Part III

Urban planning and the economic crisis in Southern European cities
9 Urban planning and territorial management in Portugal
Antecedents and impacts of the 2008 financial and economic crisis

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Introduction

This chapter discusses the role that the evolution in urban development and urban planning in Portugal have played with regard to the outbreak of the economic and financial crisis, and the impact that this crisis had on urban planning and territorial management in Portugal, in the short and long term.

It is an assumption that the recent developments in urban planning, territorial management, and urbanisation in Portugal have been motivated by unsustainable drivers that have also led to the financial and economic crisis, in particular relating to the real estate and financial sectors. The crisis is strongly interconnected with urbanisation processes as well as urban planning and territorial management activities. It is thus a specific objective of this chapter to discuss this interconnection, while explaining the evolution of recent urban planning and territorial management in Portugal.

In this chapter it will be shown that planning in Portugal, while finally holding the adequate instruments to properly develop Municipal Master Plans (PDM), faces the effects of the economic recession caused by the crisis and by previous development activities. This chapter also shows that such planning instruments took time to be adopted, since their legal framework has arrived late; such as the Ground Basis Law on Territorial Planning and Urbanism (LBOTBU) (PP, 1998) and the Juridical Regime of the Territorial Management instruments (RJIGT) (MEPAT, 1999) which were published a decade after the elaboration and application of the first Municipal Master Plans, shortening the possibility of preventing unsustainable activities, which in the long term fed the outbreak of the crisis. The Strategic Environmental Assessment (SEA) framework for Urban Planning also arrived late and, deriving from the European Union Directives (Directive 2001/42/CE) (Partidário, 2007), presented an opportunity of regulation which was not always concretised when applied to Portuguese planning culture (CNADS, 2012). The obligation to evaluate planning brought advantages and a better control of the results and impacts of planning, but it arrived when many unsustainable development strategies were already in motion. Within this evaluation process, however, the environmental impact of urbanisation, and those impacts related to nature conservation were progressively taken into
account. Despite this, the issues of energy dependence, carbon emissions, and climate change were only inserted later in these evaluations.

After this introduction, the chapter is structured in two sections, each containing three subsections. Finally, it presents conclusions. The opening section ‘Urban planning and municipal plans in Portugal from 1988–2008’ presents an overview of the recent history of urban planning and territorial management in Portugal, addressing the process of elaboration of the Municipal Master Plans (PDM) from 1988 to 2008. Three specific periods will be analysed: 1988–1998 when the first Municipal Master Plans were elaborated; 1998 the year of the publication of the first Ground Basis Law on Territorial Planning and Urbanism (LBPOTU); and 1998–2008 when the second generation of Municipal Master Plans was developed under the provisions of the new Ground Basis Law, and within the framework of the Strategic Environmental Assessment (SEA), calling for consideration of new global ecological concerns. To describe the interconnection between urbanisation and the crisis it is necessary on one hand, to address the impacts of urban development and planning on the evolution of the crisis, and on another hand, to address the impacts that the crisis had on urban development and on urban development and planning. In this context, the next section ‘Impacts of the crisis on the present and future of urban planning in Portugal’ addresses the bilateral impacts between urbanisation and planning activities and the crisis in Portugal. It also analyses what impact urban planning and territorial management activities in Portugal had on environmental protection, on the use of energy and on mobility patterns, wherein amplifying the effects of the crisis on the municipalities and families. In the first subsection of this second section of the chapter, we shall discuss the impacts of the crisis planning needs to deal with as well the changes in planning, motivated by the current crisis, in terms of ensuring sustainability, environmental protection, and implementing SEA. In the second subsection the challenge and opportunity of ‘sustainable cities’ will be introduced. In the last subsection, the crisis will be addressed as a driver of ‘low carbon’ urban planning and territorial management, illustrating the effects that a sustainable material dynamics and restricted access to fossil fuels can have on urbanism and urban planning. The chapter ends with some conclusions, while identifying some key ideas related to the antecedents and impacts of the 2008 financial and economic crisis on urban planning and territorial management in Portugal.

