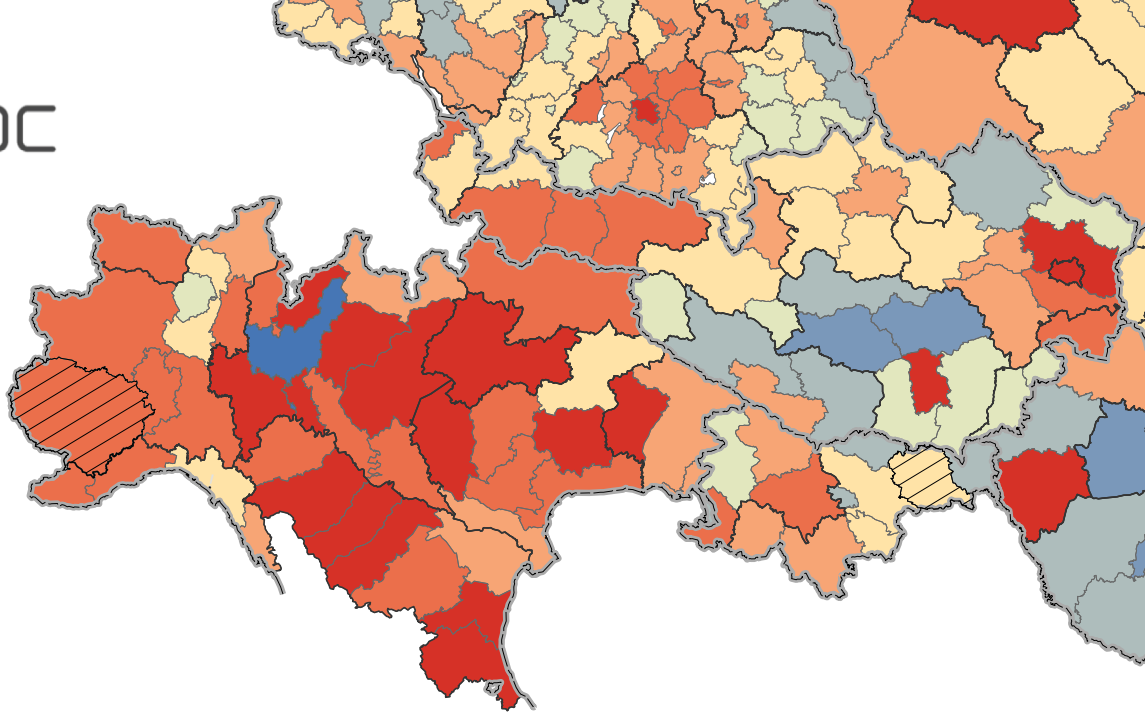
ADAPT2DC



DEMOGRAPHIC CHANGE IN CENTRAL EUROPE

A SOCIO - ECONOMIC BACKGROUND ANALYSIS

OUTPUT WP 3.1.5

CENTRAL EUROPE
COOPERATING FOR SUCCESS.

EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND

Project Acronym: ADAPT2DC
Grant Agreement number: 3sCE414P4
Project Title: New innovative solutions to adapt governance and management of public infrastructure and services to demographic change in shrinking regions and cities of Central Europe

D3.1.5 – Comparative socio-economic background analysis of shrinking regions and cities in CENTRAL EUROPE

Revision: Final

Authors:

Martin Šimon *(Institute of Sociology of the Academy of Sciences of the Czech Republic ISCAS)*
Renata Mikešová *(Institute of Sociology of the Academy of Sciences of the Czech Republic ISCAS)*

Contributors:

Klaus Bongartz *(Thuringian Ministry for Building, Regional Development and Infrastructure TMBLV)*
Tanja Simon *(Bayerisches Staatsministerium für Wirtschaft, Infrastruktur, Verkehr und Technologie BSWIVT)*
Kornelia Ehrlich *(Leibniz Institute for Regional Geography IfL)*
Thilo Lang *(Leibniz Institute for Regional Geography IfL)*
Tomáš Kostelecký *(Institute of Sociology of the Academy of Sciences of the Czech Republic ISCAS)*
Dalibor Špoták *(Regional Authority of Ústí Region)*
Alexandra Zdeňková *(Regional Authority of Ústí Region)*
Zsuzsanna Antal *(Észak-alföld Regional Development Agency Non-profit Limited Company ÉARDA)*
Zoltan Balogh *(Észak-alföld Regional Development Agency Non-profit Limited Company ÉARDA)*
Erich Giordano *(National Union of Mountain Municipalities, Communities and Authorities – Piedmont Delegation UNCEM)*
Fedora Gasparetti *(National Union of Mountain Municipalities, Communities and Authorities – Piedmont Delegation UNCEM)*
Artur Ochojski *(University of Economics Katowice UEK)*
Marcin Baron *(University of Economics Katowice UEK)*
Katarzyna Opoczka *(The Małopolska Region)*
Alicja Boryczko *(The Małopolska Region)*
Vlasta Vodeb *(Urban Planning Institute of the Republic of Slovenia UPI Slovenia)*
Franc Zakrajsek *(Urban Planning Institute of the Republic of Slovenia UPI Slovenia)*
Lívia Kelenné-Török *(Office for National Economic Planning ONEP)*
László Gere *(Office for National Economic Planning ONEP)*
Csilla Hoffmann *(Office for National Economic Planning ONEP)*

Project co-funded by the European Commission within the Central Europe
Dissemination Level
PU Public

