, 2010). Prior to the current crisis, Spain experienced an unprecedented real estate boom. Between 1996 and 2006, 6.5 million new housing units were erected (Romero, 2010), i.e. more “than in France, Germany and the United Kingdom combined” (Hernandez et al., 2014, 76), and housing prices per square meter increased on a national average nominally to 280% (García 2014,396). Due to the prominent position of real estate in the Spanish economy, the collapse of the building sector in 2007 had a serious effect on the rest of the economy. The burst of the real estate bubble combined with the rising rates of family indebtedness and the banking crisis provoked an alarming rise in the unemployment rate, and halted consumption and investment and thus the whole economy.¹

A growing body of geographical research on the 2008 global economic crisis has looked on how it affects urban spaces (e.g. Vaiou and Kalandides, 2015; Schipper, 2014; Peck, 2012; Martin, 2011; Schindler, 2014; Koutrolidou, 2015; Oosterlynck and González, 2013). Creating urban allotments was often a response to crisis, emergency and impoverishment, not only historically – for example with the Victoria Gardens during WWII (e.g. Lawson, 2005) – but also currently in cities like Detroit (e.g. Walker, 2016; McClintock, 2010). However, we rarely see research on the effects of the current global crisis on urban agriculture projects, from either a social or a land-use perspective (see Pourias, 2015, however). In Spain, the burst of the housing bubble resulted not only in social hardships such as high unemployment and foreclosures, but also in a relief, albeit temporary, of vacant land from the reckless appetite of the real estate sector. For the first time in recent economic history, urban land became available as development projects were cancelled. These vacancies, which would have previously been viewed as speculative urban assets, now present opportunities for new, non-commercial uses. Urban allotments are one such use.

Allotment gardens, and urban agriculture more generally, are praised in spatial planning literature for their many potential benefits including: subsistence, providing healthy food and recreation for households on a tight budget, fostering a sense of community, making productive use of vacant land (e.g. Hodgson et al., 2011; Mendes et al., 2008; Pothukuchi and Kaufman, 1999, to cite just a few), and for their therapeutic and educational benefits (Wakefield et al., 2007). Some

¹ In 2007, 9.3% of the national GDP was reliant on the construction sector (compared to just 4.7% in 1997) (Romero, 2010). According to García, 2.3 million jobs were lost in Spain directly or indirectly due to the collapse of the housing bubble (García, 2010, 968).

authors see them as even contributing to the decommodification of land, labour and food (Alkon and Agyeman, 2011; Rosol and Schweizer, 2012). Again, others are more critical and see a connection between neoliberalizing cities and the growing interest in urban agriculture, community gardening, and urban allotments² (e.g. McClintock, 2014; Tornaghi, 2014; Walker, 2016; Ghose and Pettygrove, 2014; Rosol, 2012) or point out that urban agriculture projects may reinforce social inequities that they attempt to overcome (Reynolds, 2014; Guthman, 2008). By now, most of the extensive literature on urban agriculture in the “Global North” focuses on North America. The specific histories of urban agriculture in other countries, and particularly of urban agriculture in Spain, are almost absent in these debates.

Spain had a very different starting point for urban agriculture due to the traditional importance of agriculture. More recently, the difficulties for an ever greater share of the population to make a living, as well as the collapse of the construction sector and the weakened real estate market, have created opportunities and new functions for the emerging urban allotment garden movement. It was no coincidence that the expansion of urban gardening, especially community gardens, appeared when the economic crisis halted the construction boom. Not only did vacant lots become available, the emerging urban gardening movement regarded and presented their use for urban agriculture as critique of the effects of the aggressive urban development that had taken place in the previous decade (Fernández and Morán, 2012, 269).

In this context of major social, economic and political change, two main types of urban gardens emerged in Spain: movement-related *community gardens* and individually-assigned *allotments*. Both types of gardens are mainly found in larger cities where strong social movements are present. Here, urban agriculture activists seek to create social spaces and improve the quality of life in their neighbourhoods (Anguelovski, 2013). The majority of community gardeners share different degrees of green activism and a commitment to environmental and social issues, and many use urban agriculture as a way to protest against – and provide an alternative to – rapid urban development. Community gardens have been set up as a result of bottom-up initiatives by ecologists, neighbourhood associations, and students or other representatives of educational institutions. The newly emerging urban agriculture movement has also been closely related to the Spanish anti-

² The literature is not precise in differentiating between the terms. Urban agriculture and urban gardening are umbrella terms that may also include commercial farming or refer to smaller projects that do not produce for sale and may also include ornamental plants. In this article, we use the term community gardens when a community manages them, and allotments when we speak about individually assigned plots (see below).

austerity (urban) social movement *15-M* (Villacé, 2012; Fernández Casadevante Kois and Morán, 2015).³

The second, more extensive, but less studied model of urban agriculture in Spain is the individually-assigned urban allotment garden, founded and managed by local authorities. They prevail in medium-sized and small towns. This second type of gardens has thus far been neglected in the literature on Spanish urban gardens, which tends to focus on movement-based gardens and larger cities (e.g. Sanyé-Mengual et al., 2015). Those allotment gardens are in the centre of our study, in which we show that since the onset of the crisis their task and meaning changed from offering healthy, green leisure activities towards addressing social needs. We do so based on a study of 38 urban allotment gardens in various municipalities of the province of Alicante, located in South-Eastern Spain on the coast of the Mediterranean Sea.

The province of Alicante was chosen as a case study for two main reasons. First, the Spanish real estate boom was strongly tied to the tourism industry and thus particularly affected coastal localities like Alicante; 48% of the housing stock built between 2000 and 2011 was located in the Mediterranean provinces (Hernandez et al., 2014, 76). A province highly dependent on tourism, Alicante experienced a 344% increase in housing prices between 1996 and 2006, greatly exceeding the national average (280%) and attaining third place among all provinces (García, 2014, 396). Due to its mild weather, tourist facilities, and coastal territory, the area was also very attractive for housing investment geared towards “retirement migration” (Morote and Hernández, 2016). According to the Spanish National Institute of Statistics, 27% of the 304,765 foreign pensioners living in Spain – coming mainly from central and northern Europe – resided in the province of Alicante in 2015.

Second, before tourism dominated the coastal line of the province, agriculture formed the heart of the economy in Alicante. The Mediterranean climate is favourable to fruit trees, horticultural crops, vineyards, almonds and olive trees, many of them established in traditional *huertas*.⁴ The construction boom converted farmland into more profitable uses such as mostly medium and low density urbanized areas and provoked the abandonment of agriculture. The province has been mostly urbanized by now, with 86% of the provincial population

³ 15-M arose on the 15th of May 2011 in Madrid to protest the management of the economic crisis, and quickly spread over the entire country (Flesher Fominaya, 2015; Taibo, 2013).

⁴ *Huerta* refers to traditional, usually irrigated, peri-urban farmland, where mostly leafy green vegetables are grown. The word *huerta* has a powerful meaning in South-Eastern Spain, especially in the Region of Valencia and Murcia.

living in medium and small-sized urban areas in 2014.⁵ Land-use change has been especially drastic, and Alicante can be considered as a prime example of the devastating effects of a rampant property market.

Our analysis of Alicante's allotments is situated within important developments of contemporary Spain that are closely related to the crisis. Specifically, we interpret the creation of urban allotments as a reaction to land speculation, massive urbanization, and urban sprawl in the province. We thus follow this introduction with a longer discussion of the changes in land use that led to massive deagrarianization and the burst of the housing bubble, and show the emergence of an urban agriculture and urban allotments movement in Spain. After a brief methods section, we show how the ways in which these gardens were managed, funded and with what goals, changed since the onset of the crisis. In order to answer this question, the first step of our study was to produce an inventory of all publicly supported allotment garden projects in the province of Alicante (see Appendix). Second, based on qualitative interviews with the garden managers and other documents, we show that these urban agriculture projects play an important social role by offering services to residents who were suffering from the effects of the economic crisis. We also discuss changes of perception of urban allotments as tools for public action concerning land use by city officials. We conclude with reflections on the successes and failures of the municipal allotment projects.

With this, we contribute to and enhance research on urban agriculture in two ways. First, we show that the very specific histories of urban allotment in Spain, which have rarely been written about in English, differ from the well-rehearsed histories of North America and also Northern Europe. Second, through a focus on urban allotments, we hope to provide a better understanding of changes in the economy, land-use, and urban-rural relations in times of crisis. We argue that although some of the features of the urban allotments in Alicante can also be studied elsewhere – for example, the use of gardening for therapeutic, educational and subsistence purposes particularly in times of economic crisis, the growing interests in organic production, and the tensions between land-owners and municipalities – some of them are quite unique to Alicante. Those unique features are related to the strong retirement migration in the province, which has resulted in: a population particularly amenable to the idea of allotment gardening; the specific urban growth model; the crisis that led both to the revalorization of open green spaces as well as the need for social services; and the specific relations between the urban and the rural as exemplified in the traditions of *huertas*, which the allotments seek to revive.