Urban planning and municipal plans in Portugal from 1988–2008

This section of the chapter offers an overall portrait of the urban planning framework which defined the territorial development and management activities in Portugal during the two decades immediately before the outbreak of the economic and financial crisis (1988–2008). This portrait is presented here because it contributes to better understanding the impacts of urban development and planning on the progression of the crisis in Portugal.
Until 1998 Portugal lacked a Ground Basis Law on Territorial Planning and Urbanism, and it still relied only on the law of 1976, designed mostly to create public land stocks and to regulate the market in times of strong urban expansion (Monteiro, 2008). In the absence of a Land Law, municipal planning had an important role to play for land use planning in Portugal in the last 20 years and was responsible for the classification of land. However, although the Portuguese Constitution states that the municipalities are the entities that should define the right to land use change (ibid.), in practice the right to convert rural land into urban land is not clearly differentiated from the civil right to own private property. Citizens have believed that owning rural land automatically assures the right to convert that land into urban land, without following the restrictions of municipal planning. This wrong assumption led to the explosion of illegal urbanism in democratic Portugal and, together with other factors, opened an opportunity for the real estate sector to develop freely and rapidly.


The democratic local government was established in Portugal in 1976, yet in the following decades the legislation on spatial planning was insufficient and inefficient. Only in the early 1980s was urban development legislated (Decree Law No. 208/82) and the first Municipal Master Plans (Planos Diretores Municipais – PDM) were adopted. It has taken a further 25 years to equally develop the PDM for the whole national territory.

The PDM in force in Portugal today were practically all designed between 1988 and 1998. These represented the main tools for urban planning at the municipal level. The elaboration of the plans has been encouraged by the European Union, in particular since 1989, however, the framework for their preparation was set only after the adoption of the Ground Basis Law on Territorial Planning and Urbanism in 1998 (Lei de Bases da Política de Ordenamento do Território e Urbanismo – LBPOTU), ten years after the elaboration of the first PDM, when most had already been completed (Portas, Cabral, & Domingues, 2003).

The regulations for the conversion of rural land into urban land, together with the national policy on road infrastructure, were main drivers behind the PDM. The efficiency of this legislation, however, was restricted, since the distinction between urban and rural land, although existing in the plans, was not followed in reality by formal and informal territorial changes (Carvalho, 2003) and it was not recognised by the citizens. As a result, construction in several municipalities grew almost as intensively in urban areas, where it was allowed and expected, as on rural land, where it was restricted by the plan dispositions (Mourão, 2012). This caused the offer of built land and housing (either legalised or not) and for 20 years (from 1998 to 2008) urban areas for construction expanded greatly, dissociated from population needs, and from the existing infrastructure networks.

The urban expansion contributed, in the long term, to intensifying the effects of the global crisis in Portugal which would arrive later. During the economic
growth of 1980–2000, the offer of urban land and of new roads all over the country, pushed by low price of fuels, thus weakened the relationships of cities with their local territories in favour of supra-local and supra-national territories, at the aegis of globalisation. The increased supply of housing, due to the unregulated conversion of rural land into urban land, ran parallel to the public policy of high accessibility infrastructures. In such a policy it was not the logic of planning the territory that presided over the decisions (Nunes da Silva, 2008) and as a consequence in the 1990s new patterns of population distribution emerged: families working in Lisbon could live in municipalities far way, driving hundreds of kilometres daily on highways. Portugal’s (sub)urbanisation of the last two decades reduced the potential for a polycentric urban system, and not only fed ‘Splintering Urbanism’ and highways (Domingues, 2006), but it also increased energetic demand and external dependency (Campos & Mourão, 2012).

The structural role of open and green spaces was scarcely recognised at that time, and planning relied mostly on zoning procedures and construction indexes (Portas, Cabral, & Domingues, 2003). Thus, the first generation of plans defined large areas where building was allowed, justifying it by the reduction in the average size of families and the increase in secondary housing needs. This resulted in a fast increase of built-up areas, which was not followed by the low population growth (Carvalho, 2003) and led to a large housing stock surplus, which contributed to the emergence of the ‘housing bubble’ and to the outbreak of the crisis.