Revision History

Revision	Date	Author	Organisation	Description
v.0.1	February 2013	Martin Šimon, Renata Mikešová	Institute of Sociology of the Academy of Sciences of the Czech Republic	First draft version of Comparative socio-economic background analysis of shrinking regions and cities in CENTRAL EUROPE
v.0.2	March 2013	Martin Šimon, Renata Mikešová	Institute of Sociology of the Academy of Sciences of the Czech Republic	Final version of Comparative socio-economic background analysis of shrinking regions and cities in CENTRAL EUROPE

Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

CONTENTS

D3.1.5 – COMPARATIVE SOCIO-ECONOMIC BACKGROUND ANALYSIS OF SHRINKING REGIONS AND CITIES IN CENTRAL EUROPE

LIST OF MAPS, TABLES AND FIGURES

List of Maps, Tables and Figures

Chapters about ADAPT2DC pilot regions

Appendix

Executive Summary

This deliverable entitled´ Comparative socio-economic background analysis of shrinking regions and cities in CENTRAL EUROPE´ (D3.1.5) aims to provide basic comparative demographic analysis of regions in the Central European area.[1] Population shrinkage and population ageing is present at the regional level in all the countries in Central Europe.

The publication comprises the following chapters:

Chapter 1 introduces the purpose and structure of the document. Information about the territorial scope and thematic focus of the study is described.

Chapter 2 provides a demographic and socio-economic analysis of shrinking and growing regions and cities in Central Europe for the last ten years. The chapter gives basic information about population distribution, ageing and the shrinking dimensions of demographic change as well as changes in age structure and future prospects of population development. Core information is provided in a series of maps and their interpretation.

Chapter 3 presents a definition of shrinking regions at two spatial levels. Firstly, shrinking regions are defined at the NUTS 3 level for the whole Central European area. Population shrinkage is measured as a relative decline of the total population size in a region in a ten year period. Secondly, shrinking regions are defined at the LAU 2 (municipal) level for all ADAPT2DC pilot regions using the same definition principle. The differences between regions in the pace and extent of population shrinkage are highlighted.

Chapter 4 contains policy analysis for the countries in Central Europe and for the EU. National as well as regional differences in demographic change are reflected in the focus and scope of particular policies and policy recommendations. The policy analysis shows a strong difference between countries with advanced population shrinkage where appropriate policies have been developed and countries starting to experience population shrinkage. Here appropriate policies are to be developed in the near future.

Chapter 5 provides a detailed description of pilot regions of the ADAPT2DC project. The basic geographical information about a region is supplemented by a demographic and labour market overview. The chapter also presents a short outlook of the planned pilot actions in the regions.

Chapter 6 summarizes the key points in the document. Current population shrinkage and population ageing is already a relevant issue to deal with in Central Europe and its regions. Demographic change is expected to become also an issue for other European regions it is important to develop innovative solutions for how to adapt to it. The development of strategies how to adapt to demographic change will be a central output of the ADAPT2DC project (www.adapt2dc.eu).

This study is based on data collected by the ADAPT2DC project partners according to instructions described in the deliverable Methodology Guidelines for WP 3.1 (D1.1).

1 Central Europe area consists of the following countries: Austria, Czechia, Germany (Mecklenburg-Vorpommern, Brandenburg, Sachsen-Anhalt, Sachsen, Thüringen, Baden-Württemberg, Bayern), Hungary, Italy (Nord Ovest, Nord Est), Poland, Slovakia, Slovenia.

1 Introduction

The overall purpose of this Comparative socio-economic background analysis of shrinking regions and cities in Central Europe (SEB report) is to analyse and present the demographic situation in regions in Central Europe as a background for subsequent analyses and activities in the ADAPT2DC project. Such subsequent analyses include comparative statistical analysis of infrastructure and service costs in Central Europe, microeconomic analyses of selected samples of infrastructure in pilot regions, and analysis of opinions of stakeholders in the regions, etc. The SEB report also serves as a basis for the development of evidence-based policies that make planning and management of social and economic development more efficient. This SEB report includes: a) background statistical analysis of shrinking regions in CE (chapter 2), b) analysis of policy documents (chapter 4) and c) case studies of pilot regions (chapter 4). The report also includes definitions of shrinkage regions at i) the NUTS 3 level and ii) the sub-regional level (chapter 3). The territorial coverage of this report is Central Europe and its regions. The time frame used in the SEB report is last 10-20 years.

Doing comparative research across European regions requires the availability of comparable data. In the first step we therefore had to check the data availability in the participating countries. For this purpose a common terminological framework and a list of potential demographic indicators was developed. Subsequently, the availability of the defined indicators across NUTS 3 regions in CE countries was determined. Then the nine indicators that were available in all NUTS 3 regions in the participating CE countries for at least two time periods were selected (total population, age structure of the population, active population, mean age, life expectancy at birth, total fertility rate, births, deaths, unemployment rate). In the next step the project partners collected the data in their particular country. In the case of demographic data these data are available and comparable, only marginal deviations in definitions are presented. In the case of socio-economic data these data are less often available and less comparable. All partners were instructed about basic demographic terms and definitions[2] for data collection, about fundamental principles concerning data sources and data reliability (census or population register data), and about how to fill the collected data into the prearranged templates. The data were collected together with information about their source and methodological notes necessary for their usage. To avoid methodological issues and to ensure better comparability of demographic changes across the CE region we collected basic comparable demographic data from which more advanced indicators were subsequently calculated.