⁵ Our own calculations based on the annual census, *Cifras oficiales de población resultantes de la revisión del Padrón municipal a 1 de enero 2014*, published by the National Institute of Statistics (<http://www.ine.es/dynt3/inebase/es/index.html?padre=517&dh=1>).

Situating urban allotments: The Spanish context

Deagrarianization, urban sprawl and the burst of the housing bubble

Compared with other Western nation-states, Spain has been an agricultural country for a long time. It was only in the 1950s that a rural exodus (*éxodo rural*) began. Once started, this process was very dynamic. During the period of 1950–1991, rural population dropped from 13.5 to 9.7 million. This was accompanied by a sharp decline in employment in the primary sector (agriculture, mining, forestry, and fishing). In 1950, 75% of economically active people living in the countryside worked in agriculture; by 1991 this proportion had dropped to a mere 26% (Collantes, 2007). Over a few decades, traditional farming was replaced by industrial agriculture. This change led to what Gallar and Vara (2010) call not only a productive, but also a cultural *deagrarianization*, i.e., the loss of interest in agriculture and rural life. Towards the late 2010s, a mere 4% of the Spanish active population worked in agriculture (Ministerio de Agricultura, 2009; Goerlich and Cantarino, 2015).

Since the 1950s, the economic growth of most Spanish municipalities located on the Mediterranean coast has been based on the tourist and construction industries (Gaja, 2008; García, 2014). The construction boom that occurred in Spain in the years 1996–2006 strongly emphasised this trend. The “urbanization tsunami” (Gaja, 2008), and the related massive consumption of land and other resources like water (Hernández, 1997; Morote and Hernández, 2016; Ibáñez, 2014), strongly hit the province of Alicante. The mid-1990s real estate bubble, which was very much related to “residential tourism” (Morote and Hernández, 2016), boosted Alicante to third position in Spain in housing units built. Most municipal governments took an active part in this massive urbanization, and pushed legislative changes in spatial planning, in order to increase their revenues through building permits and planning reviews (regarding the role of local and regional governments in the Spanish urban growth model see García, 2010; Morote and Hernández, 2016; Romero, 2010, 25).⁶

The priority of land use investment in those years was secondary homes that were mainly concentrated along the Mediterranean coast. Today, secondary homes account for more than 25% of all homes in the province, and in some municipalities their share exceeds 50%. Many of these homes, largely intended for use by (mostly retired) foreigners from Great Britain, Germany, Scandinavia and the Netherlands, have recently been built on the southern coast of the province of Alicante, i.e., areas that not so long ago were irrigated areas of high farming

⁶ Lack of space prohibits a detailed explanation of these legislative changes. Suffice to say, their introduction led to a significant liberalisation of spatial planning regulations at the municipality level and to a general belief that virtually each type of land is suitable for urbanisation (“*todo urbanizable*”).

profitability (Morote and Hernández, 2016). As a result of this process, much of the agricultural land located near the coastal tourist cities and towns was transformed into construction land or abandoned because of land speculation (García, 2010; Morote and Hernández, 2016; Burriel, 2008, 2009). The municipality of Rojales is one of the best examples to demonstrate this process of massive urbanization (see Figs. 1 and 2).

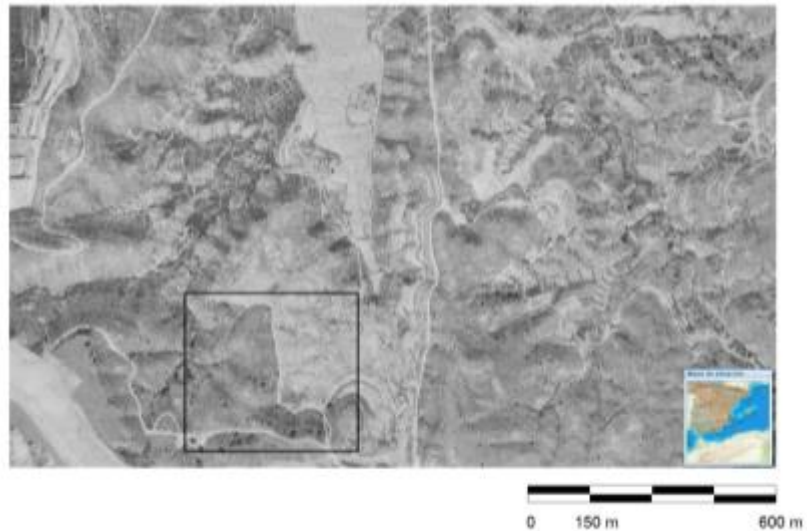


Fig. 1: Rojales-in mid 1980s before the construction boom (Aerial imagery source: www.fototeca.cnig.es)

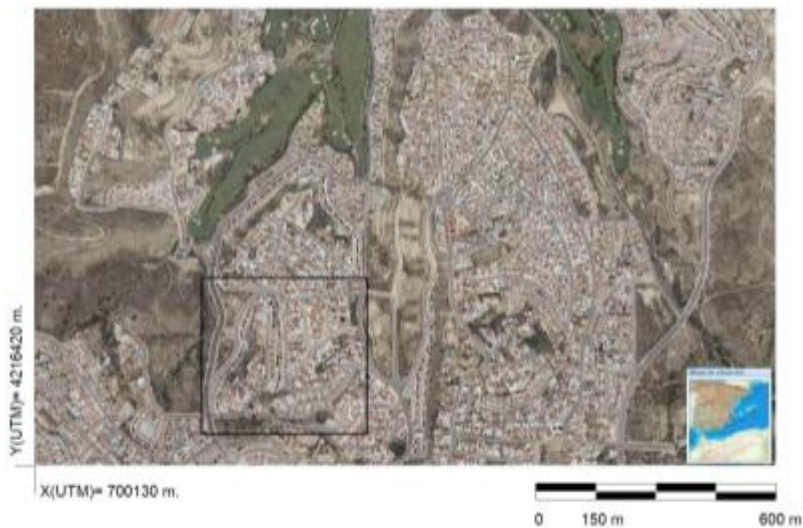


Fig. 2: Rojales in 2012 – after the construction boom (Aerial imagery source: www.fototeca.cnig.es)

The construction fever and the lack of profitability of agriculture contributed to the devaluation of agriculture as a trade and as a productive activity. According to the agricultural reports of the Region of Valencia (published by the regional Ministry of Agriculture), between 1982 and 2014, the province of Alicante lost 316,752 hectares of cultivated lands, passing from 450,564 to 133,812.⁷ Most of this loss happened in the years of the construction boom. Between 1999 and 2010, the area of farmland in the province of Alicante dwindled to less than a half, from 378,374 ha to 180,980 ha.

It was the economic crisis that stopped this drastic land-use change. One noticeable effect of the economic crunch was that those left unemployed decided to cultivate fallow land and, as a result, the area of cropland for the first time in many years grew from 144,917 ha to almost 155,000 ha between 2009 and 2010. However, because this activity turned out to be unprofitable in most cases, it was yet again abandoned. This caused the steep decline of cropland area which descended to 140,705 ha in 2011, further dropping to 133,752 ha in 2014, below the 2009 level (Navarro, 2011). Navarro concludes:

Taking up farming did not turn out to be the solution expected by many people who had lost work in industry and construction because of the economic crisis. The hard nature of farm work, lack of the necessary skills, and especially very low sale prices of agricultural produce, (...) caused most people that had decided to turn to farming as a way out of the difficult situation, to give up this idea. (Navarro, 2011)

Ramón Espinosa Sáez, the technical secretary of ASAJA, the Association of Young Farmers of Alicante, explains:

In the times of the crisis, the primary sector absorbed labour expelled by other sectors. Many farms were recuperated. But nowadays, agriculture requires much more expertise and is more demanding than it used to be. If today you are a builder and tomorrow you want to start working on your father's land, it is not so easy. You need training and specialization. (Interview 37, 2016)

Although not a massive trend and not without challenges, a change in the approach to farming occurred as a result of the crisis. According to Espinosa Sáez, land prices also serve as an indicator of this, as they are again more perceptive to agricultural uses after a long time of escalation (Interview, 2016).

⁷ See also Table 2 in Morote and Hernández (2016, 357) regarding the change in land use in Alicante province.