During the implementation of the PDM, individual interests overlapped collective interests and corruption and illegal urbanisation frequently occurred, both before and after the LBPOTU Law (Oliveira, 2008). The structures of local government, which are responsible for the implementation of the plans, faced (and still face) difficulties in articulating political and technical points of view, since politicians often choose territorial development options, contradicting the prescriptions of technicians. Difficulties also emerged in the integration of different planning sectors, such as land use, housing, mobility, rehabilitation, or environmental protection, amid which the territorial development objectives and strategies did not always converge (Mourão, 2012). When the first generation of these plans was complete, among their main advantages was the fact that they provided greater knowledge of the territory and the legal constraints involving its occupation. The main disadvantages and negative impacts of these plans, however, were the creation of a surplus of urban areas and the consequent dispersal of human settlements and building construction (Carvalho, 2003). Analysis of 16 different PDMs in 2003 showed the creation of large urban areas 12 times larger than the expected increase of housing needs (ibid.). Taking this into consideration, it could be said that the first generation of municipal plans responded to the short-term housing and accessibility needs and even exceeded them, creating territorial conditions which, in the long term, contributed to the outbreak of the financial and economic crisis in Portugal.
1998: the Ground Basis Law (LBPOTU)

The contribution of urban planning and territorial management activities to importing the international crisis to Portugal is significant, and is connected with the antecedents of the planning system in Portugal. For that reason an important moment of the evolution of the planning system is considered here, namely the adoption of the Ground Basis Law which, due to its delay and limitations, can also be related to the outbreak of the financial and economic crisis in Portugal in 2008.

The Ground Basis Law on Territorial Planning and Urbanism (PP, 1998) resulted from a long process of evolution of the instruments of urban planning and territorial management in Portugal (ibid.), with the intention of creating a framework for the public regulation of territorial transformations, protecting the public realm while assuring conditions of equity for the territorial activities of the several agents of the private sector. It introduced a new framework for spatial planning in Portugal; however, it found a territory with sprawled and unregulated settlements and infrastructures, developed as the result of a lack of efficient housing and land policies.

According to LBPOTU, a Municipal Master Plan establishes the territorial development strategy, the municipal policy on spatial planning and urbanism, and the model of spatial organisation of the municipal territory (MEPAT, 1999, Art. 84). Before the introduction of this law there was no clear definition of the purposes and contents of the PDM. This law also integrated and articulated instruments of territorial management of national and regional level with those at municipal level. Even though all municipalities had prepared a PDM since 2003, however, these plans have often not reflected the territorial strategy of local development (Costa, 2008) since these strategies are generally tied to a municipal electoral mandate, lasting for only four years, a much shorter time than the 20 years covered by the PDM.

Other limitations are noted in these plans:

The current figure of PDM is limited to the definition of the dominant uses without ensuring the formalisation of the fundamental structures of the landscape, both in terms of ecological sustainability and in terms of a structure built to ensure the testimony of the past in the construction of future.

(Translated from Magalhães, 2008: p. 113)

Such structuring limitations persist partly in the process of reviewing these plans, as do the limitations regarding interaction with housing policies, urban transport, or energy demand (Mourão, 2012), increasing the vulnerability of the territories and citizens to the global crisis effects.

The experience of implementing LBPOTU, and in particular of implementing the PDM, revealed difficulties in applying measures contrary to the prevailing notion of ‘quality of life’ among the local communities, and also among decision-makers. In fact, plans were almost always ‘non-grateful’
instruments or were perceived as obstacles that needed to be overcome (Oliveira, 2008). For this reason, public participation was progressively recognised as a way to overcome the divergence between administration, spatial and urban planners, and private agents, as well as to legitimise the role of planning. Indeed, public participation found a wider space in the plans of the second generation (Crespo, 2008), allowing citizens and organisations to express their points of view to the municipalities, during the time of the plans’ elaboration.


A survey focusing on the first PDM showed that the areas of urban expansion predicted by the Plans, did not correspond to the demographic and economic dynamics of each municipality. The effective urbanisation of the urban land predicted on the plans was thus very low (Carvalho, 2003) and many of these areas continued to expect land use changes that never occurred. This situation, in combination with other factors, created an ‘unsustainable housing bubble’ fed by the growing financial real estate sector. This was addressed in several PDM revisions (second generation plans, initiated before the crisis outbreak) which defined urban area shrinkage, while the environmental protection of natural resources gained greater importance, in particular through the Municipal Ecological Structures (EEM) (Magalhães, 2008). The EEM constitutes an important tool which emerged as a further development of the Ground Basis Law addressed in the previous subsection. These new EEM, integrated in the PDM revisions, aimed to manage ecological non-built spaces as collective resources, allowing a reduction of pressure for the construction of new buildings in certain areas. However, many of the second generation plans were only finished after the outburst of the international crisis of 2008, facing difficulties in implementation such as new EEM, due to the lack of financial resources for any kind of territorial intervention. On one hand, the tendency to shrink the urban limits and to restrict building activities derived from environmental economic purposes (Magalhães, 2008; Portas, 2008); but on another hand, it was also facilitated by the conditions offered by the decrease in pressure from the real estate sector, justified by the crisis.