All the data for the SEB report were collected for NUTS 3 regions (according to the NUTS 2006 version) across Central European regions (spatial information about NUTS 3 was available in GIS format from Eurostat). This spatial layer is suitable for SEB report purposes because it covers all NUTS 3 regions of the CE countries. The comparability of data for NUTS 3 regions in time was assured by recalculating minor territorial administrative changes after the year 2006.

In our interpretation of demographic development in Central Europe we use knowledge from a few regional typologies at the NUTS 3 level developed by the ESPON 2013 Programme. In principle such regional typologies are useful also for demographic analysis, although there are also limitations. ESPON 2013 typologies were developed for Europe as a whole, not just the Central European area, and therefore limited use is made of such typologies due to the just minor variations in the Central European area. Furthermore, from a population geographical perspective there is a continuum between different types of regions (e.g. regions with different population density), but categories and typologies developed in the ESPON 2013 maps have delimited boundaries, which might not be optimal for spatial demographic analysis. We would recommend adjusting these typologies for particular European regions such as the Central European area. In our analysis we use three regional typologies[3]:

2 Definitions of demographic indicators were adapted from RAMON database at Eurostat and from EC report (3/2003/E/no25).

3 Other typologies from the ESPON 2013 programme were not utilized due to the small[just minor] variations in the Central Europe area, which hinder their meaningful interpretation in the Central Europe area, or because they are not particularly related to the demographic situation in the regions.

1) Typology No. 1 - Urban-Rural regions delimiting:

a. predominantly urban regions,
b. intermediate regions - close to a city,
c. intermediate regions – remote,
d. predominantly rural regions - close to a city,
e. predominantly rural regions - remote;

2) Typology No. 2 - Metropolitan regions delimiting:

a. capital city regions,
b. second tier metro regions,
c. smaller metro regions,
d. other regions;

3) Typology No. 7 - Mountainous regions delimiting:

a. regions in which more than 50% of the population lives in mountain areas,
b. regions in which more than 50% of the surface is covered by mountain areas,
c. regions in which both more than 50% of the surface is covered by mountain areas and more than 50% of the population lives in mountain areas,
d. other regions.

In this report 'demographic change' is used in the narrow sense referring only to demographic ageing and demographic shrinkage. Other processes that can be labelled as forms of demographic change such as the second demographic transition or increasing longevity are discussed only partially. This is due to the thematic focus of the SEB report, which mainly deals with changing population numbers, changing age structures and regional population development as the background for subsequent studies. The focuses of such studies are infrastructural costs and their optimisation in regions with demographic changes. The added value of subsequent demographic analysis is that it is delivered at the NUTS 3 level which is more detailed than what is customary in such studies[4]. The analysis on the NUTS 3 level allows us to evaluate demographic changes and changes in the spatial distribution of the population and population subgroups in a more detailed perspective.

4 For a list of actual projects and events which are also related to the topic of demographic change see ADAPT2DC webpage at <www.adapt2dc.eu>.

2 Demographic background analysis

The main aim of demographic background analysis is to provide a basic comparison of shrinking and growing regions in Central Europe. This serves as a background for further analysis focussing on the costs of social and technical infrastructure and services. It is important to stress that certain infrastructure costs are directly related to population numbers in a region; other infrastructure costs are related to the age structure of the population or to the settlement structure in a region. For example, the costs of health care are highly age-dependent. They are relatively stable for young and middle-age populations, but grow significantly in old age and especially in old-old age. Another example are the costs for road maintenance. This depends only partially on the total population number, but more on the number of settlements and the length of the roads that need to be taken care of. Infrastructure costs can also be divided into categories according to the level of administration of the particular infrastructure. For example, health care can be the responsibility of regional government, whereas municipal councils might be in charge of waste management. Various differences in administration and budgetary sources for financing certain infrastructures in regions are expected in different Central European countries.

In general, the effect of population ageing is threefold. Population ageing can influence the cost of a service per capita, the supply of certain services, and the demand for certain services. The day-care system can serve as an example of how population ageing influences a supply of services. Facilities for the younger population are adjusted to the needs of an older population. Ageing can also influence the demand for services in day-care systems, which are labour intensive and require specific qualifications from the labour force. Ageing can be expected to have a different impact in densely and sparsely populated areas. Less concentrated settings in rural areas are more vulnerable due to the poorer availability of basic services and poorer accessibility to them. Similarly, the effect of population shrinkage is threefold. A decline in the total population will increase the cost of services per capita for certain infrastructures, e.g. water management. There will also be changes in the supply of services (fewer services and poorer access to them) and the demand for services (a decrease due to decreasing population size). As in the case of population ageing, the effect of population shrinkage can be more serious in rural areas, which are vulnerable due to the lower population density. Population shrinkage is also a serious challenge for the provision of public services, because population shrinkage usually means a decrease in tax income for municipalities.

In sum the impact of population shrinkage or the impact of population ageing is a serious challenge for both local and national decision makers. Many regions witness population ageing and population shrinkage simultaneously, which multiplies the impact of both processes. Such a situation is occurring in regions in East Germany where the effects of population ageing were sharpened by a high level of out-migration of young and middle-aged people. The mean age in some regions is almost 50 years (Dessau-Rosslau, Altenburger Land and Suhl). The overall impact of population ageing and population shrinking on the costs of infrastructure strongly depends on the kind of service and how it is organised and provided to users.

