SHRINKAGE IN PORTUGUESE NATIONAL POLICY AND REGIONAL SPATIAL PLANS: CONCERN OR UNSPOKEN WORD?

Sílvia Sousa
Paulo Pinho

ABSTRACT

This paper aims to assess whether and how current Portuguese national spatial planning policy and regional spatial plans are based on evidence revealing trends and patterns of population decrease and rural and urban shrinkage in Portugal. Firstly, built on a literature review, we identify the consequences of population decrease, the so-called characteristics of shrinkage, and we briefly look at dominant approaches and strategies to deal with it. Secondly, we review macro level policy documents to access global awareness and perception of shrinkage from a transnational perspective. Finally, after sketching an international framework on our subject matter shrinkage, a content analysis is applied to the Regional Spatial Plans of the Metropolitan Area of Lisbon and of the Northern Region.

Urban shrinkage and shrinking cities are not explicitly mentioned in these documents. This is partly understandable because it is an emergent phenomenon in Portugal, in comparison with other countries, and because the concept is recent and it has not yet come to light in Portuguese planning practice. In addition, results suggest that the doctrine of growth is still embedded in Portuguese planning culture. In sum, despite clear evidence of population decrease in Portugal, spatial planning policy and regional spatial plans have either disavowal or reactive character pertaining population decrease and shrinkage.

Keywords: National Spatial Planning Policy, Regional Spatial Planning, City Shrinkage, Portugal

JEL Classification: R00, R23, R28, R38

1. INTRODUCTION

This paper aims to assess whether and how current national spatial planning policy and regional spatial plans are based on evidence revealing trends and patterns of population decrease and rural and urban shrinkage in Portugal, specially focusing on Regional Spatial Plans of the Metropolitan Area of Lisbon and of the Northern Region, where the two hardest hit cities, Lisbon and Oporto, are located. With this purpose in mind, we review macro level policy documents to assess global awareness and understanding of shrinkage, and later compare it to the Portuguese national and regional situation. Lastly, after outlining an international framework on our subject matter shrinkage, a content analysis is applied to the Regional Spatial Plans of the Metropolitan Area of Lisbon and of the Northern Region.

Shrinking cities are now on the spotlight all over the world. German planners were the precursors of the shrinking cities debate but efforts have been made to widen the international discourse on this topic. The Shrinking Cities Project, an initiative of Germany's Federal

Cultural Foundation, kicked off in 2002. Later, in 2004, the Shrinking Cities International Research Network (SCiRN™) was founded. More recently, in 2009, COST[1] Action TU0803 Cities Regrowing Smaller (CIRES) was launched. In the same year, the Project SHRINK SMART was initiated focusing on governance of shrinkage within a European context. Thus, this topic came into view as a fertile field open to contributions since there was not yet a view or published research on shrinking cities in Portugal before Sousa (2010).

Although the center of gravity of shrinkage has been the west, especially Europe and the USA, it is fair to say that it is spreading throughout the world. The number of shrinking cities is increasing, faster than the number of growing cities, despite it all. Shrinkage is not found exclusively in the north, center or south, east or west of the globe or in an individual country, in large, medium or small-sized cities, or in specialized cities; it can occur in parts of or in entire cities, city-regions, metropolitan areas, regions, urban areas, rural areas, etc. This trend will surely increase: in the future, Europe will barely participate in worldwide population growth and developing countries will be affected. Some countries should even prepare for a general decrease in resident population.

In this overall picture, Portugal has been occasionally pinpointed, but until recently there was not a clear view on the subject of shrinkage and its characteristics in the country (Sousa, 2010). Panagopoulos and Barreira (2012) systematize what they call the most common strategies adopted by the Portuguese central and local governments and identify their results in dealing with population decrease, based on a survey of newspapers and municipal websites and by using economic and demographic time series from 1999 to 2008.

Sousa and Pinho (2013) identify the consequences of population decline, the characteristics of shrinkage (Figure 1), which range from decreasing population density to over-dimensioned and underutilized infrastructure, death of the public sphere, creativity and innovation, almost as much as the approaches, strategies and recommendations to deal with it found in the literature. Planning is mostly reactive and aspires (re)growth, as a result of a generalized negativism against shrinkage, and optimism to population growth; but is also adaptive and accepts shrinkage, having a positive position toward shrinkage, being realistic and pragmatic toward population change (Sousa and Pinho, 2013).

Lisbon, the capital, and Oporto, the major city of the industrialized Northern coast, are very old Portuguese cities, where shrinkage is a growing issue. The former is twice the size of the later in population, but both have lost population for more than two decades. Housing units grew 16% and 21% respectively, in the last 20 years. Greater Lisbon is more affluent, with the country's highest GDP per capita, whilst Greater Oporto, more peripheral (where unemployment is also more of an issue) is just slightly above the national average. With a similar population density, the two cities also have the same social diversification index (0.71).

By the 19th century, the city of Lisbon had stagnated and lost relative importance in Europe. Lisbon is the financial and administrative center. The Port of Lisbon is one of the busiest ports of the European Atlantic Coast and many of Portugal's national and international firms are based in Lisbon. Main economic activities include tourism, consulting services, telecommunications, steel and chemicals. Lisbon's core has approximately half a million inhabitants and the population in the Greater Lisbon region is two million. Over the last decades, the city core lost population while the region grew. These population trends are due to the core's tertiarization and new emerging lifestyles, though the national total fertility rate has also been dropping.

[1] COST is an intergovernmental framework for European Cooperation in Science and Technology.

Figure 1. Consequences of population decline

The economic and cultural prosperity of Oporto occurred in the 19th century when the driving forces were based on highly concentrated industrial activity, strong trading and the opening up of the city to the world, which contributed to the development of the city and to a certain cosmopolitan flare. Deindustrialization was followed by tertiarization. Today, Oporto's economy is still based on machinery, textiles, Port wine exports and, of course, on consulting services. Some of the largest companies are located in the city-region. Oporto's core has a population of a quarter of a million and the Greater Oporto population region reaches 1.3 million. The city core lost population while the region grew. These population trends are due to general processes of deindustrialization, tertiarization and changes in standards of living.

Both cities increasingly gravitate around the Tourism industry, driven by low-cost airline companies and forceful marketing which made them fashionable.