Urban allotment gardens in Spain

For a variety of economic, cultural, geographical and historical reasons, urban allotments in Spain do not have as rich a tradition as those in Central Europe or the United States (for the US example, see Lawson, 2005; for Europe, Bell et al., 2016; for England, Burchardt, 2002; for Germany, Gröning and Wolschke-Bulmann, 1995; Rosol, 2006). At the beginning of the 19th century, so-called pauper's gardens were created in many European countries on formerly uncultivated peri-urban land, allowing the urban poor to cultivate their own produce (Fernández Casadevante Kois and Morán, 2015). Since industrialisation and urbanisation in Spain lagged behind those processes in Western countries, urban allotments appeared only in the first decades of the 20th century. This was a result of the spontaneous cultivation of land in the peripheries of Madrid and Barcelona, that supported working class families (Morán, 2011; Diputación de Alicante, 2011). However, as Ballesteros et al. (1984) write, city administrators were reluctant to deal with the issue of informal gardens in Madrid's outskirts because they resembled slums (*chabolas*) (cited in Morán, 2011). Ballesteros et al. (1984) conclude: "While in the rich Europe urban allotments are places of relaxation for social-democratic workmen and office workers with no serious financial problems, in Madrid they are means of support for people in poverty" (cited in Morán, 2011, 34). There was also less interest in allotments in medium-sized and smaller towns, as they were surrounded by farmland sufficient in supplying products that served local and regional needs.

The first step for the promotion of urban agriculture in Spain was the *Huertos metropolitanos en precario* project from 1983 by COPLACO.⁸ The main goal was the legalization and inclusion in strategic planning documents of these spontaneous gardens and farms in the peripheries of Madrid (Morán, 2011). According to Fernández and Morán (2015, 245), the first example of actively establishing and publicly promoting an allotment in Spain was situated in the Basque Country in 1980, in the municipality of Martutene. A few years later, in 1987, the Caserío de Henares urban allotment was created in San Fernando de Henares near Madrid. This project became a reference for similar projects implemented in other large cities in the country, e.g., Seville (1991) and Barcelona (1992). In the Barcelona case, the two main goals were to provide leisure occupations for pensioners and to improve the quality of the urban environment. Courses on principles of organic agriculture were taught because only organic gardening practices were allowed (Puente, 2012). At the same time, pensioners from Barcelona spontaneously set up several informal gardens on the banks of the Besós and Llobregat Rivers (Sanyé-Mengual et al., 2015; Domene and Saurí, 2007; Faus, 2008).

⁸ *Comisión de Planeamiento y Coordinación del Area Metropolitana de Madrid*, the regional Planning and Coordination Commission of the Metropolitan Area of Madrid.

However, those early projects failed to popularise urban agriculture in Spain. There were no favourable social, economic or cultural conditions for establishing allotments. It was a time when the Spanish society was perceiving itself as finally moving away from its traditional agricultural economic base and even began to import fruits and vegetables (Amigos de la Tierra, 2012). Another reason for the disinterest in urban agriculture and other green land uses was the massive urbanization process and land speculation as previously discussed. Until 2006 there were only fourteen Spanish cities with urban allotments and no new projects underway. At that moment, Ballesteros et al. counted 21 municipal projects with 2,492 plots. However, only eight years later in 2014, there were 216 urban areas in Spain with urban allotments (a fifteen-fold increase), 400 municipal projects and more than 15,000 plots. The surface area of urban allotments went from 261,870 m² in 2006 to 1,616,201 m² in 2014, a six-fold increase (Ballesteros et al., 2014).

Urban agriculture projects have subsequently been established in order to recuperate urban space for social and environmentally friendly uses, to reincorporate agriculture in the city, to positively influence economies seriously harmed by the crisis, to foster food sovereignty and neighbourhood relations, to increase participation, and to develop environmental education in an increasingly urban society (Fernández Nieto and Gallego Sánchez-Torija, 2013). The development of urban agriculture projects is also closely connected to the growing desire for organic produce and local production (Kacprzak and Maćkiewicz, 2014).⁹ Some even see urban farmers as urban militants, who fight against the prevailing land-consuming economic model and revive traditional productive systems based on agriculture as a way to counter the economic crisis as well as reconnect with the countryside (Gallar and Vara, 2010).

Increasingly, local governments are also considering urban allotments as effective and cost-efficient tools for maximising social, cultural, and environmental benefits in damaged urban areas.¹⁰ Any political party governing at the local scale has benefited from the introduction of these projects, and thus both right- and left-leaning political parties support urban allotments. However, only the left openly

⁹ Although with 1.6 million ha of cultivated area Spanish organic production is the highest in the European Union (European Commission, 2013), national consumption had been relatively low and the majority of production exported. Since the 2010s, there has been a growth of organic consumption in Spain, especially among city dwellers, young adults, and families with children (Ministerio de Agricultura, 2014). Furthermore, a National Organic Farming Development Plan (2007-2010) was established with the main objective of increasing the number of organic farms. A new plan from 2011 emphasizes organic farming as an strategic sector that combines the production of high quality food with environmental protection and the creation of "green work-places" (Kacprzak and Maćkiewicz, 2014).

¹⁰ For a critique of administrative attempts to co-opt urban gardening projects in Berlin, see Rosol (2012).

declared urban allotments as tools for rethinking urban planning and the city in a more social and sustainable way.¹¹

Study: Urban allotment gardens in the province of Alicante

Methods

Our study covers all publicly supported allotment projects in the province of Alicante that were in operation at the time of our empirical research (spring to summer 2014). Projects under construction at the time and also the growing number of privately rented allotments¹² were excluded. In total, we analysed 38 allotment projects within 24 municipalities; all of them supported by public funds and 35 of them also initiated and managed by the municipalities.¹³ Aside from five projects that were located in villages under 10,000 inhabitants (the Spanish limit for defining a settlement as urban), they were all situated in urban areas.

First, we gathered data on the existing allotments with the help of a template (e.g., number, size, funding, goals, division of work, users' profile, objectives, crop techniques) adapted from a Puente's (2012) inventory of allotments of the City of Seville. We visited the gardens, took documentary photos, and filled in the required fields on the template. Second, interviews were conducted with urban allotment project managers and users. In total, 27 semi-structured interviews in all 24 municipalities¹⁴ were conducted and recorded from February to July 2014.¹⁵ Whenever possible, we requested the interviewees to help in selecting representative allotment users for a short supplementary interview. Based on this,

¹¹ After the regional and local political elections of May 2015, parties derived from the 15-M movement (*Podemos*, *Recortes Cero-Grupo Verde* or *Guanyem Barcelona*) and other left-oriented local and regional parties (*Compromís* in the Region of Valencia, *La Marea* in Galicia, *Ahora Madrid* in the city of Madrid or *En Comú Podem* in Catalonia) included the creation of urban allotments in their electoral programmes. All of the three biggest cities in the country (Madrid, Barcelona and Valencia, now governed respectively by *Ahora Madrid*, *Barcelona en Comú*, and *Compromís*, have encouraged the creation of formal urban allotments (for Barcelona, see e.g. Díaz, 2015; for Madrid, see García, 2016; for Valencia, see Pérez, 2015).

¹² An internet search showed the existence of a growing number of landowners who rent their abandoned lands to urbanites wanting to grow their own vegetables, thereby building on the success of urban allotments among pensioners and the unemployed. All of them were located in rural, distant locations and none of them provided educational services.

¹³ Only the City of Alicante does not have a municipality run allotment garden. Instead, a neighbourhood association, the 15-M social movement, and a NGO (Red Cross) manage the gardens (see Table 1).

¹⁴ Some interviewees managed multiple gardens.,with the 27 interviews we therefore covered and visited all 38 allotment garden projects.

¹⁵ In 2016, interviewees in all 24 municipalities were contacted again. The main goal of these follow-up interviews was to corroborate whether urban allotments retained their previous goals, assess changes provoked by the transition of government after the regional and municipal elections in May 2015, and any change regarding the general economic and social situation.

in 2016 we further interviewed seven gardeners: three long-term unemployed senior users, two foreign pensioners from the United Kingdom, and two 36-year-old unemployed individuals who aimed to expand their professional qualifications for future careers in organic agriculture.

Interviews lasted between 30 and 60 minutes. Interviewees were asked about the creation of the project, features related to the requisites for participating, the management of the allotments, the leasing contract conditions, and the descriptive elements mentioned above. We also asked administrators what they saw as the social, economic, educational, and therapeutic benefits of urban allotments, particularly for people affected by the economic crisis. Moreover, we were interested in the perception of urban allotment projects as helpful tools for the recovery of socially and environmentally beneficial land uses. The information gathered was complemented with expert interviews with Nerea Morán, architect and urban agriculture activist from Madrid and the most prolific Spanish academic writer on urban agriculture, and Ramón Espinosa Sáez, the technical secretary of ASAJA – Alicante (Association of Young Farmers of Alicante).¹⁶ Quotes from interviews were translated by authors.

History, funding, governance, and size of the Alicante allotments

According to our sources, the oldest official allotment project in the province of Alicante dates from 2005. Following the 2008 economic crisis more projects appeared. By the summer of 2014, 24 municipalities had already created urban allotments (see Figs. 3 and 4 and Table 1), and many others were starting to seek funding and develop projects. Most of the allotment projects were entirely funded by the state, i.e., local councils, with the help of provincial, regional, or even national subsidies. For example, many of the urban allotments in the province are a result of Local Agenda 21. Some municipalities used funds acquired through other regional and national subsidy programmes. The most significant ones were *Plan E*, also known as *Plan Zapatero*, promoted by the national government and *Plan Confianza*, from the regional government of Valencia. Both plans, launched in 2009, mobilised public funds for investing in job creation during the worst years of the economic crisis.