2.1 Overall population development

This analysis of demographic development in regions in Central Europe is conducted in a broader framework, which is demographic development at the national level. The following two tables (Table 1, Table 2) describe the current demographic situation in countries in Central Europe and also include demographic projections for several indicators to the year 2030 at the national level. In Czechia, Germany, Hungary, Poland, Slovakia and Slovenia a decline in the total population size is expected. This will mainly be caused by negative natural change (a higher death rate than birth rate); migration is expected to somewhat mitigate the impact of population shrinkage due to natural change.

Another set of indicators shows the projected rise in life expectancy. This will of course also contribute to further population ageing. The current and projected total fertility rates are low and significantly below replacement level. The old-age dependency ratio will increase in all Central European countries and thus the economic and social burden on the working-age population will grow.

Table 1: Population outlook in Central Europe I

	Total population *(thousands)*		Natural growth *(thousands)*		Net migration *(thousands)*	
Year	**2009**	**2030**	**2009**	**2030**	**2009**	**2030**
Austria	8375	8988	-1	-11	21.2	31.2
Czechia	10507	10420	10.9	-47.0	28.3	22.9
Germany	81802	80152	-189.4	-365.8	-10.7	187.1
Hungary	10014	9651	-34	-47.5	17.3	17.3
Italy	60340	61868	-22.8	-215.8	318.1	248.7
Poland	38167	36975	32.6	-153.3	-1.2	-1.3
Slovakia	5425	5332	8.3	-21.9	4.4	3.9
Slovenia	2047	2023	3.1	9.1	11.5	3.4
EU 27	501103	519942	523.1	-846.1	877.1	1093.1

Source: Demography report 2010

Table 2: Population outlook in Central Europe II

	Life expectancy at birth *(years)*		Total fertility rate *(children per woman)*		Old-age dependency ratio *(65 or over / 15-65 years old; %)*	
Year	**2009**	**2030**	**2009**	**2030**	**2009**	**2030**
Austria	79.9	82.5	1.39	1.48	25.7	38.1
Czechia	77.3	81.7	1.49	1.41	21.2	35.7
Germany	80.3	83.2	1.36	1.42	30.8	46.2
Hungary	74.1	79.1	1.32	1.42	23.8	34.1
Italy	81.8	84.4	1.42	1.46	30.8	42.4
Poland	76.3	80.2	1.40	1.36	18.9	36.0
Slovakia	75.2	78.3	1.41	1.34	16.7	32.3
Slovenia	79.4	82	1.53	1.40	23	40.8

Source: Demography report 2010

It is possible to characterise the population development in Central Europe using not only basic demographic figures but also the key processes which influence it. Table 3 summarises the key challenges posed by contemporary demographic change in Central European countries. The particular demographic or socio-economic processes have to be considered in relation to basic demographic figures presented above in Table 1 and Table 2. In principle there is a convergence in population ageing: less aged societies age faster than more aged societies. Population shrinkage is more regionally unequal, but in countries which are losing population as a whole population shrinkage is a relevant process in almost all regions. It is important to stress that population changes occur not only in situ, but are also significantly influenced by changing spatial patterns of population distribution. Residential decentralisation from cities to their hinterland is a common process in former socialist countries. This process shapes population distribution especially in metropolitan regions which are macro-regional spaces of population concentration.

Table 3: Key demographic processes and challenges in Central Europe[5]

	Key demographic processes and challenges
Austria	low fertility level average values of life expectancy moderate ageing
Czechia	relatively younger population, but the pace of ageing will be faster average fertility levels and life expectancy moderate shrinkage is expected in the near future population shrinkage in the peripheries decentralisation from cities to the hinterland
Germany	already an aged population with a low ageing dynamic high life expectancy, but low fertility levels high out-migration and fast population shrinkage in eastern Germany possible shortage in the labour force
Hungary	long-term population decline at the national level due to low fertility levels low levels of foreign migration, moderate out-migration de-concentration from cities to their hinterland life expectancy significantly below the EU-27 average high male mortality rate
Italy	already an aged population with a low ageing dynamic high life expectancy, but low fertility levels high old-age dependency ratio stable population due to significant immigration from abroad
Poland	high levels of out-migration at the national level relatively younger population, but the pace of ageing will be faster population de-concentration from core cities to the suburban hinterland depopulation of peripheral rural areas life expectancy and fertility level below the EU-27 average
Slovakia	relatively young population, but very low fertility levels fast population ageing is expected, especially in rural areas life expectancy below EU 27 level population shrinkage at the national level is expected
Slovenia	aged population with a slower pace of ageing population concentration in the metropolitan region of Ljubljana average life expectancy and fertility level of the EU-27 depopulation of rural peripheries

Source: *Demography report 2010, authors' analysis of scientific literature*

5 The data described in this table and in subsequent parts of this report refer only to countries in Central Europe and parts of countries which are included in the Central European area.

The structure of demographic data analysis is divided into four parts. Firstly, basic information about actual population distribution in the NUTS 3 regions is presented. This is considered to be core information, which will be interwoven into the interpretation of all the other demographic indicators. The impact of population shrinking and population ageing is different in densely and sparsely populated areas as well as in metropolitan and non-metropolitan regions. Secondly, selected indicators of demographic ageing are discussed. The value of mean age and a change of mean age indicate the level and the pace of population ageing. Supplementary indicators of birth and death crude rate and the values of life expectancy are presented. Thirdly, selected indicators of population shrinkage are presented. The extent of population shrinkage is depicted by using absolute as well as relative indicators of population change. The values of the total fertility rate show serious risks for future population development, and the regional differentiation of unemployment illustrates economically more and less advanced regions. Finally, core information about the distribution of and changes to the main age groups are included. The development of young and old age cohorts in relation to the working-age population indicate a level of economic dependency and gave us a clear picture about changes to the age-related infrastructure. The chapter about demographic data analysis will be summarised with a short look of expected population development in the future.