Table 1. Approaches, strategies and recommendations to deal with population decline/shrinkage

General/Reactive Mainstream Planning	**Specific/Adaptive Planning for shrinkage**
Attraction-retention	Vacant properties and land banks
Urban regeneration	Housing and integrated regeneration (inc. downsizing and demolition)
Culture and creative industries	De-suburbanization and social capitalization
Knowledge, innovation and systems of innovation	Regional
Information and communications technology	Technical infrastructure
Environment/Sustainability	Transportation
Community involvement	Finance

2. DISCUSSION

2.1 International awareness of shrinkage

A review of macro level policy documents (mostly European; Table 2) demonstrates growing awareness of demographic challenges, including shrinkage. Shrinkage slowly became part of the technical vocabulary, and we can also find related keywords like "population decline",

"aging", "economic decline" or "urban decline". Although these words are carefully used, with reluctance at times, given their inherent negative connotation and general implications, it should be admitted nonetheless that progress has been made during the past 10 to 15 years.

Table 2. Most relevant macro level documents regarding demographic trends and shrinkage 1999-2012

European Commission (1999) European Spatial Development Perspective –Towards Balanced and Sustainable Development of the Territory of the EU (official document), Committee on Spatial Development, Luxembourg.
European Commission (2005) Green Paper "Confronting demographic change: a new solidarity between the generations", Commission of The European Communities, Brussels.
European Commission (2006) The demographic future of Europe – from challenge to opportunity, Office for Official Publications of the European Communities, Luxembourg.
EU (2011) EU Hungarian Presidency Budapest Communiqué on European urban areas facing demographic and climate challenges, Directors General responsible for urban development, Budapest.
European Spatial Planning Observation Network (2006) ESPON ATLAS – Mapping the structure of the European territory, Federal Office for Building and Regional Planning, Bonn.
European Spatial Planning Observation Network (2007) Scenarios on the territorial future of Europe. ESPON Project 3.2, ESPON, Belgium.
European Spatial Planning Observation Network (2008) "Territorial dynamics in Europe: Trends in population development" ESPON Territorial Observation 1: 4–15.
European Spatial Planning Observation Network (2010) DEMIFER – Demographic and Migratory Flows affecting European Regions and Cities, ESPON and NIDI, Luxembourg.
UN (2004) World Population to 2300, Department of Economic and Social Affairs – Population Division, New York.
UN (2007) World Population Prospects: The 2006 Revision, Department of Economic and Social Affairs – Population Division, New York.
UN (2009) World Population Aging 2009, Department of Economic and Social Affairs – Population Division, New York.
UN (2011) World Population Prospects. The 2010 Revision United Nations, Department of Economic and Social Affairs – Population Division, New York.
UN-HABITAT (2006) State of the World's Cities Report 2006/2007, The Millennium Development Goals and Urban Sustainability–30 Years of Shaping the Habitat Agenda, Earthscan, London.
UN-HABITAT (2007) Global Report on Human Settlements 2009 "Revisiting Urban Planning" Outline, United Nations Human Settlements Programme, Nairobi.
UN-HABITAT (2008) State of the World's Cities Report 2008/2009, Harmonious Cities, Earthscan, London.
UN-HABITAT (2009) Planning Sustainable Cities: Global Report on Human Settlements 2009, United Nations Human Settlements Programme, Earthscan, London.
UN-HABITAT (2011) Cities and Climate Change: Global Report on Human Settlements 2011, United Nations Human Settlements Programme, Earthscan, London.
UN-HABITAT (2012) State of the World's Cities Report 2010/2011, Bridging the Urban Divide, Earthscan, London.
EUROCITIES (2008) Cities and economic migration – Challenges and local policy responses, Eurocities, Brussels.
EUROCITIES (2008) Demographic change and its impact on housing (report pre-release version), Helmholtz Centre for Environmental Research, Leipzig.
EUROCITIES (2008) Demographic change and urban mobility and public space, Europaforum Wien, Centre for Urban Dialogue and European Policy, Wien.

The European Spatial Development Perspective/ ESDP (European Commission, 1999) identified three main trends that would lead population development in the European Union (EU) in the next 20 to 30 years: declining population; migratory movements; and shifts in age profile. A shift from population growth to population decline was forecasted to occur around the year 2020. The ESDP also recognized a number of less dynamic towns and cities

in the EU, with a relatively narrow economic basis led by a single economic sector, whose decline has had a negative impact on the regional economy as a whole.

The European Commission (2005) published a Green Paper on demographic change about solidarity between generations, highlighting the challenges the EU had to confront: falling population, continuing low birth rates and continuing increases in longevity. However, the Green Paper suggested that the EU should return (first) to demographic growth, ensure a balance between generations, and find new bridges between the different stages of life.

Under the heading "from challenge to opportunity", the EC (2006) published a communication to present its objectives with regard to Europe's demographic future. The direction built on demographic renewal, through a more productive and dynamic Europe with sustainable public finances, promoting employment and receiving and integrating immigrants. The Budapest Communiqué (EU, 2011) gave emphasis to demographic and climate challenges which, because of cross-border consequences, could only be tackled through international cooperation and the adjustment to the principles of sustainability, making recommendations and proposals for shrinking cities.

The United Nations' projections (2004) suggested that world population, after moving through the demographic transition from high, and relatively balanced, birth and death rates to low rates, would not necessarily return to the old equilibrium. According to the *World Population to 2300* report: if the medium scenario is correct, future population growth will be slower than it has been at any point since the Industrial Revolution; if the low scenario is correct population decline will ensue; and if the high scenario is correct, future population growth rates will resemble earlier rates before the demographic transition, but population will continue to grow substantially to unprecedented levels. The subsequent *World Population Aging 2009* and the *World Population Prospects* (UN, 2009; UN, 2011) also validated these kind of scenarios.

The European Spatial Planning Observation Network/ ESPON admitted that differences in population development were increasing, at the regional level, and asserted that around 40 per cent of NUTS-3 regions experienced declining population numbers thru the 1990s (ESPON, 2006). Eighty of the 133 "most declining regions" were identified in Germany, 18 in Bulgaria, 11 in Spain, 10 in Romania, 7 in Estonia, 5 in Portugal and 4 in the United Kingdom as well as in Latvia. These were described either as relatively rural, sparsely populated and geographically remote regions or as more central old industrial areas and regions.