In the second generation plans, due to the introduction of the SEA imposed on Portugal by the EU (Partidário, 2007; DGOTDU & APA, 2008), the environmental risks were considered in the instruments of local land management. With regard to the use of non-renewable energy, climate change, and dependence on fossil fuels, however, SEA did not lead to the introduction of more ecological options for municipal planning (Mourão & Pedro, 2007). Public transport, mobility, the modal share of road space, energy efficiency of buildings, and urban services are secondary issues in most of the PDM. Such issues would be important in helping territories and cities to adapt to the post-crisis conditions, when energy had a heavier impact on the financial management of municipal territories and of families (Mourão, 2012).
Trying to slow the urbanisation of rural areas, the second generation of PDM proposed, in general and in theory, polycentric territorial models in favour of the rationalisation of land use and of the conservation or reactivation of the productive and landscape potential (Mourão, 2012), but in their strategic aims, the PDM were often overtaken by other sectorial planning instruments at national level, as the plans from the roads and logistic sector, overlapped local plans and neglected the integration of different planning sectors. The plans from the roads and logistic sector were often seen as an opportunity to create more infrastructure for the economy, enhancing the competitiveness of Portugal; however, the crisis effects did not confirm this assumption, in for example, the face of the declining income and rising of costs of redundant highways in the country. The problems of the disarticulation of national and local plans were aggravated by the fact that the PDM revision often lasted more than ten years, with a low capacity to respond quickly to national and local political changes (Portas, 2008; Costa, 2008).

If some of the revised plans invested in the biophysical values of the territory, safeguarding nature, agriculture, and forest, others invested simultaneously in the allocation of land to large-scale tourist and road logistic activities, remaining permissive about concerns of illegal urbanisation and the construction of heavy infrastructure in high environmental value areas. These plans were pushed by the urgency of reversing the tendencies towards unemployment and loss of population, already signs of the coming crisis. Indeed, tourism, logistics, and housing were, in general, the dominant fields of investment and allocation of municipal land use in Portugal, prior to and after the outbreak of the financial crisis (Mourão, 2012).

After the ‘housing bubble’, the ‘tourism bubble’ also began to inflate, encouraged either by municipal planning or by higher level strategic planning, following the national goal of promoting Portugal as a competitive tourism destination. However, territorial development strategies based on tourism and road logistics were questionable, because tourism suffers from the impacts of coastal erosion, of urban centre congestion, and gentrification, while the use of road logistics declines because trade flows slow down. Such planning options, however, have already left infrastructure, as well as planning instruments, which still persist today. Some of this infrastructure is now unsustainable, in either environmental or financial terms. Indeed, sustainability issues would have been important to consider in urban planning and territorial management in order to mitigate negative effects of the crisis, such as the insolvency of municipal territories and families.

**Impacts of the crisis on the present and future of urban planning in Portugal**

As shown previously, Portuguese territories suffered the impact of pre-crisis urban development based on unsustainable trends (1988–2008) which, together with global drivers, triggered the crisis. From 2008 on, these territories were exposed to the impacts of the global crisis which aggravated the impact of the
unsustainable urban development. The crisis also evidenced the inadequacy of several infrastructures, such as highways and mass housing for a small number of users, exceeding needs and representing costs with no economic return. Addressing this second period of territorial development in the country, and the future, the next subsection analyses how the 2008 crisis impacted, in the short term, both positively and negatively, urban development, urban planning, and territorial management activities in Portugal. Addressing the long term, the second and third subsections below will discuss how planning activities can evolve in Portugal in the near future, profiting from the opportunities brought by the general concept of ‘sustainable cities’ and the specific targets of ‘low carbon urban planning’.