¹⁶ See <http://www.alicantearaja.com/>

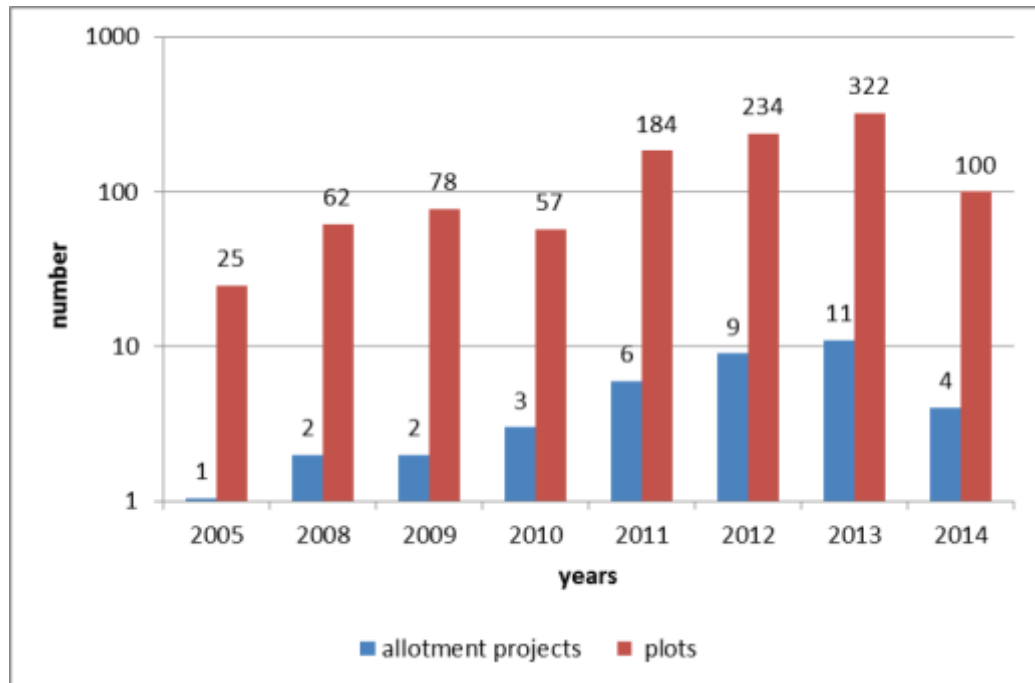


Fig. 3: Number of new allotment projects and plots created in the province of Alicante per year according to year of establishment (Source: own fieldwork).

The majority of urban allotments counted with an initial investment below 10,000€. The funds were invested in tools, tool sheds, and fences, as well as used for training, usually provided by external technicians. Water and electricity are also covered by municipal budgets, as urban allotments are regarded as public spaces similar to parks. Only a few of them require users to pay a fee for using the plot, between as much 50€ per month in the wealthier municipalities such as in the case of Gran Alacant and a yearly fee of 20€ and 30€ in Alfaç del Pi and Bigastro, respectively. The main reason for charging a fee is to raise awareness of responsible water consumption in a semi-desert area like Alicante. All but two allotments (Bigastro and the neighbourhood association in Alicante) follow organic agriculture practices. Education and monitoring are an important part of the projects and account for the highest expenditures.

An important and time-consuming part of the preparation of projects was the establishment of municipal regulations for the allotments. Only registered inhabitants in good standing with the municipality can participate in the project. Since the majority of the projects target unemployed people, they also need to prove their unemployment status. If they find a new job, they are allowed to maintain the plot until the end of the season. Contracts with individual users are only valid for one or two years, but are normally renewed regularly. When demand exceeds the number of empty plots, municipalities try to increase the number of plots or allotments. If an allotment project needs to be closed down on a particular

piece of land, users have to abandon their plots, but local councils try to reallocate the allotments elsewhere.¹⁷ Municipal regulations prohibit users from planting fruit trees or any other perennials, restricting them to planting green and leafy vegetables or herbaceous plants such as berries. Consequently, beautification of the plots is not a priority and it is quite unusual to find ornamental flowers. Seeds are usually saved from the last crop or exchanged in meetings. Since local governments provide water, services, and soil, the sale of produce is prohibited in all projects and production is only to be consumed amongst family members and friends.

The total area of all urban allotments in the province of Alicante amounts to approximately 6.6 ha across 1062 plots (see Table 1). There are no official counts of how many people benefitted from the gardening projects. If we estimate that at least one family member also has access to the sites, the projects reach more than 2,000 people, not including those who have already left the projects. The number of plots and their sizes vary among municipalities (see Table 1). In general, each municipality created one or two projects by dividing land into smaller plots for individual use. Only the tourist, coastal municipality of Altea established seven different urban allotment projects, providing more than 120 individual plots to users, both Spanish and central European foreigners. The average number of plots per municipality is 40, with a large range between 14 plots in the NGO urban allotment of Alicante, and the 121 in Altea. About half of the municipalities provide a maximum of three plots for educational purposes (primary schools, high schools or universities) or for local associations (neighbourhood and disability associations).

The average size of an individual plot is 60 m², but plot sizes vary according to goals and funding of the projects. The Red Cross NGO allotment project in Alicante for example, which targets people with high risk of social exclusion and has only limited financial means, offers the smallest plots we encountered in this study in order to minimise the cost of maintenance of the allotment while serving as many people as possible. Since the Red Cross provides users with packaged food and other material services, and also give valuable assistance on cultivation techniques, the allotment coordinator calculated a minimum plot size of just 6 m² as enough for growing the produce a family needed to complement their diet.

¹⁷ To our knowledge, there has been no move to make the allotment gardens permanent thus far, either from the local state or from the gardeners. They are not protected in local spatial planning documents.