Coastal areas, specialized in fishing and trade, were also identified as experiencing population, employment and income decline, particularly the remote ones. This decline was seen as a consequence of fertility decline and aging, which combined to alter the *rules* of the regional-demographic *game*. In this context, both inward and outward migration became increasingly important, from the ESPON standpoint. Finally, regions, which show both a negative natural population change and net losses due to migration, are defined by ESPON as "depopulation areas".

ESPON (2008) identified an East-West pattern of demographic development polarization in 2001-2005, challenging the aims of territorial cohesion: regions with population growth were mainly located in Central-Western Europe while regions with population decline were more dominant in Eastern Europe. ESPON's demographic prospects up to 2030 for Europe and its neighboring countries showed significant demographic discrepancy in terms of population growth between Europe and its Eastern neighbors and between Europe and its neighbors to the South. Whereas the neighboring countries to the East faced a negative trend, Southern and South-Eastern countries were expected to grow above European average.

The Network of Major European Cities/ EUROCITIES (2008) emphasized that many European cities now faced population decline – shrinkage – despite the fact that population

growth had been (and remained) a major driver for urbanization for a long time. If fertility rates were lower than mortality rates and migration did not fill the gap, shrinkage was expected to occur. The EUROCITIES argued that only cities with a positive net migration balance and a strong economic base were experiencing on-going population growth, emphasizing that correlation.

As explained by the EUROCITIES, the growth paradigm is still the dominant pattern steering the cities' development strategies, mainly due to strong economic competition. The need to accept urban shrinkage as a valid development pathway, just like urban growth, was considered urgent by the Network. The EUROCITIES was aware that shrinking cities now need even more attention and support for their specific demands in policy and governance; and that urban and regional decision-makers need new strategies in spatial planning, such as innovative housing market instruments.

The recent *State of the World's Cities 2008/2009* (UN-HABITAT, 2008) dedicated considerable attention to shrinking cities, to its causes and to future developments. It was admitted by the UN-HABITAT that although slow or negative urban growth was mostly a developed world phenomenon, it was also occurring in developing countries. A UN-HABITAT analysis of 1,408 cities in the developing world showed that 143 cities (10.2 per cent of the sample) experienced a reduction in population between 1990 and 2000. These cities experienced the loss of 13 million people. The phenomenon of declining populations in 48 cities of the developing world was considered relatively new, an emerging trend that was not yet as prevalent as it was in the developed world. However, the UN-HABITAT asserted that population loss may be a prelude to a new urban trend that was starting to unfold. The *Global Report on Human Settlements 2009* also highlighted that in developed countries some of the key issues were shrinking cities and the retrofitting of decaying areas within the city (UN-HABITAT, 2007), a fact already vaguely mentioned in the *State of the World's Cities* (UN-HABITAT, 2006).

UN-HABITAT (2009) accepted that shrinking cities were found in the developed and transitional regions of the world, but was aware that more recently, city shrinkage had occurred in some developing countries. In the former, the demographic trends with the most far-reaching implications for planning were urban population decline and an aging population; whereas in the latter, comparatively, international migration rendered the features of shrinkage and aging less intense. In the report, planning challenges in both developed and transitional country contexts were pointed out: determining how to meet costs from underused infrastructure; identifying alternative uses for abandoned social facilities, managing huge swathes of vacant housing units, as well as commercial and industrial facilities; managing an increased demand for healthcare, recreation, transportation and other facilities for the elderly, due to aging.

2.2 Methods and materials

Following the aim stated in the introduction, we set out to review the Regional Spatial Plans of the Metropolitan Area of Lisbon and of the Northern Region (Figure 2), where population decrease and/or shrinkage and its direct consequences are more severely felt, namely in Lisbon and Porto.

The method is a very simple content analysis. The key goal of this content analysis is to shed light on how planning is reacting, according to the national (central government) and regional (*Comissão de Coordenação de Desenvolvimento Regional*) awareness of the shrinkage phenomenon. The diagnosis is not intended to grade planning's performance, but instead to get acquainted with the perception and corresponding policy formulation in situations of population decline/shrinkage. We do not expect to measure how well decision makers and planners are doing, but instead qualitatively assess it.

This content analysis implies answering a group of questions regarding certain aspects of shrinkage. To be precise, we inquire what the documents say about: population decline and other related demographic issues, such as natural increase, net migration, elderly population, consequences, perception, meaning, concerns, priorities, alternatives, opportunities, obstacles and roles. The analysis involved the acquirement of a number of spatial planning policy documents (see the following Table 1) and two Regional Spatial Plans.

This diagnosis is organized into 13 matrixes; each matrix representing a characteristic/ consequence of shrinkage (e.g. "Population Decline"; see Introduction and more importantly Figure 1). The procedure consists in going through the whole document against these and the questions stated[2]. There are limitations due to discrepancies between the date of the several spatial planning documents, and between these and the process of population decrease.