Short-term impacts of the economic and financial crisis on urban planning in Portugal

In Portugal the model of urban expansion brought advantages in the short term, while satisfying housing and accessibility needs (Nunes da Silva, 2008) in a country that had still shortages in these areas, and bringing relevant social impacts which were initially seen as positive (Portas, Cabral, & Domingues, 2003), and which contributed to reinforce the importance of urban planning. However, urban planning began to be questioned (Domingues, 2006) when the model of growing urban networks (expanded by financial interests relating to infrastructure such as buildings, roads, water, waste, and energy) led to the emptying of urban centres and their degradation; when credit dependence led to the insolvency of municipalities and families; when oversized investment in motorway and logistics and private concessions of infrastructure was neglecting environmental and affecting social values; or, when excessive conversion of rural land into urban land led to the undervaluation of the countryside (Mourão, 2012). In Portugal, as worldwide, overall accessibility had increased energy demand and consumption, environmental contamination, and climate change (Stern, 2007), bringing new problems to urban planning and territorial management.

After 2008, the financial crisis further exposed the negative social impacts of the unsustainable development and planning model previously adopted. The breakdown of employment, the insolvency of families and increased levels of poverty, the rise of ‘ghost neighbourhoods’, the privatisation of urban services with prejudice against the state, and the weakening of institutional structures responsible for territorial management (Portas, 2008) were results of external control over the country and municipality budgets and funding, but also results of the antecedents of urban planning and territorial management. Although the crisis had devastating impacts for territories and citizens, from the point of view of planning, some changes with regard to territorial development patterns can thus be identified as positive impacts, since they allowed the rethinking of the former planning and management practices, which in some sectors had proved to be inadequate for the long-term evolution of the country, in terms, for example,
of demography and ageing. Examples of such positive impacts, with regard to territorial development patterns, are the slowdown of the civil construction sector and reduction of its pressure on the governance structures, the reduction of the oversized role of the real estate sector, the changing of mobility and housing patterns to patterns spatially more concentrated, the reactivation of traditional urbanity based on agglomeration, the rise of resource-efficiency, the reoccupation of public space, together with a broader institutional space for public participation (Crespo, 2008), and for environmental and energetic commitment (e.g. Covenant of Mayors in JRC, 2009).

The opportunity of sustainable cities

Cities as agglomerations started facing a ‘crisis’ long ago, with the increase and generalisation of accessibility led by the industrial revolution and capitalism (Lefebvre, 1970). During the accelerated economic growth of 1980 to 2000, with energetic low priced resources, accessibility became widespread and cities and territories were in conflict. As recalled by Naredo (2003) and Cuchí, Marat-Mendes and Mourão (2010) this caused an environmental crisis and later an economic and financial crisis. The problem of suburbanisation has thus dominated the urbanisation agendas for the last three decades, contradicting traditional polycentric territorial systems, feeding Splintering Urbanism (Graham & Marvin, 2001) and stimulating debates on sustainable urban form (Talen, 2011; Marat-Mendes, 2002).

The debate of compact urbanisation versus sprawl, and its inherent impacts on a city’s sustainability is not new (see, for example, Frey 1999; Jenks, Burton, & Williams, 1996; Urban Task Force, 1999; Williams, Burton, & Jenks, 2000). The implications of the urban form of our cities in the environment have strongly emphasised the issue of the sustainable city, while finding strong support, for example, within the European Union (Marat-Mendes & Scoffham, 2000). This situation is even more evident since the publication of the Urban Task Force by Lord Rogers of Riverside in 1999 (Urban Task Force, 1999), which has also had repercussions in Portugal (see, for example, Portas, Cabral, & Domingues, 2003, 2011). This also finds agreement in Echenique et al. (2012), who argue that in recent years the paradigm of urban planning has been to promote the compact city as a reaction against the sprawl induced by the newer universal use of private automobiles. However, as argued by Echenique et al. there is no clear evidence that such a compact urban model induces greater environmental, economic, or social effects, or more sustainable cities. Attention is paid to the economic and social costs of the process of urban compaction, which needs to be better understood and considered in future cost–benefit analyses, as it is being done in Portugal by Carvalho (2013). Finally, Echenique et al. (2012) conclude that there is not a clearly superior spatial urban form solution in terms of sustainability. Changes in lifestyles and the associated population growth have a far greater impact on the natural environment and resources than that attributed to spatial urban forms (Marat-Mendes, 2013). The consequences of the social and
economic costs that the current financial crisis might have produced in terms of changes of lifestyles should therefore be considered. These changes must be the main elements of analysis in any urban policy.