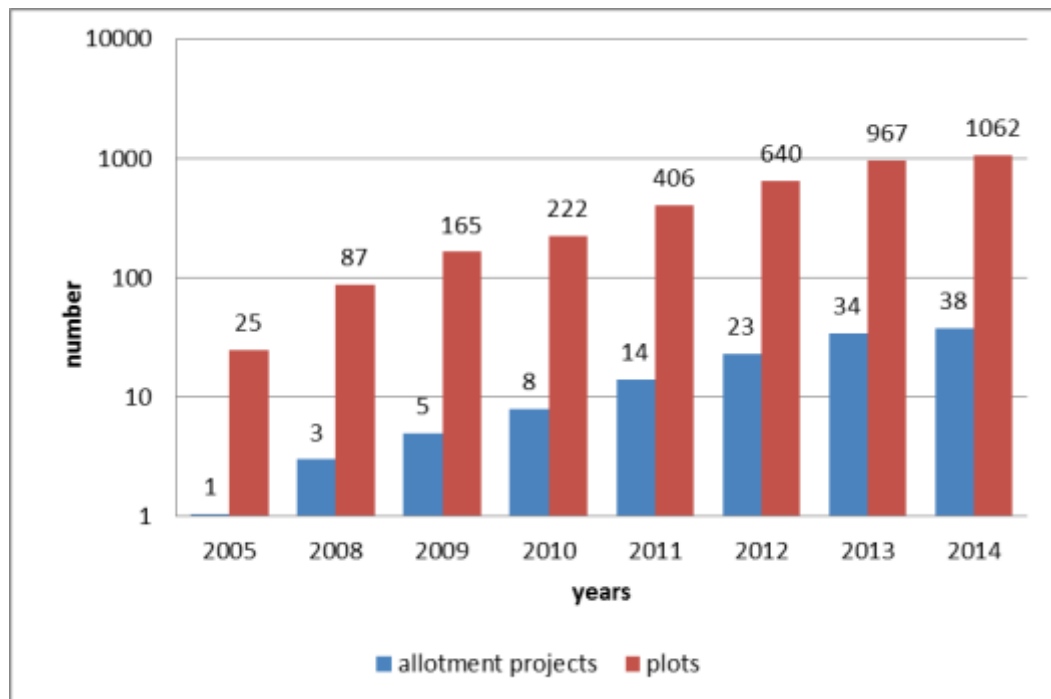


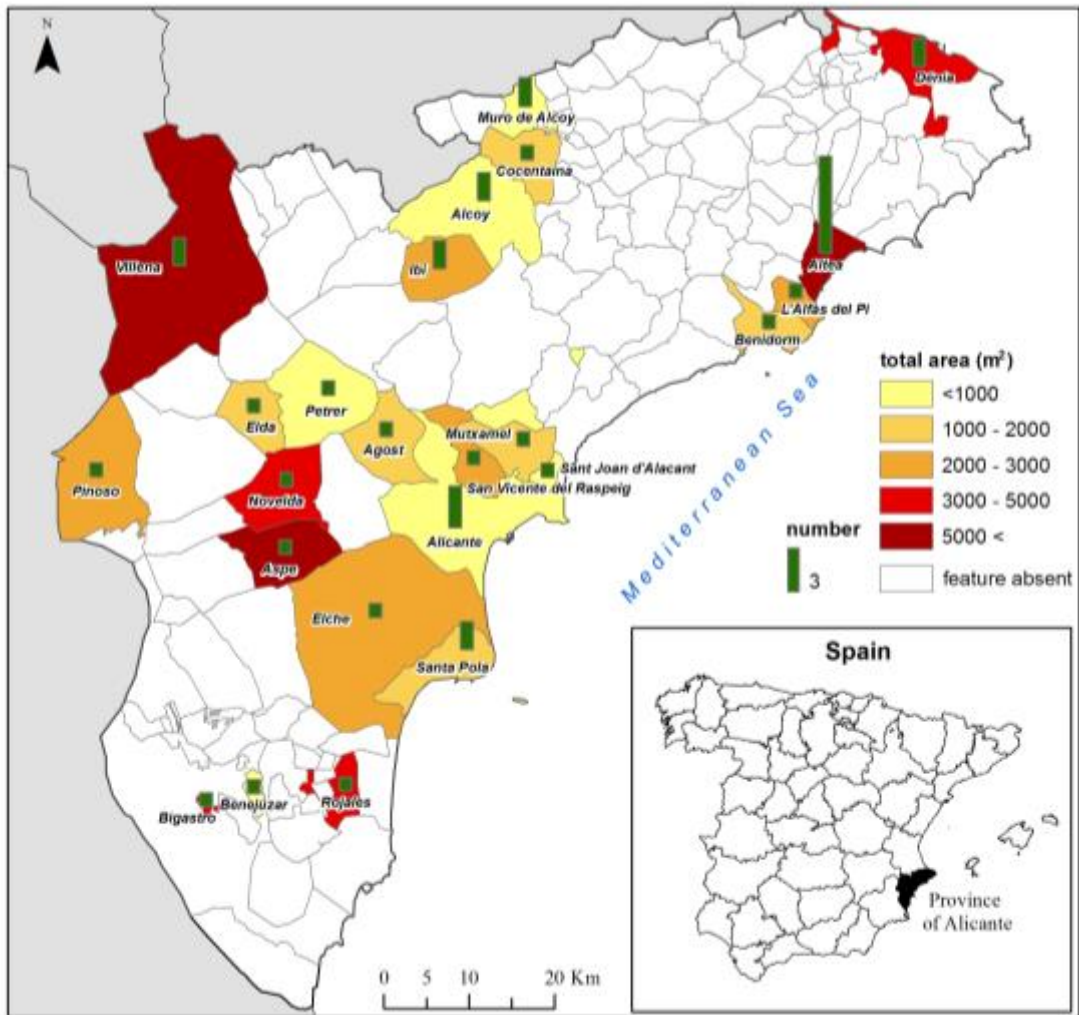
Fig. 4: Total number of allotment projects and plots in the province of Alicante (2005-2014) (Source: own fieldwork).

Location, land acquisition, and the difficulty in recovering the tradition of huertas

Contrary to what we had assumed prior to our research, the establishment of the projects did not follow any spatial pattern. They arose in all types of municipality without regard of location (coastal or inland), economic background (industry, services or tourism), or size (see Map 1).

As mentioned previously, coastal, tourist-oriented municipalities with a significantly higher representation of Northern European foreigners were the first ones to create urban allotments. Regarding the previous land use, 12 out of 38 locations had been former *huertas*. The best example was in the historic city of Elche, where its *Huerto de la Cuerna* was using an inner-urban site that had been a historic palm grove. Furthermore, two out of the three examples located in the South of the province (Benejúzar and Bigastro) were located in a traditional area of *huertas*. This southern area of the province (Vega Baja) has historically been one of the most productive agricultural areas. In the mid-19th century the *Huerta valenciana* embraced 7,350 ha (Calatayud, 2005), most of which by now have been abandoned or transformed into residential areas.¹⁸

¹⁸ The province of Valencia started a protection plan for the traditional *huerta* in 2004, and the Region of Murcia followed suit in 2007. Traditional farmers, who saw how rapidly the urbanization



Map 1: Size (total area in m²) and number of urban allotment projects in the municipalities of the province of Alicante in 2014 municipality)

Land acquisition for urban gardening projects was not easy compared to community gardens in large Spanish cities, which occupied central vacant lands informally. This was obviously not an option for the municipal projects. To our surprise, given the abundance of empty sites, none of the projects were established in central locations owned by private housing developers, which became vacant as a result of the crisis. Even the Red Cross received a negative response from the most important urban developer of the city of Alicante when they asked for a small

boom was consuming the traditional *huerta*, boosted both initiatives. In the province of Alicante, none of those measures were taken.

part of an empty block for their urban gardening project. They could not afford to pay for a lease, but offered to take care of the abandoned land. According to the interviewee from the Red Cross:

The company prefers to have the site empty and totally abandoned rather than lending it to us. It is quite paradoxical ... This way of treating parcels of land as gold has caused the crisis. Now, we have to manage with extreme poverty and they (the developers) don't want to help us. (Interview 23, 2014)

Therefore, for the more centrally located gardening projects, local governments had to turn to public land, like abandoned lots and non-residential sites located in parks, public recreation centres or other green areas. Another frequent acquisition strategy was to negotiate a lease with individual, small-scale landowners, mostly pensioners, whose lands were abandoned. In return, the local governments helped the owners with the maintenance of the plot or significantly reduced the annual property tax. However, these sites were mostly located in the peripheries of the towns and thus less accessible to users, sometimes even without public transport connection.

Based on this acquisition strategy, in 2014 five municipalities (Aspe, Pinoso, Villena, Novelda and Cocentaina) declared their intention to facilitate contact between landowners of abandoned plots and anyone interested in farming, especially unemployed people skilled in organic production. Based on their experience with the allotments, they planned to create a *banco de tierras agrícolas*, an agricultural land bank comprised of lands suitable for agriculture but currently abandoned, and in doing so planned to establish regulations for making them available for farming. They considered urban allotments as the leitmotif and trigger of a bigger project that would recuperate abandoned lands, distribute them among those in need, and clear the lands of scrub in order to avoid fires. However, when the interviewees were re-contacted in the spring of 2016 to inquire about any advances or changes, the results were rather disappointing.

All the five interviewees pointed out the difficulty of creating such a *banco de tierras*. Landowners were suspicious of the potential benefits from cultivation projects and wanted to keep land within their exclusive control due to their hopes to sell their land for prices comparable to those before the crisis. Another reason for the failure was, in our view, that most municipalities had not considered any kind of incentives for landowners nor the beneficiaries for participating in this model. Only the municipality of Aspe declared that the local government would help financially with insurance for the first crop planted. Together with the limited capacity of the projects, which covered less than 7 ha in total, the intention to use allotment garden projects as a starting point for a change in land-use practices and for recovering the traditions of the *huerta* have so far failed.

Social aims

In a quantitative and land-use sense, the traditions of recovering the *huerta* have been unsuccessful thus far, but what can be observed in terms of the social achievements of these projects? According to the municipal regulations, the purpose of the two first municipal urban allotments (in the village of Bigastro and in the coastal village of Alfac del Pi, since 2005 and 2008, respectively) was to offer healthy leisure activities to senior citizens living in the municipalities. Coming from a tradition of urban gardening in Central and Northern Europe, foreign senior citizens who were now left without access to arable land in the region, were particularly susceptible to this idea.

The proliferation of these new projects coincided with the bursting of the housing bubble and the beginning of the economic crisis. Once the economic crisis became more tangible, their goals, procedures, and governance were changed (see Fig. 5). According to the interviewees, the main goals of urban allotments established in the midst of the economic crisis were now: to provide social assistance; grow fruits and vegetables for personal consumption; serve as active leisure for those unemployed or at-risk; and reclaim empty lots for social and environmental purposes. Figure 3 shows the increasing importance of socio-economic aims for the creation of allotments that now serve mainly subsistence, rather than leisure, purposes.¹⁹ Importantly, the redefinition of the role of urban allotments also resulted in a transfer of responsibility from technical staff to municipal social workers or local development agencies.

Allotment also served in many cases as open-air classrooms for mostly male, unemployed people of all ages, from young people who had abandoned their studies during the housing boom and decided to work in the construction sector, to seniors over 50 years old.²⁰ Also Ramón Espinosa Sáez connects allotments to job training and the increasing interest in organic agriculture. One of the examples is a 36-year-old unemployed man from Aspe. When he lost his job as a mechanic as a result of the crisis, he decided to seek employment in agriculture, in which he had previously gained some experience as a teenager. He applied for a plot in an urban allotment garden because it offered an opportunity to obtain more practical experience in organic agriculture. He gradually improved his skills and now this has become his occupation, though still precarious. As he explained in an interview: “I try to sell my organic produce in street market and I have some loyal clients, but I do not produce enough to live on. And I also started to receive small jobs related to agriculture helping with grapes, tomatoes...” (Interview 34,

¹⁹ Only those municipalities in which the economic crisis and levels of unemployment were not felt as drastically (Alfac del Pi, Gran Alacant, Santa Pola – a district entirely inhabited by foreigners – and Bigastro), maintained their predominant leisure orientation and did not specify priority groups.