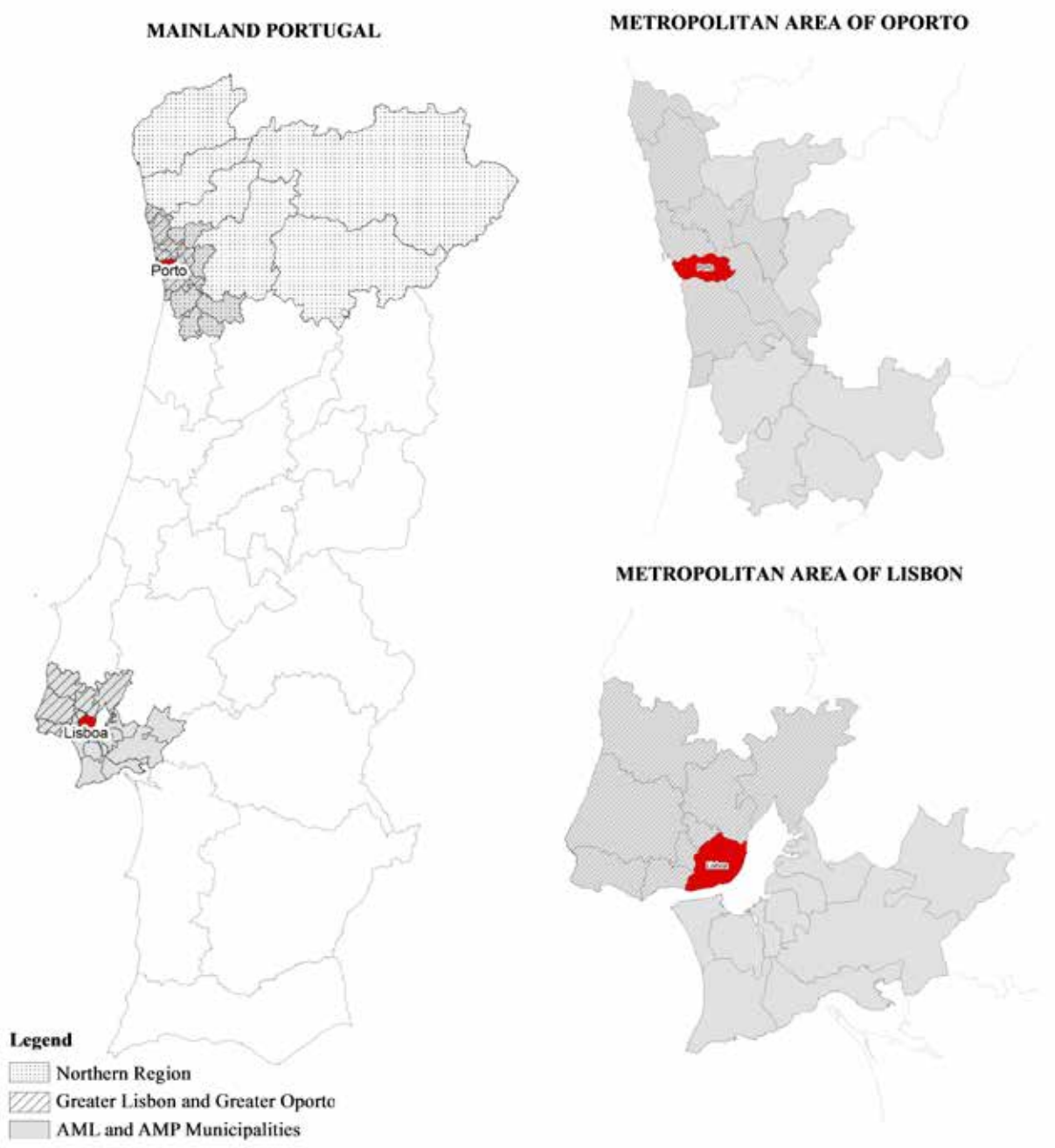
The reader should bear in mind that the diagnosis is not a description of reality; it is an account of the perception/ awareness of population decline/ shrinkage. A great synthesis effort was made. The next sections present a synthesis of the findings.

Table 3. National Programs, Dossiers and Other Documents

Priority from the Portuguese presidency for the Environment, Spatial Planning and Regional Development (2007-07-02)	Prioridades da presidência portuguesa para o Ambiente, Ordenamento Territorial e Desenvolvimento Regional (2007-07-02)
Strategic National Reference Framework 2007-2013 (2007-01-16)	Quadro de Referência Estratégico Nacional 2007-2013 (2007-01-16)
National Program for Spatial Planning Policies (2006-04-27)	Programa Nacional da Política de Ordenamento do Território (2006-04-27)
Urban Development and Reintegration Interventions in Deprived Neighborhoods (2006-10-02)	Operações de Qualificação e Reinserção Urbana de Bairros Críticos (2006-10-02)
Green paper on European territorial cohesion (2009-02-09)	Livro verde da coesão territorial europeia (2009-02-09)
South Waterside Arch Project (2008-09-12)	Projeto do Arco Ribeirinho Sul (2008-09-12)
Action Plan for the Coast (2008-02-21)	Plano de Ação para o Litoral (2008-02-21)
Preparatory Actions of Urban Networks for Competitiveness and Innovation (2007-12-17)	Ações preparatórias de Redes Urbanas para a Competitividade e a Inovação (2007-12-17)
Cities' Policies, Polis XXI (2007-04-11)	Política de Cidades, Polis XXI (2007-04-11)
Priorities for the Coast (2006-12-20)	Prioridades para o Litoral (2006-12-20)
Guidelines for the Strategic National Reference Framework and operational programs 2007-2013 (2006-03-10)	Orientações para o Quadro de Referência Estratégico Nacional e programas operacionais 2007-2013 (2006-03-10)
Framework for the Integrated Management Strategy of the National Coastal Zone (2006-01-23)	Bases para a Estratégia de Gestão Integrada da Zona Costeira Nacional (2006-01-23)
Program from the XVII Constitutional Government (2005-2009)	Programa do XVII Governo Constitucional (2005-2009)

[2] Three steps were taken to implement the content analysis in a simple two column matrix :
A. Listing the analysis/policy statements: The first column under each characteristic/ consequence is marked ANALYSIS/ POLICY STATEMENT. When there are analysis/ policy statements in the reviewed document that address a particular characteristic/ consequence, they are listed in this column, covering the most significant parts of the statement, including citations (e.g. "PROURB, Anexo 2, p. 4"). When there are no policy statements in the documents reviewed addressing a particular characteristic/ consequence, either positively or negatively, then "no statements found" is written.
B. Listing the goals and implementing code (if there is one): The second column under each characteristic/ consequence is designated GOALS AND IMPLEMENTING RULES. In this column are listed whichever goals and/or implementing rules addressing, in any way, each characteristic/ consequence of shrinkage.
C. Evaluating the spatial planning instruments and policies: Once the first two columns are filled, each policy statement is evaluated according to two criteria: (1) did the policy statement demonstrate awareness of the characteristic/consequence under which it was listed; and (2) did the corresponding goals and implementing rules effectively support the policy statement, in the following manner:
1 – POOR, if the policy does not address or is at odds with the characteristic/ consequence.
2 – RULES NEED IMPROVEMENT, if the goals and implementing rules do not entirely support the policy statements listed.
3 – POLICY NEEDS IMPROVEMENT, if the policy does address the characteristic/ consequence but falls short of problem description and formulation.
4 – EXCELLENT if there is almost complete awareness of the characteristic/ consequence in analysis/ policy statements and the rules generally support the statements.

Figure 2. Location map



2.3 Results and discussion – National Framework

At the national level, the existence of ongoing and future population decline and other related demographic issues is acknowledged, especially in the National Program for Spatial Planning Policies (PNPOT), in the Strategic National Reference Framework (QREN) 2007-2013, and in the Framework for the Integrated Management Strategy of the National Coastal Zone (BEGIZCN). But, only their regional and rural-urban unevenness is emphasized.