The relationship between urban form solutions, urban planning, and their implications for environmental problems still seems to be an open discussion. Nevertheless, if one accepts that changes of lifestyles are crucial to the achievement of sustainability, and that sustainability is an important social goal (WCED, 1987), the study of the relationship between lifestyles, population growth, urban form, and the impacts of these factors on the natural environment seems to be an urgent task, to be followed by urban planning.

The crisis as an opportunity for low carbon urban planning

In a time when planning is under pressure to better respond to the financial crisis, and to the sustainability agenda which has been imposed at an international level since the publication of the Brundtland Report in 1987 and has been committed in several agreements and charts (consider, for example, the International Kyoto Agreement of 1997, or the European Water Directive of 2000), calls have been made for attention to a revision of the urban planning models and the available planning tools and methodologies to better achieve the signed commitments. In consequence, there is an ongoing debate about the integration of the necessary actions to achieve more sustainable development in the field of urban planning, and on how planning must change in order to develop cities and territories, as expressions of a society, based on a sustainable economic model. As already explained by Cuchi, Marat-Mendes, and Mourão (2010) this debate is only taking place now because there is social recognition of the environmental impact caused by the productive industrial system that is still in operation.

The continuous waste and atmospheric emissions dump generated by the productive and consumer systems generates environmental impacts, therefore Cuchi, Marat-Mendes, and Mourão (2010) argue for new methodological planning approaches that take into account tools that allow monitoring of the material flows that operate within the productive system and their relationship with sustainability. One alternative proposal is to explore the relationship between urban material dynamics and sustainability as the elementary tool through which to approach territorial and urban planning. Cuchi, Marat-Mendes, and Mourão (2010) understand this as a useful vision for sustainable urban planning. Urban material dynamics represents a tool for the recognition of new roles of the urban space, spreading ecological regeneration from the green spaces to the entire city. Green strategies can begin on the green fields, but they should finish on the ‘grey’ infrastructure of the city. In that sense, at the international level (Newmann, 2006; Cuchi, Marat-Mendes, & Mourão, 2010) and also in Portugal (Pinho et al., 2013) research on urbanism has identified study of the energy-carbon flow, among other flows of the urban metabolism, as a relevant field of research to achieve more ecological urbanisation. Several authors define urban
metabolism as the group of material flows which enter and leave a certain urban
system in order to enable its activity. Thus, studies of urban metabolism fre-
quently use material flow accounting as has also been done for Lisbon (Niza,
Rosado, & Ferrão, 2009).

‘Low carbon cities’ are understood as urban systems that demand fewer fossil
fuels and produce less carbon emissions, thus mitigating climate change (Stern,
2007). ‘Low carbon urban planning’ should propose spatial scenarios of low
fossil fuel consumption, envisioning scarcity or the internalisation of environ-
mental and climate change costs. Although few ‘low carbon cities and territ-
ories’ exist as yet, territorial and urban administrations all over Europe, and in
Portugal, are committed to the ‘low carbon goal’ (e.g. Covenant of Mayors in
JRC, 2009).

The theme of ‘low carbon development’ entered Portuguese public institutions
slowly, in particular through the work of the Environment National Agency
(APA), responsible for the application of the Kyoto Protocol and for the delivery
of reports to the International Panel for Climate Change (IPCC). Some Portu-
guese authors have researched ‘low carbon buildings and cities’ in Portugal in
terms of climate change mitigation (Fernandes, 2009), of bioclimatic urban
design and sustainable building principles (Mourão & Pedro, 2012) or in terms
of the management of low carbon cities and territories (Pinho, 2009; Pinho et al.,
2013), approaching the need and the strategies to reduce energy demand and the
consumption of urban areas directly, and, therefore, to reduce CO₂ emissions. A
route to take towards Low Carbon Economy until 2050 (APA, 2012) and a
strategy for climate change adaptation (PCM, 2010) have been developed at an
institutional level. A new version of a national plan for climate change is also
being designed (PNAC 2020). However, ‘low carbon planning’ approaches in
Portugal are still limited, partially due to the fact that the importance of climate
change adaptation for vulnerable cities and territories has been increasing and
crossing over with the concerns about climate change mitigation (Santos, Forbes,
& Moita, 2002).