It is recommended that the maps and the text be read together and linkages be sought between different types of indicators. The demographic development is not linear, but it is significantly shaped by different cohorts and generations. Therefore, in some cases the average value of an indicator is calculated and pictured in the map. The reason for this adjustment is to present a more accurate picture of demographic change in the longer term perspective. Further details about the data displayed and their interpretation by the authors of this study is described in the chapters below.

2.1.1 Population distribution

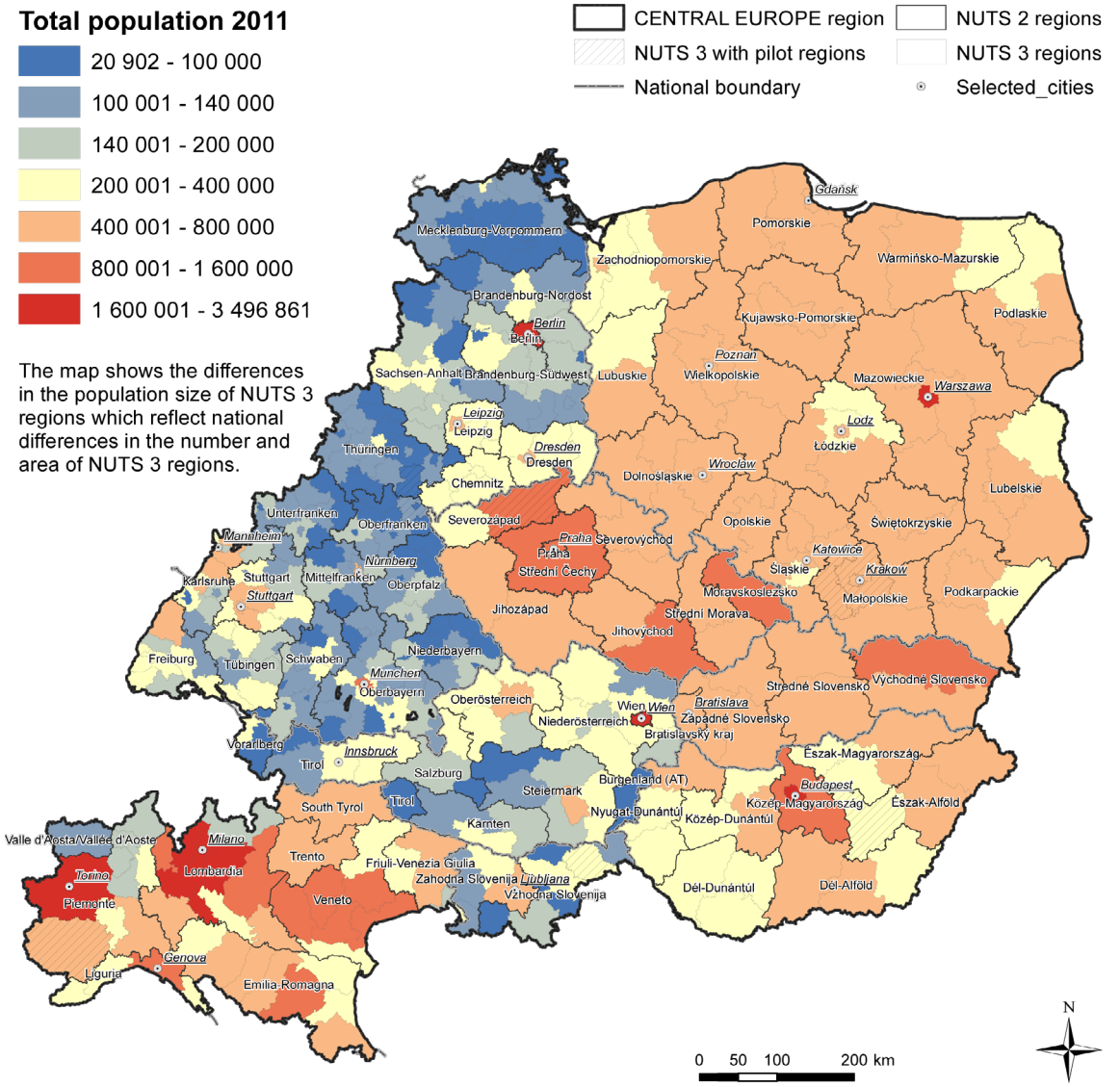
The main aim of this chapter is to describe basic population geography in Central Europe. Knowledge about spatial patterns of population distribution is a key precondition for understanding contemporary demographic changes and their consequences for society in regional perspective. This is considered to be core information which will be interwoven into the interpretation of all the other demographic indicators in subsequent chapters. The key reason why the basic population geography of Central Europe forms the introductory chapter of this study is because the impact of population shrinking and population ageing is different in distinct national contexts, in densely and sparsely populated areas and in metropolitan and non-metropolitan regions. The unit of analysis are NUTS 3 regions as defined by Eurostat (updated version 2006). NUTS 3 regions are also units of analysis in this whole analytical report.

The chapter focuses on two different indicators which provide information about the spatial distribution of the population and about units of analysis. Firstly, basic information about total population distribution in NUTS 3 regions is presented. As the uneven areas of NUTS 3 regions visually distort the perception of population distribution a second map depicting population density in regions is presented. Additional notes on various regional typologies useful for the analysis of demographic changes in NUTS 3 regions are included.