The decline in the absolute number of inhabitants, and the growing aging of the population, caused by declining fertility/ birth rates and increasing life expectancy, are often cited, albeit safeguarding the Portuguese figures likeness to the EU-15 average. It is argued that recent immigration waves mostly correspond to a population with demographic characteristics already close to the EU-15 model. Even in the case of Asian immigrants,

convergence to Portuguese fertility and mortality levels is seen as quick. It is stated that Portugal's peripheral (geographical, economic and political) condition, underpinned by EU's eastward enlargement, can contribute to further aging and to make a stronger demographic decline scenario come true.

Accordingly, recessive demographic dynamics and even depopulation are a concern and identified as threats, although typically in inner regions and in contexts of very low densities. It is also reminded that the structure of the urban system is one of the biggest obstacles to territorial competitiveness, in a context of significant unequal population distribution. Moreover, it is accepted that urban growth often mirrors rural emptying rather than sustained regional growth patterns. The QREN document emphasizes that unplanned urban growth has contributed to depopulation of the inner regions and to a fragile and inefficient urban network.

From a slightly different perspective, the BEGIZCN identifies separate realities, ranging from rural areas under the influence of urban areas or aligned along the road network to more marginal territories that match diverse demographic and functional situations. It considers growing depopulation as a threat to areas with special interest for conservation, limiting management options. Population regression and abandonment are considered serious problems in many of the classified (usually peripheral) areas/ regions, threatening their landscape and cultural continuity, in the medium term.

At the national level, a clear association is not made between population decrease and over dimensioned and underutilized infrastructure, higher costs of public services, declining tax base and revenues, space surplus and vacancies. Regarding vacant and derelict land, QREN points out that despite the fact that extractive and industrial activities and sites have been abandoned and declining for a long time, it has not always been easy to make companies accountable for its recovery.

Furthermore, a decrease in available income for consumption (e.g. housing), more severe in the inner regions due to aging, is recognized in PNPOT. Portugal is compared to Spain and Greece, characterized by a high rate of home-ownership; reduced provision of social housing, low standard and falling market supply of rental housing, and low public expenditure on housing. The QREN calls attention to the fact that unplanned urban growth has created severe spatial development problems, visible in the housing market breakdown and in the difficult balance and rational provision and distribution of amenities. Growth also caused accessibility problems, solved mainly through an excessive resort to individual motorized transport with higher congestion, pollution and land use costs.

On matters of territorial and social cohesion, some attention is given to issues such as territorial segregation, social exclusion and cumulating social problems (e.g. increasing violence). The QREN stresses concern about emergent social exclusion and spatial segregation problems in some cities. In the *Programa Operacional Temático de Valorização do Território*/ Thematic Operational Program for Spatial Enhancement 2007-2013, included in QREN, it is also noted that these phenomena associated with urban areas have been rising, calling for new forms of prevention and management. Social and integrated revitalization policies for degraded areas, with urban poverty and social exclusion problems, excessively dependent on welfare money and other public investments are considered important.

In this context, a strategic priority in the QREN, and ensuing Thematic Operational Programs, is spatial and city development – promoting better planning, preventing risks, improving connectivity and strengthening the urban system, bearing in mind the need to reduce regional asymmetries. Channeling funds to the development of hinterlands is considered an important lesson learned. Accordingly, the decline of the so-called "rural world" can affect/ distress habitats and ecosystems, because of the vast protected areas in close dependency from traditional human activities. Relevance is also given to investments

that promote mobility and accessibility to major population and economic centers, seen as important factors to strengthen population settlement conditions.

One of the strategic options of the BEGIZCN is to develop/ recover human urban and rural landscapes, through financial management mechanisms and means to ensure better living conditions. In the same mindset, it is asserted that the agro-forestry sector, while creating direct employment and fostering the emergence of new markets, can contribute to the anticipated population attraction and retention and in declining areas (PNPOT, 2007). Housing rental incentive programs for the younger population, contributing to demographic and economic revitalization of urban areas with aging problems and functional and economic decline, are also seen as part of the solution.

Reabsorbing brownfields' environmental liabilities is a priority policy area of the Thematic Operational Program for Spatial Enhancement. Two of the main objectives of the Operational Agenda for Spatial Enhancement are to promote: polycentric urban development, strengthening the articulation between cities and their surrounding areas and the improvement of urban spaces; and social cohesion, while ensuring territorial equity when providing infrastructure and public facilities and services. Innovative solutions that physically focus on efficiency and reuse of infrastructure and facilities, at the expense of new construction, are seen as necessary to answer to complex urban problems. In technical terms, solutions should explore opportunities that new technologies have to offer.

QREN's Action Program finances projects, which integrate the improvement of public spaces and the urban environment, besides socio-economic development. Investments supported by *Eixo Prioritário*/ Priority Axis IX (QREN) aim at enhancing responses to urban problems and demand. It is argued that traditional solutions and funding are not enough to tackle the negative consequences of the urbanization process in Portugal (economic decline of the historic centers, housing demand, violence and crime, etc.), and require new organizational arrangements able to capitalize on investments.

Pilot projects with a significant intangible component, which use innovation to meet urban problems and new urban demand, are privileged, contributing to the development of sustainable urban communities, particularly in the areas of: provision of proximity services; urban accessibility and mobility solutions, security, risk management and crime prevention; eco-innovation in construction and housing; management of public space and buildings, energy efficiency, air quality and waste management; and urban governance models.

POLIS XXI[3] encourages innovative solutions for urban development, in which urban projects serve an overall and integrated vision to transform cities. It is guided by principles of environmental sustainability, efficiency and reuse of infrastructures and facilities, community empowerment and development of new PPP arrangements. Its goal is to ensure that cities are places of citizenship, cohesion, cultural identity, integration, heritage, environmental quality and well-being, promoting sustainable resource use, urban design, construction, landscape, mobility, economic competitiveness and just access to housing, amenities, and services, making participation processes more efficient, and fighting obsolescence, crime and exclusion factors.