²⁰ Despite every allotment being open to all genders, there was an overwhelming majority of men applying for a piece of land, both in the groups of unemployed people as well as pensioners. To our knowledge none of the gardeners were previous full-time farmers.

2016). In this way, urban allotments can fulfil socio-economic goals beyond subsistence by also training for future professional activity in the agricultural sector.

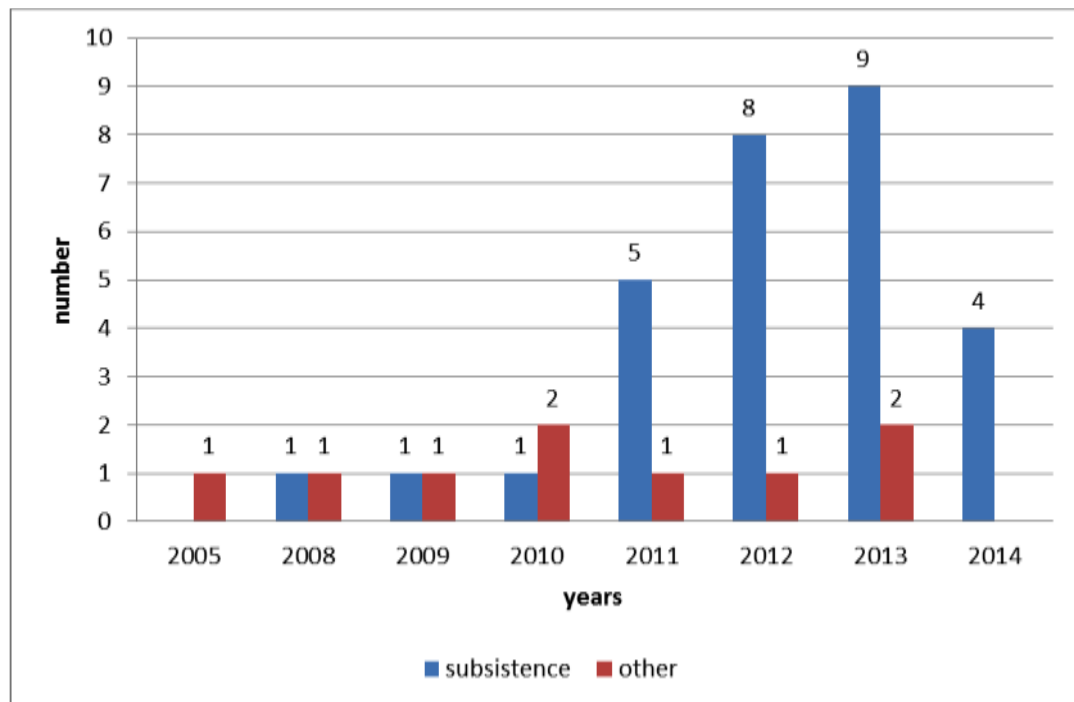


Fig. 5: Main goal of new allotment projects according to year of establishment (Source: own fieldwork).

Overall, allotments were considered by the managers as an alternative way of providing material and psychological assistance for those in need. As the local development office manager in Aspe explained:

Our aim is that users don't mull over the precarious situation they live by giving them hope and happiness. The other day I came across one of our user's wife and she explained to me how her husband had changed after these months of working in the garden. Before, he felt apathetic and showed no interest for anything. The garden has helped him to establish a daily routine. She expressed her gratitude and I felt good. (Interview 18, 2014)

One of us was able to talk with the man in question and he explained:

Now I feel much better, although I know it is hard for me to find another job at my age. Working outdoors with my hands and seeing the fruits of my work help me avoid the bad news we are bombarded with every day. (Interview 18, 2014)

Indeed, many administrators we interviewed emphasized the non-monetary value of urban allotments:

We can't measure in money the impact of coming every day to the allotment, following the classes or seeing the fruits of their effort. But we observe how users talk to each other and give to us some of their produce and this is invaluable. (Interview 3, 2014)

Conclusion

In this article, we have discussed the direction and extent of changes taking place in urban allotments in Spain as a result of the economic crisis, focusing on the province of Alicante. We produced an inventory of allotment garden projects in the whole province, explained funding and governance structure, studied their locations, and interviewed garden managers and some users regarding benefits and social aims. We contextualized this by discussing the wider processes of urbanization, deagrarianization and the emergence of an urban agriculture movement in Spain. The province of Alicante represents the general tendencies in Spain, but exemplifies a concentration of effects of the housing boom and the related process of deagrarianization. We contend that the emerging community gardening movement, as well as the creation of urban allotments by the municipalities, have to be understood as an emerging interpretation of urban vacant land, a reconfiguration of the relationship between the urban and the rural, and also of citizenship.

Before the economic crisis, only two urban allotments existed in the province of Alicante. The main objective of these allotments was to provide seniors with healthy leisure activities, to promote organic agriculture by teaching the necessary techniques, and to restore a sustainable model of land cultivation in the tradition of the *huerta*. Once the economic crisis began, local governments redefined the purpose of urban allotments and their number increased significantly. Since then, urban allotments have become a tool to promote social inclusion of individuals most affected by the crisis. While the Spanish economy appears to be recuperating,²¹ allotments are still targeting the unemployed and pensioners.²² They offer agricultural production for personal consumption, education, occupational training, and the increased social connections. City administrators and politicians, regardless of their political orientation, have increasingly embraced urban allotments as a comparatively low-cost aid and education programme for citizens

²¹ According to the economic indicators: "Evolution of the GDP" and "Evolution of working population" of Spain published by INE (National Institute of Statistics), from the last trimester of 2015 there is a slow decline in the unemployment rate and the GDP is performing slightly better than during the preceding years.

²² When interviewees were contacted again in 2016, all of them indicated that the goals and regulations had not changed over the two last years.

and urban areas, both damaged and debilitated by the collapse of the housing market and the economic crisis of the last decade.

At the same time, allotments have been regarded as symbolic for the struggle to re-introduce agricultural and green land uses in rapidly urbanizing areas. However, this reintroduction of agricultural land use through urban allotments has proven to be difficult for a number of reasons. First, urban allotments were not integrated into a wider plan for recuperating old or abandoned traditional *huertas*. Initially, the idea of creating urban allotments was linked to the recuperation of agricultural trade, land, and social status. This aim was somehow lost and many urban allotments were located rather opportunistically in areas without much potential for farmland regeneration. The lack of protection of the cultural landscape of the *huerta alicantina* has not helped either. Compared to the provinces of Valencia and Murcia that protected their traditional *huertas* in 2004 and 2007, respectively, in Alicante there is still no protection at all. Ongoing land speculation has also obstructed the creation of the *banco di tierras* model. It was not easy to convince landowners (usually inheritors of agricultural lands) to make their lands available to unemployed residents in search of a future professional specialisation as many still harbour hopes for a recovery in the housing market. The spectre of rising land values is still present in the minds of many. This means that the areas on which agricultural land use was restored, via urban allotments, was rather small, especially when compared to what existed prior to the massive urban development during the construction boom.

However, the effects have to also be evaluated from a qualitative perspective. Although the projects were small and only a small percentage of the population living in Alicante province could benefit from them, our study shows that in the time of economic crisis they nevertheless had an important and positive effect on people in need, and contributed to a new perception of land use. Urban allotments supported people affected by the crisis by offering agricultural production, education, occupational training, and the possibility of social interaction. Interviewees pointed out that training in organic agriculture opened up new professional possibilities for allotment users, for example. Such benefits need to be further explored in subsequent in-depth studies that focus on users and their perceptions.

In conclusion, using urban agriculture as a strategic tool for rethinking the use of urban space in a more sustainable and more social way is still an on-going task and challenge in the province of Alicante. Even more, one of the main threats that we sense right now is the possible dilution of this new way of thinking and acting in urban areas, once the economy performs better and the land speculation intensifies again. The collapse of land prices following the uncontrolled and non-rational rise in value may be perceived only as a temporary break before the regeneration of the housing market. But there is still the chance that it will be seen as a signal that the preceding economic model based on construction and

speculation harms the social, spatial, and economic tissue of Spain – and thus needs to be changed.

Acknowledgements

Part of this research was supported through the project "Espacios y prácticas económicas alternativas para la construcción de la resiliencia en las ciudades españolas" (2016-2018), reference CSO2015-65452-R, funded by the Spanish Economy and Competitiveness Ministry. We would like to thank all the interviewees from the urban allotments in Alicante for sharing their ideas and experiences with us. We are particularly grateful to Nerea Morán (Madrid) and Ramón Espinosa Sáez from ASAJA Alicante for providing us with a general overview of urban agriculture in Spain and the current situation of agriculture in the province of Alicante, respectively. Special thanks to Katherine Yee for help with copyediting. Finally, we wish to acknowledge the support by the guest editors of this Special Issue, Nathan McClintock and Ségolène Darly.