2.1.1.1 Total population 2011

Map 1 shows the total population in NUTS 3 regions in 2011. The differences of populations in regions largely depend on how large or small an area the NUTS 3 region covers. There are notable differences in the average size of the area of a region between countries, which are the result of the historical development of NUTS 3 regions in different countries. Poland, Czechia, Slovakia and Hungary have relatively larger NUTS 3 regions which tend to have a more or less similar population size. Therefore a typical NUTS 3 region in these countries includes one or more regionally important cities and its surrounding rural hinterland. Exceptions from this standard are regions of national capitals and a few other big cities which cover smaller areas and have a slightly bigger population size. Capital city and big city regions are often surrounded by another NUTS

Map 1: Population distribution in Central Europe 2011



3 region which is basically an urban hinterland and together can be conceived as a single metropolitan region (e.g. the Miasto Wroclaw Region as a core city and Wroclawski Regioin as its hinterland). Slovenia, Austria and Italy have medium-sized regions. In Austria and Slovenia only regions which include big cities have a bigger population size (e.g. Osrednjeslovenska Region which includes the City of Ljubljana).

The regions in Italy cover densely populated areas with a high number of cities and conurbations and therefore are bigger in population size. All the federal states in Germany have relatively small NUTS 3 regions. Whereas in other countries a regional city and its hinterland together usually form one NUTS 3 region, in Germany the regional city is usually one NUTS 3 region and the hinterland of a regional city is usually another NUTS 3 region. This distinction allows us to see in greater detail whether demographic processes are similar or different in urban and rural areas. As we have described, there are some differences in NUTS 3 delimitation in Central Europe, which reflect national and historical factors behind the development of this spatial statistical classification. These differences might lead in some cases to a possible variation in the explanation of spatial patterns describing demographic changes. As the authors of this study we will notify the reader in our interpretation of the maps if such a situation occurs.

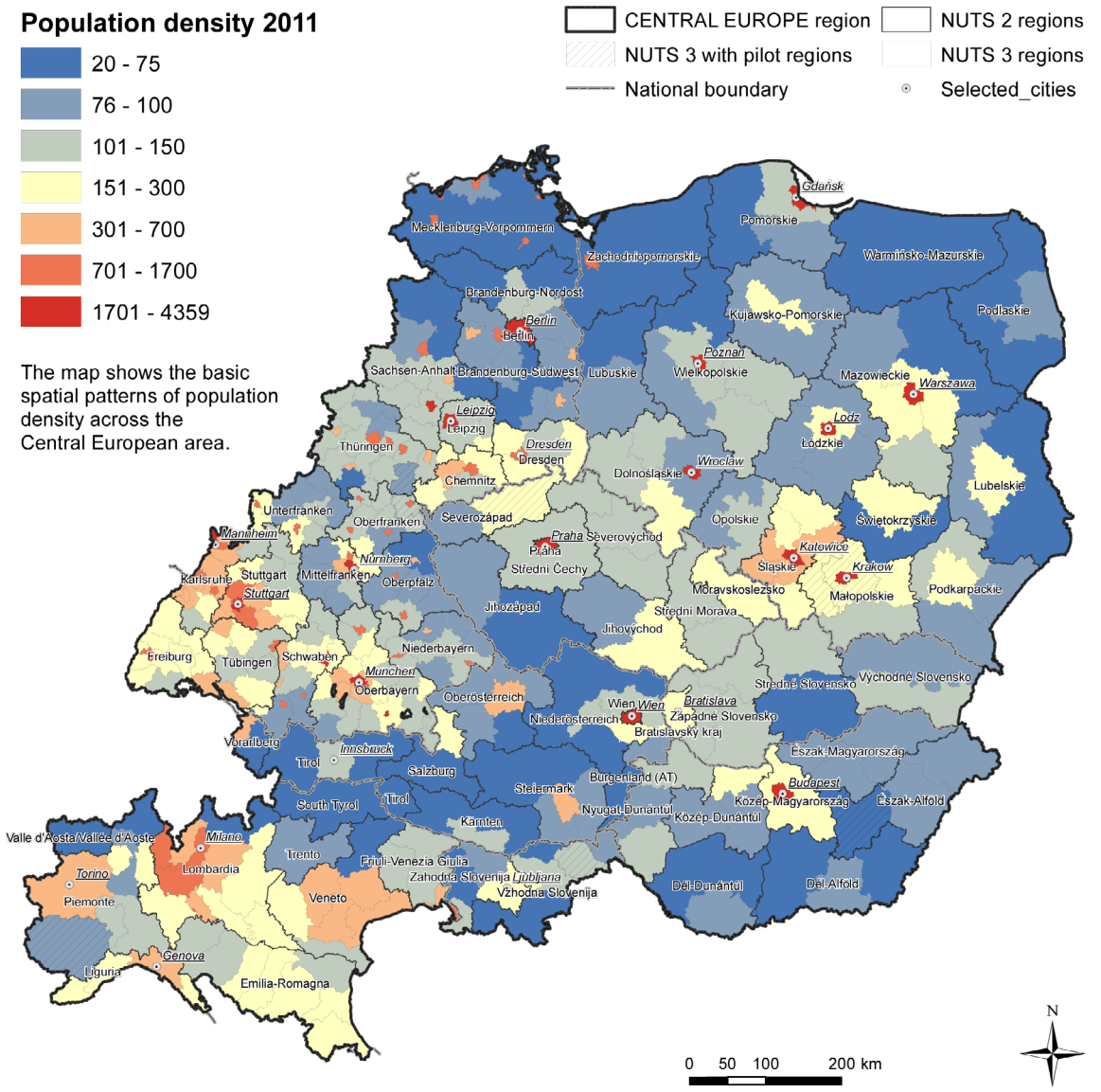
It is of crucial importance to stress, that the demographic situation in a region at the NUTS 3 level might not be characteristic for the whole area of a particular NUTS 3 region. The different demographic changes and geographic processes altering the spatial distribution of the population may be going on at the same time. For example, consider Central Bohemia Region, which is a NUTS 3 region surrounding the capital city of Prague. There is intensive suburbanisation and population growth in its inner circle close to the City of Prague and long term out-migration and population decline in its outer border, which is too far for daily commuting to Prague. Therefore, for the correct interpretation of demographic development at the NUTS 3 level it is necessary to supplement the data presented with scholarly literature dealing with population geography or spatial demography in particular countries or regions. Several examples of population changes at LAU[6] 1 or LAU2 level are presented in the chapters about pilot regions (chapter 5) and in the chapter defining population shrinkage at the sub-regional level (chapter 3).