2.4 Results and discussion – Regional framework

2.4.1 Northern Region

In this matter, the Regional Spatial Plan for the Northern Region[4] is especially concerned with the physical degradation and economic decline of urban areas and population loss in rural areas. The main demographic trends mentioned in the plan are: a slight decrease

[3] The POLIS program is a partnership between the State and the city councils (Local Authorities), based on complementary policy instruments and financing sources, and addresses spatial and environmental planning.
[4] Plano Regional de Ordenamento do Território do Norte in public discussion.

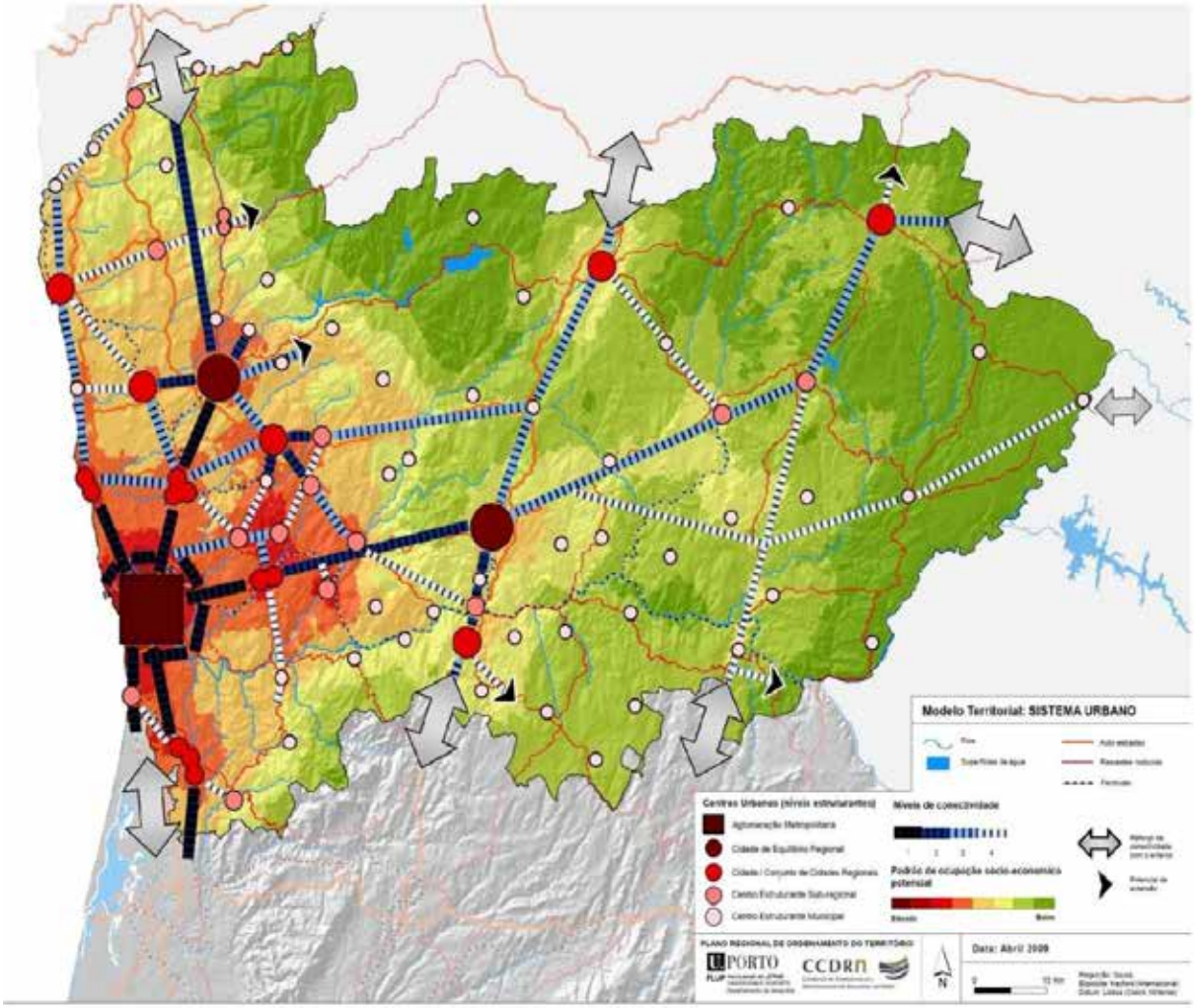
(stagnation) of the resident population in the short-term; a significant population loss in the long-term, and a noteworthy population aging. A low economic performance, depopulated and impoverished hinterland (Trás-os-Montes and Alto Douro), with a strong environmental and tourism potential and a low urban and infrastructural density, is identified in the Urban System (Figure 3). In contrast, a consolidated central area in the coastal urban region of Oporto is seen emerging, whose dynamics suggest tumbling demographic and economic density processes, which usually characterize the transformation of the traditional city.

The state of degradation of the built heritage is part of the concerns expressed. It is stated that the crisis in the central city, combined with the crisis in the traditional retail sector and the relocation of services, caused spiraling more unemployment, population loss, urban degradation and decay. In agricultural/ forestry rural areas, population dynamics are reported as being in constant regression, featuring a growing elderly population. These internal and external migration movements are considered onerous, leading to a sharp population decline in rural areas, and labor force and young population flight to cities, coastal areas and abroad, unless employment and other attraction mechanisms are implemented, taking advantage of the local productive base.

The plan stresses different realities and problems. First, there is a planning deficit and excessive urban growth and sprawl, largely due to strong housing speculation in coastal areas. Second, there is continuous population decrease, abandonment and change of land exploration systems in the inland. Last but not least, there are "intermediate" areas, where urban settlements are not sufficiently infrastructured and have lower attractiveness. Decreasing purchasing power in the region is identified. Regeneration of central areas is considered a challenge. Aspects as diverse as structuring the Oporto metropolitan ring, strategic planning, strengthening compactness, polycentrism and multi-functionality, reinvention of urban-rural relationships, and control of diffuse urban development are highlighted throughout the Regional Spatial Plan. The plan encourages urban fabric densification and urban subsystems consolidation operations. As regards new infrastructure, a preventive and restrictive land policy was considered basic, especially in the most peripheral and less urbanized areas. Public investment should be strictly oriented towards this.