References

- Alkon, Alison and Agyeman, Julian (eds.). 2011. *Cultivating Food Justice: Race, Class, and Sustainability*, Cambridge, MA: MIT Press.
- Amigos de la Tierra. 2012. "Alimentos kilométricos: las emisiones de CO2 por la importación de alimentos al Estado español." Report. Madrid. https://issuu.com/amigos_de_la_tierra_esp/docs/informe_alimentoskm.
- Anguelovski, Isabelle. 2013. Beyond a Livable and Green Neighborhood: Asserting Control, Sovereignty and Transgression in the Casc Antic of Barcelona. *International Journal of Urban and Regional Research* 37 (3), 1012-1034. <http://dx.doi.org/10.1111/1468-2427.12054>.
- Ballesteros, Gregorio, Domingo, Elena, González, Francisco, Berlín, Belén, Baigorri, Artemio and Gaviria, Marco. 1984. "Agricultura periurbana." Madrid. Consejería de Ordenación del Territorio, Medio Ambiente y Vivienda de la Comunidad de Madrid.
- Ballesteros, Gregorio, Fdez.-Casadevante, José Luis and Morán, Nerea. 2014. Agricultura urbana: "A la huerta de la esquina". *La Fertilidad de la tierra. Agricultura ecológica* (58), 66-69.
- Bell, Simon, Fox-Kämper, Runrid, Keshavarz, Nazila, Benson, Mary, Caputo, Silvio, Noori, Susan and Voigt, Annette (eds.). 2016. *Urban Allotment Gardens in Europe*, Abingdon: Routledge.
- Burchardt, Jeremy. 2002. *The Allotment Movement in England, 1793-1873*. Rochester NY: Royal Historical Society.

- Burriel, Eugenio. 2008. La "década prodigiosa" del urbanismo español (1997-2006). *Scripta Nova Revista Electrónica de Geografía y Ciencias Sociales* XII (270 (64)), nonpaginated. <http://www.ub.edu/geocrit/sn/sn-270/sn-270-64.htm>
- Burriel, Eugenio. 2009. La planificación territorial en la Comunidad Valenciana (1986-2009). *Scripta Nova Revista Electrónica de Geografía y Ciencias Sociales* XIII (360), nonpaginated. <http://www.ub.edu/geocrit/sn/sn-306.htm>
- Calatayud, Salvador. 2005. La ciudad y la huerta. *Historia agraria* (35), 145-164.
- Collantes, Fernando. 2007. La desagrarización de la sociedad rural española, 1950-1991. *Historia agraria* (42), 251-276.
- Díaz, Eva. 2015. La Barcelona de Ada Colau. *Estrella digital*, May, 25. Available online: <http://www.estrelladigital.es/articulo/espanha/barcelona-ada-colau/20150525133039240729.html>. Accessed 2 May 2016.
- Diputación de Alicante. 2011. "Manual de huertos municipales sostenibles." Alicante: <http://web.ua.es/es/ecocampus/documentos/consejos-ambientales/huertos-sostenibles.pdf>.
- Domene, Elena and Saurí, David. 2007. Urbanization and class-produced natures: Vegetable gardens in the Barcelona Metropolitan Region. *Geoforum* 38 (2), 287-298.
- European Commission. 2013. "Facts and figures on organic agriculture in the European Union." http://ec.europa.eu/agriculture/markets-and-prices/more-reports/pdf/organic-2013_en.pdf.
- Faus, Pau. 2008. La ciudad jubilada. Breve Diccionario sobre los Huertos informales en los ríos de Barcelona. Barcelona <http://laciudadjubilada.blogspot.com.es/>
- Fernández Casadevante Kois, José Luis and Morán, Nerea. 2015. *Raíces en el asfalto: pasado, presente y futuro de la agricultura urbana*. Madrid: Libros en acción.
- Fernández, José Luis and Morán, Nerea. 2012. Cultivar la resiliencia. Los aportes de la agricultura urbana a las ciudades en transición. *Papeles de relaciones ecosociales y cambio global* (119), 131-143.
- Fernández Nieto, María Antonia and Gallego Sánchez-Torija, Jorge 2013. Aliseda 18. Un huerto comunitario procedente de recuperación vecinal del espacio urbano. *Agricultura urbana. Hábitat y Sociedad* (6), 105-117. <https://drive.google.com/file/d/0Bw36ljIKn46QWmgxeFVvX3RNQ3c/view?pref=2&pli=1>.
- Flesher Fominaya, Cristina. 2015. Debunking Spontaneity: Spain's 15-M/Indignados as Autonomous Movement. *Social Movement Studies* 14 (2), 142-163. <http://dx.doi.org/10.1080/14742837.2014.945075>.

- Gaja, Fernando. 2008. El "tsunami urbanizador" en el litoral mediterráneo. El ciclo de hiperproducción inmobiliaria 1996-2006. *Scripta Nova Revista Electrónica de Geografía y Ciencias Sociales* XII (270 (66)), <http://www.ub.edu/geocrit/sn/sn-270/sn-270-66.htm>.
- Gallar, David and Vara, Isabel. 2010. Desagrarización cultural, agricultura urbana y resistencias para la sustentabilidad. *PH Cuadernos* (26), 236-257. <http://www.agriculturaurbana.cat/wp-content/uploads/David-Gallar-e-Isabel-Vara.pdf>.
- García, Bruno. 2016. Carmena planea cubrir las azoteas de verde y crear jardines en solares vacíos. *El País*, January 25. Available online http://ccaa.elpais.com/ccaa/2016/01/23/madrid/1453573500_585056.html. Accessed 2 May 2016.
- García, Hugo. 2014. El círculo vicioso del turismo residencial: análisis de los factores locales del boom inmobiliario español. *PASOS. Revista de Turismo y Patrimonio Cultural* 12 (2), 395-408.
- García, Marisol. 2010. The Breakdown of the Spanish Urban Growth Model: Social and Territorial Effects of the Global Crisis. *International Journal of Urban and Regional Research* 34 (4), 967-980. <http://dx.doi.org/10.1111/j.1468-2427.2010.01015.x>.
- Ghose, Rina and Pettygrove, Margaret. 2014. Urban Community Gardens as Spaces of Citizenship. *Antipode* 46 (4), 1092-1112. <http://dx.doi.org/10.1111/anti.12077>.
- Goerlich, Francisco and Cantarino, Isidro. 2015. Estimaciones de la población rural y urbana a nivel municipal. *Estadística Española* 57 (186), 5-28.
- Gröning, Gert and Wolschke-Bulmann, Joachim. 1995. *Von Ackermann bis Ziegelhütte: Ein Jahrhundert Kleingartenkultur in Frankfurt am Main*. Frankfurt a.M.: Kramer.
- Guthman, Julie. 2008. Bringing good food to others: investigating the subjects of alternative food practice. *Cultural Geographies* 15 (4), 431-447. <Go to ISI>://WOS:000261137900004.
- Hernández, María. 1997. *Paisajes agrarios y medio ambiente en Alicante: evolución e impactos medioambientales en los paisajes agrariosalicantinos, 1950-1995*. Alicante: Publicaciones de la Universidad de Alicante.
- Hernandez, María, Morales, Alfredo and Saurí, David. 2014. Ornamental plants and the production of nature(s) in the Spanish real estate boom and bust: the case of Alicante. *Urban Geography* 35 (1), 71-85. <http://dx.doi.org/10.1080/02723638.2013.871813>.