2.1.1.2 Population density 2011

Further information about the spatial distribution of the population is presented in Map 2 depicting the population density in NUTS 3 regions in 2011. Population density is defined as the average number of inhabitants per square kilometre in NUTS 3 regions. Map 2 shows the main urban centres and their metropolitan areas (e.g. Budapest and Pest county), the broader densely populated agglomerations (e.g. Slaskie in Poland or Stuttgart-Karlsruhe-Manheim in Germany), and less populated rural areas (e.g. Warminsko-Mazurskie in Poland or Burgenland in Austria). The impact of demographic change on the costs of infrastructure differs in densely and sparsely populated regions and also depends on the settlement structure in particular regions. For example a decline in the total population in a highly urbanised region will result in an increase in infrastructural costs per capita (public transport, water provision) or a decline in the number of services (schools, medical care), but does not jeopardize the provision of certain services per se. The commuting distance to services and their accessibility for inhabitants are still on a relatively acceptable level. The unused infrastructure and costs for its maintenance together with decreasing tax returns might pose serious challenges to local and regional governments. A different situation occurs in sparsely populated areas or regions with a fragmented settlement structure and with many small villages. In such regions a decline in the total population will also result in an increase in infrastructural costs per capita and a decline in the number of services as in the previous case, but some services might become untenable or unsupportable due to low population density, longer commuting distances and few potential customers (e.g. shops, schools, health care, public transport, etc.). Long-term or selective out-migration from such regions might lead to a decrease in social capital and subsequently to a decrease in the ability of local populations to adapt to the changing situation.

6 LAU stands for Local Administrative Unit.

Map 2: Population density in Central Europe 2011



2.2 Trends in population development

Key demographic and socio-economic indicators representing various population changes in Central Europe are presented in this chapter. In the first part indicators related to population ageing (mean age, birth rate, death rate, and life expectancy at birth) are dealt with. In the second part indicators related to population shrinkage (population change, total fertility rate, components of population change, unemployment level) are discussed. In the third part indicators using specific age groups are examined (young-age dependency ratio, old-age dependency ratio). In the last part the future outlook of population development in Central Europe is discussed. Each group of indicators is briefly introduced and the main lesson learned from their analysis is highlighted in the conclusion of the section. The individual indicators are always shown in the form of a map depicting the spatial patterns in NUTS 3 regions in Central Europe and respective commentary explaining the main features displayed.

Besides the demographic and socio-economic indicators presented later in this chapter additional indicators were considered. Indicators of the household size, in-migration, out-migration, selective migration, commuting, housing vacancy share, capacity of primary schools, poverty rate, number of pensioners, and part-time employment were reviewed in partner countries, but were not available in requested detail in all Central European countries and thus could not be used for comparative analysis. The indicator of active population was available with the requested detail but were not utilised in the analysis due to methodological problems[7].

2.2.1 Indicators of ageing

The mean age of the population is considered to be the best measure of how certain populations age. Not only the level of ageing but also the pace of ageing is crucial for analysis of population development in general and population shrinkage in particular. The change in the mean age of the population measured in a decennial period shows a convergence between regions in Central Europe. Regions with a younger population tend to age more rapidly and vice versa. The faster pace of ageing also suggests that the concomitants of population ageing such as a growth in the number of people outside the labour force or an increase in retirement annuities will rise more rapidly. Political representation in those regions thus will have less time to adapt to demographic changes. Supplementary indicators of the crude birth and death rates and the values of life expectancy are presented.