Concerning housing policies, efforts to contain urban perimeters (making housing policy and housing market forecasts more compatible, with special attention to less affluent local demand, rehabilitation of the most degraded urban areas, and the infilling of the existing urban voids) should be highlighted. The plan aims at minimum levels of land use and just access to public services/facilities, to fight demographic and socio-economic regressive trends that threaten social and territorial cohesion. The plan wishes to find solutions for a major challenge: being attractive, competitive and just. Two sets of measures are endorsed: (1) development of endogenous resources (e.g. agro-forestry); and (2) integrated service networks and ICT initiatives; mostly in low population density/ rural areas.

Figure 3. Regional Spatial Plan of the Northern Region: Urban System



2.4.2 Metropolitan Area of Lisbon

The 2002 Regional Spatial Plan of the Metropolitan Area of Lisbon[5] (AML) acknowledges that, since the 1980s, the metropolitan area's attractiveness has decreased sizably which, associated to low fertility, slowed down population growth. However, it is noted that the AML still grew at a faster rate than that of the country and that of the region, reinforcing its relative demographic weight.

A metropolitan North-South divide is recognized. While the North lost population, presenting the highest shares of elderly, aging index, old-age dependency index, and the lowest shares of young people and young-age dependency index (mainly due to the city of Lisbon); the South continued to grow. It is asserted that in Lisbon and in more rural and peripheral municipalities, the percentage of older people tended to increase, together with the demand for elderly care support services.

The plan's projection model assumes progressive metropolitan population aging, as well as higher concentration of immigrants (more than 80%) in the North, exception made only to the city of Lisbon. Additionally it assumes the reversal of young population decrease, due to reduction in infant mortality and increase in fertility (although below generation

[5] Plano Regional de Ordenamento do Território da Área Metropolitana de Lisboa was approved by the Resolução do Conselho de Ministros n.º 68/2002, 8 April, and its amendment approved by the Resolução do Conselho de Ministros n.º 92/2008, 5 June.

replacement figures). For internal and external migratory movements, it is forecasted either stability or matching decline. The plan predicts demographic loss in several municipalities.

The plan highlights several spatial pattern trends. Suburbanization or periurbanization is predicted. The metropolitan center of Lisbon is described as a central area with an important historic core, with serious problems such as depopulation, retail decadence, low standard building stock and public space, as well as industrial, logistic and social housing areas.

Two relevant types of spaces concerning dominant change trends and dynamics are identified. The *problem space*s include fragmented and unstructured peripheral areas with low urban and environmental quality; and central areas with population and activity loss, denoting a sharp urban decline and strong degradation processes. The *areas with potential for conversion/renewal* are obsolete or deactivated areas whose location and size offer conditions for new metropolitan centralities related to dynamic and innovative activities.

It is stated that the AML has the lowest population density within metropolises with more than one million inhabitants and that Amadora and chiefly Lisbon have become less attractive over the years. Certain low density corridors are considered a result of policy favoring individual motorization without adequate matching public transportation. The acknowledgment that local finance structures are the first to encourage urban expansion, through urban subdivision operations is particularly important. Albeit in the long term, some of these interventions can involve costs for which there are no foreseeable resources available, quick and easy financial revenues from levying taxes are tempting.

The municipality of Lisbon is given as an example of socio-economic inequality, where high-end areas and high purchasing power coexist with strongly degraded areas, mainly inhabited by underprivileged population and risk groups. In what regards the housing market, it is simply remarked that housing growth rate is much higher than that of population, especially in the North AML. Voids are associated mostly with industrial brownfields created by economic changes. Housing surplus is attributed to new but low quality residential development, often a response to low purchasing power demand, owed to poor spatial planning and inadequate urban integration.

Despite efforts made, it is argued that decrease or reversal of socio-spatial segregation phenomena that push population outwards is not yet visible. Very congested, ill-equipped and architecturally poor housing pockets are seen as social exclusion ghettos. Slum housing and critical neighborhoods populated by ethnic minorities embody socio-economic segregation and are mostly found in the North (of AML), chiefly in Lisbon and Amadora. According to the plan, the metropolitan area accumulates all the social exclusion factors: asymmetries, fragmentation and poverty.

The spatial strategy devised in the plan aims to "sustainably" revalue the city of Lisbon and the Tagus estuary as anchors at the center core of the regional and metropolitan structures, correcting urban and social inequalities, and countering low quality suburban growth, land and real-estate speculation along the coastline(Figure 4). The plan proposes the improvement of urban quality and living conditions– socio-territorial cohesion – chiefly in degraded/socially deprived urban areas, peripheral/suburban areas and historic centers.

The implementation of the strategic guidelines is based on a number of measures. For the Lisbon case, the idea is that trends can be changed or reversed in the light of the city's role, social housing programs, and metropolitan urban and socio-economic development. For the Barreiro case, total industrial redevelopment and new accessibility conditions are seen as the solution. Provision of quality social and cultural facilities is thought of as essential for retaining population, allowing for growth of diverse job opportunities and relocation of employment centers. The plan considers the municipality of Barreiro as a preferential location for polytechnic schools, stopping population flight while meeting educational needs.

Figure 4. Regional Spatial Plan of the Metropolitan Area of Lisbon: Territorial Model

3. CONCLUSIONS

Although Portuguese demographers have seen it coming for quite some time, based on this case analysis, spatial planners and decision makers have not really been alarmed by the upcoming and, in some cases, ongoing population decrease in Portugal.

The concept of shrinking cities is not directly mentioned in any of the Portuguese national spatial planning policy documents and regional spatial plans analyzed in this paper. This can be explained by three reasons: (1) it is a fairly recent and still emergent phenomenon in Portugal; (2) it is still associated to negative social and political connotations; (3) it had not yet developed into a consistent theoretical framework able to support the knowledge transfer from theory to practice. Given that shrinkage has not been recognized in its full and comprehensive extent, we could only find some isolated references to dimensions of the concept. That is the case of general references to population decrease and to other interrelated demographic issues, but seldom with agreeing policy implications.

On a national scale, low fertility rates, diminishing net migration, and the sharp rise in population aging are consensually, considered a major social and economic development concern. In addition, population decline in inner rural areas and in urban cores, or even more specifically in historic centers and downtown areas is highlighted. Another common concern is the reconversion of industrial brownfields usually located in the periphery of the main cities, sometimes as they turned obsolete absorbed by the physical expansion of these cities.