- Hodgson, Kimberley, Campbell, Marcia and Bailkey, Martin. 2011. *Urban Agriculture: Growing healthy, sustainable places*. Chicago: American Planning Advisory Service.
- Ibáñez, José. 2014. La recuperación del cultivo del viñedo en la comarca del Comtat (Alicante). *GeoGraphos. Revista Digital para Estudiantes de Geografía y Ciencias Sociales* 5 (70), 358-375.
- Kacprzak, Ewa and Maćkiewicz, Barbara. 2014. The distribution systems for organic farming produce in Poland and Spain – similarities and differences. *Die Erde* 145 (3), 175-190.
- Koutrolidou, Penny. 2015. Governmentalities of Urban Crises in Inner-city Athens, Greece. *Antipode*, n/a-n/a. <http://dx.doi.org/10.1111/anti.12163>.
- Lawson, Laura. 2005. *City Bountiful: A Century of Community Gardening in America*. Berkeley: University of California Press.
- Martin, Ron. 2011. The local geographies of the financial crisis: from the housing bubble to economic recession and beyond. *Journal of Economic Geography* 11 (4), 587-618. <http://joeg.oxfordjournals.org/content/11/4/587.abstract>.
- McClintock, Nathan. 2010. Why farm the city? Theorizing urban agriculture through a lens of metabolic rift. *Cambridge Journal of Regions, Economy and Society* 3 (2), 191-207. <http://cjres.oxfordjournals.org/content/3/2/191.abstract>.
- McClintock, Nathan. 2014. Radical, reformist, and garden-variety neoliberal: coming to terms with urban agriculture's contradictions. *Local Environment* 19 (2), 147-171. <http://dx.doi.org/10.1080/13549839.2012.752797>.
- Mendes, Wendy, Balmer, Kevin, Kaethler, Terra and Rhoads, Amanda. 2008. Using Land Inventories to Plan for Urban Agriculture: Experiences From Portland and Vancouver. *Journal of the American Planning Association* 74 (4), 435-449. <http://dx.doi.org/10.1080/01944360802354923>.
- Ministerio de Agricultura, Alimentación y Medio Ambiente. 2009. "Análisis y Prospectiva – serie AgrInfo, Número 12, Febrero 2009 titled: Población y Sociedad Rural." http://www.magrama.gob.es/es/ministerio/servicios/analisis-y-prospectiva/Agrinfo12_tcm7-161562.pdf.
- Ministerio de Agricultura, Alimentación y Medio Ambiente. 2014. "Evolución de la caracterización de la tipología y perfil sociodemográfico del consumidor de alimentos ecológicos en España." http://www.magrama.gob.es/es/alimentacion/temas/la-agricultura-ecologica/estudioperfilconsumidorecologico2014_tcm7-346684.pdf.
- Morán, Nerea. 2011. Huertos urbanos en tres ciudades europeas: Londres, Berlín, Madrid. *Boletín CF+S* (47/48), 5-124. <http://habitat.aq.upm.es/boletin/n47/anmor.html>

- Morote, Álvaro-Francisco and Hernández, María. 2016. Urban sprawl and its effects on water demand: A case study of Alicante, Spain. *Land Use Policy* 50, 352-362. <Go to ISI>://WOS:000367755700032.
- Navarro, David. 2011. Los bajos precios frustran el regreso a la agricultura de los parados alicantinos. *Información. El Periodico de la provincia de Alicante*, nonpaginated. Available online <http://www.diarioinformacion.com/economia/2011/12/24/bajos-precios-frustran-regreso-agricultura-parados-alicantinos/1205103.html>
- Oosterlynck, Stijn and González, Sara. 2013. 'Don't Waste a Crisis': Opening up the City Yet Again for Neoliberal Experimentation. *International Journal of Urban and Regional Research* 37 (3), 1075-1082. <http://dx.doi.org/10.1111/1468-2427.12064>.
- Peck, Jamie. 2012. Austerity urbanism. *City* 16 (6), 626-655. <http://dx.doi.org/10.1080/13604813.2012.734071>.
- Pérez, Moisés. 2015. Ribó planta huertos urbanos en terrenos abandonados. *El Diario*, October 16. Available online http://www.eldiario.es/cv/Ribo-plantea-huertos-terrenos-abandonados_0_442006821.html. Accessed 2 May 2016.
- Pothukuchi, Kameshwari and Kaufman, Jerome. 1999. Placing the food system on the urban agenda: The role of municipal institutions in food systems planning. *Agriculture and Human Values* 16 (2), 213-224.
- Pourias, Jeanne. 2015. "Urban Allotment Gardens in the City in Crisis. Insights from Sevilla (Spain). Short Report on the Short Term Scientific Mission." COST Action Urban Allotment Gardens in European Cities. http://www.urbanallotments.eu/fileadmin/uag/media/STSM/rapport_final.pdf.
- Puente, Raúl. 2012. *Los huertos urbanos de Sevilla: de la tradición a la novedad*. Sevilla: Dip. Prov. de Sevilla.
- Reynolds, Kristin. 2014. Disparity Despite Diversity: Social Injustice in New York City's Urban Agriculture System. *Antipode*, n/a-n/a. <http://dx.doi.org/10.1111/anti.12098>.
- Romero, Juan. 2010. Construcción residencial y gobierno del territorio en España. De la burbuja especulativa a la recesión. Causas y consecuencias. *Cuadernos Geográficos* (57), 17-46.
- Rosol, Marit. 2006. *Gemeinschaftsgärten in Berlin. Eine qualitative Untersuchung zu Potenzialen und Risiken bürgerschaftlichen Engagements im Grünflächenbereich vor dem Hintergrund des Wandels von Staat und Planung*. Berlin: Mensch-und-Buch-Verlag.
- Rosol, Marit. 2012. Community Volunteering as Neoliberal Strategy? Green Space Production in Berlin. *Antipode* 44 (1), 239-257. <http://dx.doi.org/10.1111/j.1467-8330.2011.00861.x>.

- Rosol, Marit and Schweizer, Paul. 2012. Ortoloco Zurich – Urban Agriculture as an Economy of Solidarity. *City* 16 (5), 586-597.
- Sanyé-Mengual, Esther, Anguelovski, Isabelle, Oliver-Solà, Jordi, Montero, Juan Ignacio and Rieradevall, Joan. 2015. Resolving differing stakeholder perceptions of urban rooftop farming in Mediterranean cities: promoting food production as a driver for innovative forms of urban agriculture. *Agriculture and Human Values* 33 (1), 101-120. <http://dx.doi.org/10.1007/s10460-015-9594-y>.
- Schindler, Seth. 2014. Detroit after bankruptcy: A case of degrowth machine politics. *Urban Studies*, <http://usj.sagepub.com/content/early/2015/03/26/0042098014563485.abstractN2>
- Schipper, Sebastian. 2014. The Financial Crisis and the Hegemony of Urban Neoliberalism: Lessons from Frankfurt am Main. *International Journal of Urban and Regional Research* 38 (1), 236-255. <http://dx.doi.org/10.1111/1468-2427.12099>.
- Taibo, Carlos. 2013. The Spanish indignados: A movement with two souls. *European Urban and Regional Studies* 20 (1), 155-158. <http://eur.sagepub.com/content/20/1/155.abstractN2>.
- Tornaghi, Chiara. 2014. Critical geography of urban agriculture. *Progress in Human Geography* early view, <http://phg.sagepub.com/content/early/2014/02/04/0309132513512542.abstract>.
- Vaiou, Dina and Kalandides, Ares. 2015. Practices of collective action and solidarity: reconfigurations of the public space in crisis-ridden Athens, Greece. *Journal of Housing and the Built Environment*, 1-14. <http://dx.doi.org/10.1007/s10901-015-9468-z>.
- Villacé, Beatriz. 2012. "Estudio etnobotánico de los huertos urbanos colectivos de Madrid." Unpublished Master Thesis, Universidad Autónoma de Madrid.
- Wakefield, Sarah, Yeudall, Fiona, Taron, Carolin, Reynolds, Jennifer and Skinner, Ana. 2007. Growing urban health: Community gardening in South-East Toronto. *Health Promotion International* 22 (2), 92-101. <http://heapro.oxfordjournals.org/cgi/content/abstract/22/2/92>.
- Walker, Samuel. 2016. Urban agriculture and the sustainability fix in Vancouver and Detroit. *Urban Geography* 37 (2), 163-182. <http://dx.doi.org/10.1080/02723638.2015.1056606>.

Appendix. Urban allotments in the province of Alicante

Municipality	Population (thousands) (2014)	Number of urban allotments projects	Number of plots	Total area of plots (m ²)	Year of establishment
Agost	4,707	1	18	1,260	2013
Alcoy	59,567	2	13	455	2011
L'Alfàs del Pi	21,700	1	52	2,080	2008
Alicante*	328,648	1 from a NGO	17	102	2013
		1 from a neighbourhood association	18	540	2011
		1 from a 15M association	6	60	2012
Altea	22,385	7	121	10,890	2010-2012-2013
Aspe	20,406	1	60	5,100	2013
Benejúzar	5,398	1	14	910	2014
Benidorm	69,045	1	50	2,000	2011
Bigastro	6,714	1	25	5,000	2005
Cocentaina	11,406	1	20	2,000	2013
Dénia	41,553	2	103	3,180	2011
Elche	227,312	1	38	2,280	2009
Elda	53,248	1	26	1,400	2013
Ibi	23,321	2	48	2,880	2012
Muro de Alcoy	9,167	2	17	935	2012
Mutxamel	24,256	1	33	1,320	2013
Novelda	26,146	1	40	3,200	2009
Petrer	34,586	1	16	960	2010
Pinoso	7,695	1	37	2,775	2014
Rojales	18,127	1	88	4,400	2013
San Vicente del Raspeig	56,302	1	36	3,000	2014
Sant Joan d'Alacant	22,825	1	10	1000	2008
Santa Pola	31,657	2	33	1,169	2010/2014
Villena	34,361	2	123	8,580	2012
Total	1,160,532	38	1,062	67,476	

*All allotment projects are run by the municipality except for Alicante City

Source: Own elaboration based on fieldwork and 2014 census data (<http://www.ine.es/dynt3/inebase/es/index.html?padre=517&dh=1>)