Portuguese academic research shows that the characterisation of carbon emis-
sions from an urban system on the basis of nationally and locally produced data,
although complex and demanding specific information (Cuchí, Mourão, &
Pagés, 2009; Mourão, 2012), enables to account and to restrict carbon emissions
of urban origin (buildings, mobility and sanitation emissions, considering delo-
calised emissions). This quantitative knowledge, although still incomplete, can
help to identify options on territorial and urban form transformations, and to
develop a balance between ‘high carbon’ and ‘low carbon urbanisation’, particu-
larly relevant for post-crisis urban planning and development. ‘Urban Carbon
Balance’ can be relevant for ecological territorial and urban form regulation
aiming at higher resilience in the current crisis, but it is not yet incorporated in
an operative territorial and urban regulation method which could serve urban
planning in Portugal. Indeed, traditional instruments of urban planning and terri-
torial management can address neither urban energy demand nor urban carbon
emissions (Mourão, 2012).
Conclusions

This chapter discussed the role that urban development, urban planning, and territorial management activities have played on the evolution and outbreak of the financial and economic crisis in Portugal, over two decades. It also addressed the impacts that the crisis, from 2008 on, is having on urban development, urban planning, and territorial management in this country.

The assumption that evolution in urban development, urban planning, and territorial management in Portugal in the last decades before 2008 was motivated by drivers that also led to the financial and economic crisis, such as the oversized real estate sector, was verified. It was shown that the crisis is strongly interconnected with urbanisation processes as well as with permissive urban planning and territorial management activities.

It is possible to conclude that the evolution of planning in Portugal was significant in recent decades; however, it is also possible to identify a time lag between this evolution and the evolution of urban dynamics, since the period of higher urban dynamics has preceded the availability of the Ground Basis Law on Territorial Planning and Urbanism, and of the arrival of conditions for its accomplishment. This contributed, in the long term, to the outbreak of the crisis in Portugal, as well to aggravating its effects.

Suffering from inefficiency in the implementation of plans and their rules, planning has had little control over its long-term consequences. The aims of planning were oriented to the short term, and the long-term environmental and economic impacts on energy demand, mobility patterns, and green fields conservation have not been properly considered. The delay in the legislation of urban planning and of environmental impact assessment, together with the inefficiency in planning accomplishment, further exposed the Portuguese urbanised territories to the drivers and to the effects of the financial crisis. For example, urban areas remain dependent on the automobile and are vulnerable to rises in the price of fossil fuels, to environmental contamination, to climate change effects, and to the sudden change in mobility patterns and housing needs connected to the change of employment conditions deriving from the crisis.

During the second generation of Municipal Plans, the tendency to reduce the expansion of urban areas showed a positive evolution in terms of environmental goals, to which the crisis is also related. However, some of these plans still allow construction in areas with high environmental value and do not face yet the challenge of sustainable mobility, ecological construction, or of the consideration of social and economic costs of lifestyle changes, which happened as a result of the crisis. Along these lines it should be noted that, as a result of the reduced pressure from the real estate sector, there has also unfortunately been a lack of pressure to conclude the revisions of the Municipal Plans and to implement their ecological structures. In consequence, many of the second generation plans are now on 'stand-by' leaving municipalities without strategies with which to face the crisis.

Municipal Master Plans were thus affected by the crisis due to a lack of resources and the weakening of planning institutional structures, in the face of the external
control of the country and budget reductions, but also due to uncertainty about the right strategies of territorial development to be adopted, in particular in the face of the growing concepts of ‘sustainable cities’ and ‘low carbon economy’. Questioning pre-crisis urban planning models made space for methodological discussions and renovation but, at the same time, the deadlock of the revisions of the Municipal Master Plans reduced the chances for motivating territorial and urban planning and its public participation actions, as predicted by the second generation plans.

It was argued in this chapter that to face the consequences of unsustainable urban development in Portugal, aggravated by the crisis, planning practice should use tools and methodological approaches that incorporate the urban material dynamics, valuing and protecting endogenous resources, such as water and energy, and assuring a higher resilience to crisis scenarios for territories. Compromises in climate change mitigation play an important role in such innovation and, although the debate on sustainable urban form continues, there is already agreement about the importance of considering lifestyle changes, together with territorial and urban form analysis of the elaboration of strategies for ‘low carbon territorial and urban development’.

References


Urban planning and management