For the Northern Region planning, especially with reference to Oporto and the rural areas, the vulnerabilities of the housing market coupled with sinking population density are the most important worries. The Spatial Plan for the Metropolitan Area of Lisbon gives more emphasis to the long trend of population decrease, to the surplus of vacant lots and buildings, and to the declining purchasing power of the population. These same topics can be found in most local spatial planning instruments and policies. This is not a surprise because population decrease is seen as, mostly, a response to inadequacies of the housing market, unbalances between housing supply and housing demand – whether because of practical matters such as the conservation state of the buildings or sociological issues such as image and dominant local lifestyles.

Whether you look at national or regional planning documents, you can always find the new buzz expression in Portuguese planning: territorial cohesion. Almost every measure falls under the umbrella of territorial cohesion that together with social cohesion might constitute the most repeated expressions in the documents under analysis. Social cohesion in central or historic areas commonly goes hand in hand with urban regeneration. Improving quality of life is considered essential to create lasting competitive advantages between cities that surpass mere short-term stimuli for leaving a city and living in another city, such as lower property prices. Quality of life is associated to amenities for the young and for the elderly, green spaces, safety, cultural activities and, to some extent, innovation.

Partnership opportunities are usually encouraged. From a resource efficiency perspective, a significant importance is given to ICT and to the reuse of existing urban infrastructures and facilities. The priority is to devise adequate strategies to revitalize existing built-up areas, reprogram brownfields, or infill urban voids. Important steps have been taken already. Issues such as reduction of urban perimeters, control of dispersion areas, and regional complementarities have been incorporated in planning strategies, approaches and recommendations.

It is possible to assert that the Portuguese national spatial planning policy documents and regional spatial plans have either a disavowal or reactive character. The growth paradigm is still paramount in Portugal. Through content analysis it was possible to verify that similarly to other Western countries, the Portuguese planning system does not contemplate, in equal or equivalent terms, shrinkage and growth. Whichever the administrative level, national or regional, planning documents fall short to describe the depth of shrinkage in the country. The imbalance is greater when considering the necessary soundness between "analysis and policy" and between "goals and implementing rules".

The awareness of shrinkage in Portugal is similar to most other countries that do not seem to perceive the magnitude that the consequences of population decrease may have planning wise. Not only, but also because of this, strategies and approaches have a conventional planning nature, seeking to retain and, especially, attract new residents, tourists and city users. As luck would have it, it is already accepted that the process will not be swift.

There cannot be planning for shrinkage in Portugal because it has not been fully recognized: it is an unspoken spatial phenomenon and practice. Thus far, Portugal has not taken that leap. Shrinkage and/or population decline in cities is considered inexorably reversible, unlike in rural areas where it has been widely accepted and even precociously taken for granted. Notwithstanding, the present financial crises have triggered additional planning concerns regarding the economy of resources, which are pre present in new Municipal Master Plans and in the current Land Policy Reform.

ACKNOWLEDGEMENTS

This research was supported by the Portuguese Foundation for Science and Technology and the Human Potential Operational Programme/European Social Fund.

REFERENCES

CCDRLVT. (2002). *Plano Regional de Ordenamento da Área Metropolitana de Lisboa*. Access in 2nd of June 2014, on the Website of Comissão de Coordenação e Desenvolvimento Regional de Lisboa e Vale do Tejo : http://www.ccdr-lvt.pt/pt/plano-regional-de-ordenamento-do-territorio-da-area-metropolitana-de-lisboa/54.htm.

CCDRN. (2009). *Plano Regional de Ordenamento do Território do Norte*. Access in 2nd of June 2014, on the Website of Comissão de Coordenação e Desenvolvimento Regional do Norte: http://consulta-prot-norte.inescporto.pt/plano-regional.

EU. (2011). *EU Hungarian Presidency Budapest Communiqué on European urban areas facing demographic and climate challenges*. Directors General responsible for urban development. Budapest, Hungary.

EUROCITIES. (2008). *Demographic change and its impact on housing (report pre-release version)*. Helmholtz Centre for Environmental Research. Leipzig, Germany.

European Commission. (1999). *European Spatial Development Perspective –Towards Balanced and Sustainable Development of the Territory of the EU (official document)*. Committee on Spatial Development. Luxembourg.

European Commission. (2005). *Green Paper "Confronting demographic change: a new solidarity between the generations"*. Commission of The European Communities. Brussels, Belgium.

European Commission. (2006). *The demographic future of Europe – from challenge to opportunity*. Office for Official Publications of the European Communities. Luxembourg.

European Spatial Planning Observation Network. (2006). *ESPON ATLAS – Mapping the structure of the European territory*. Federal Office for Building and Regional Planning. Bonn, Germany.

European Spatial Planning Observation Network. (2008). Territorial dynamics in Europe: Trends in population development. *ESPON Territorial Observation.* **1**: 4–15.

Panagopoulos, T. and Barreira, A. P. (2012). Shrinkage Perceptions and Smart Growth Strategies for the Municipalities of Portugal. *Built Environment*. **38(2)**: 276-292.

Sousa, S. (2010). *Planning for shrinking cities in Portugal*. Ph.D. Thesis. Faculty of Engineering, University of Oporto. Oporto.

Sousa, S. and Pinho, P. (2013). Planning for shrinkage: paradox or paradigm. *European* Planning studies. DOI: 10.1080/09654313.2013.820082.

UN. (2004). *World Population to 2300*. Department of Economic and Social Affairs – Population Division. New York, US.

UN. (2007). *World Population Prospects: The 2006 Revision*. Department of Economic and Social Affairs – Population Division. New York, US.

UN. (2009). *World Population Aging 2009*. Department of Economic and Social Affairs – Population Division. New York, US.

UN. (2011). *World Population Prospects*. The 2010 Revision United Nations. Department of Economic and Social Affairs – Population Division. New York, US.

UN-HABITAT. (2006). *State of the World's Cities Report 2006/2007, The Millennium Development Goals and Urban Sustainability–30 Years of Shaping the Habitat Agenda*. Earthscan. London, UK.

UN-HABITAT. (2007). *Global Report on Human Settlements 2009 "Revisiting Urban Planning" Outline*. United Nations Human Settlements Programme. Nairobi, Kenya.

UN-HABITAT. (2008). *State of the World's Cities Report 2008/2009, Harmonious Cities*. Earthscan. London, UK.

UN-HABITAT. (2009). *Planning Sustainable Cities: Global Report on Human Settlements 2009*. United Nations Human Settlements Programme. Earthscan. London, UK.