2.2.1.1 Mean age 2001

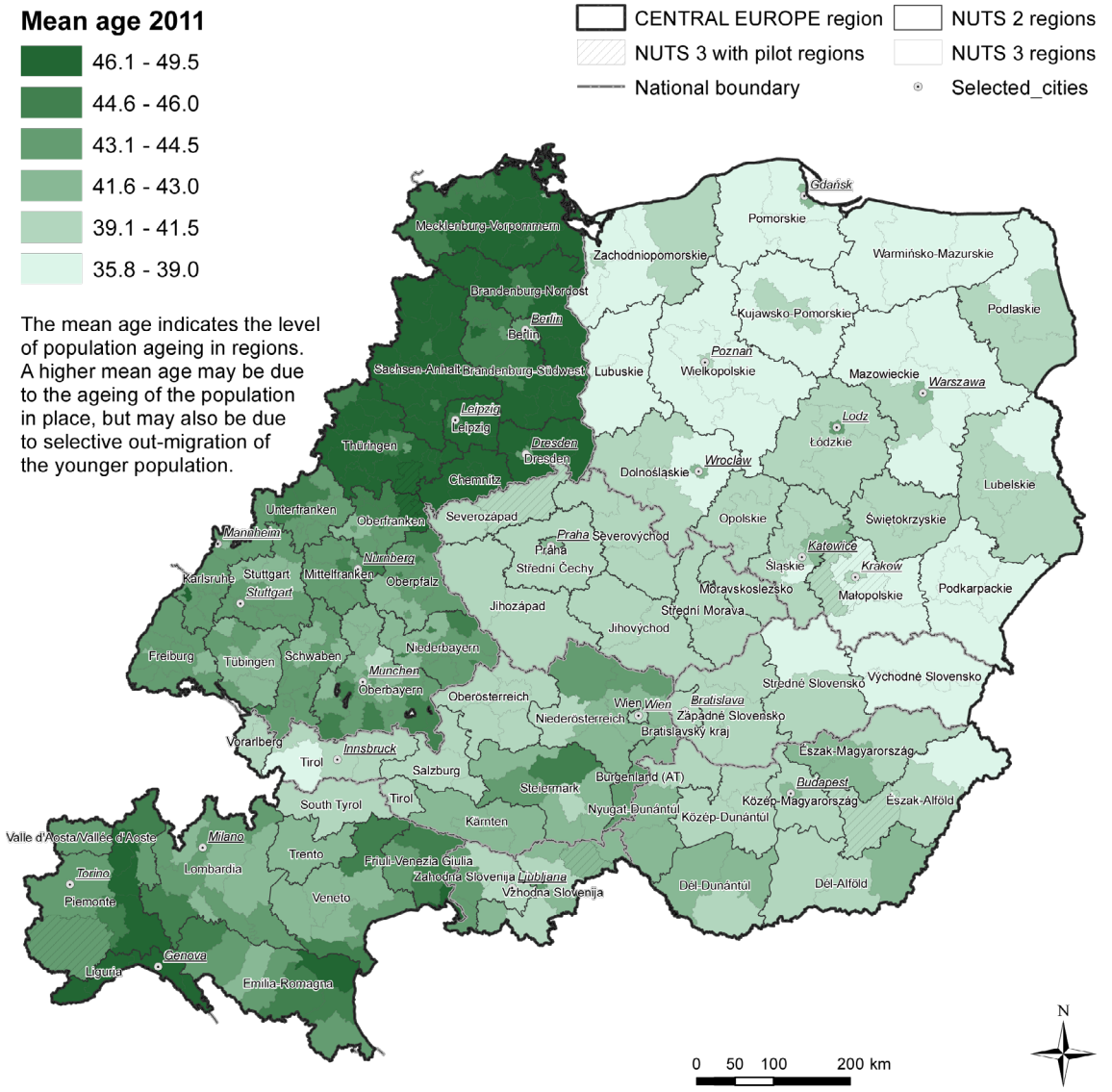
One of the key indicators for evaluating contemporary demographic changes is mean age which measures the level of population ageing. The indicator of mean age is defined as the mean value of the age of a certain population at a certain time[8]. A higher mean age indicates older populations. The difference between the youngest and the oldest region is almost 15 years. Map 3 depicts deep differences in mean age between Central Europe countries. At the country level there are three basic types of countries based on experiences with population ageing. The first group consists of Poland, Czechia, and Slovakia which have fewer experiences with population ageing and their population age structures do not have a high number of elderly people. The difference in the mean age in this group of countries is largely the result of demographic and migration history.

The urban-rural difference is not clearly visible due to the delimitation of NUTS 3 regions as an urban core together with its surrounding rural areas, although some Polish urban regions are slightly older in comparison with their hinterland. In the second group are Austria, Slovenia and Hungary, which can be characterised as medium-aged societies. Their mean age is higher and they also have bigger differences between younger and older regions. In the third group are Italy and Germany.

7 The indicator was removed from the analysis due to the different definitions of 'active population' in Central Europe countries.

8 Mean age data were acquired from official demographic statistics. In the case where mean age data are not directly published in official statistics they were calculated from particular regional age structures. Mean age in a region is the sum of middle age values multiplied by the population sizes of respective age categories subsequently divided by the total population of a region. The middle age value is a theoretical middle value of a certain age group. For example, the middle age value for people aged 15 is 15.5; for people aged 30-34 it is 32.5.

Map 3: The level of population ageing in Central Europe in 2011



Those countries have older populations and also some regions with very old populations (the mean age is higher than 45 years; e.g. Savona, Genoa, and Alessandria in Italy, or the majority of regions in former East Germany). Whereas in north Italy and in south Germany the high values of the mean age are the result of long-term ageing processes the situation in former East Germany has been significantly shaped by extensive out-migration since the German Wiedervereinigung.

At the regional level there are several noteworthy differences within countries. Polish, Czech, and Hungarian urban regions tend to be older than their surrounding regions due to the residential decentralisation of younger generations from cities to their hinterland. The metropolitan hinterland in such regions tends therefore to be relatively younger than in non-metropolitan areas. A similar situation is in Slovenia, where central regions close to Ljubljana also tend to have younger populations. The situation in Germany is different.

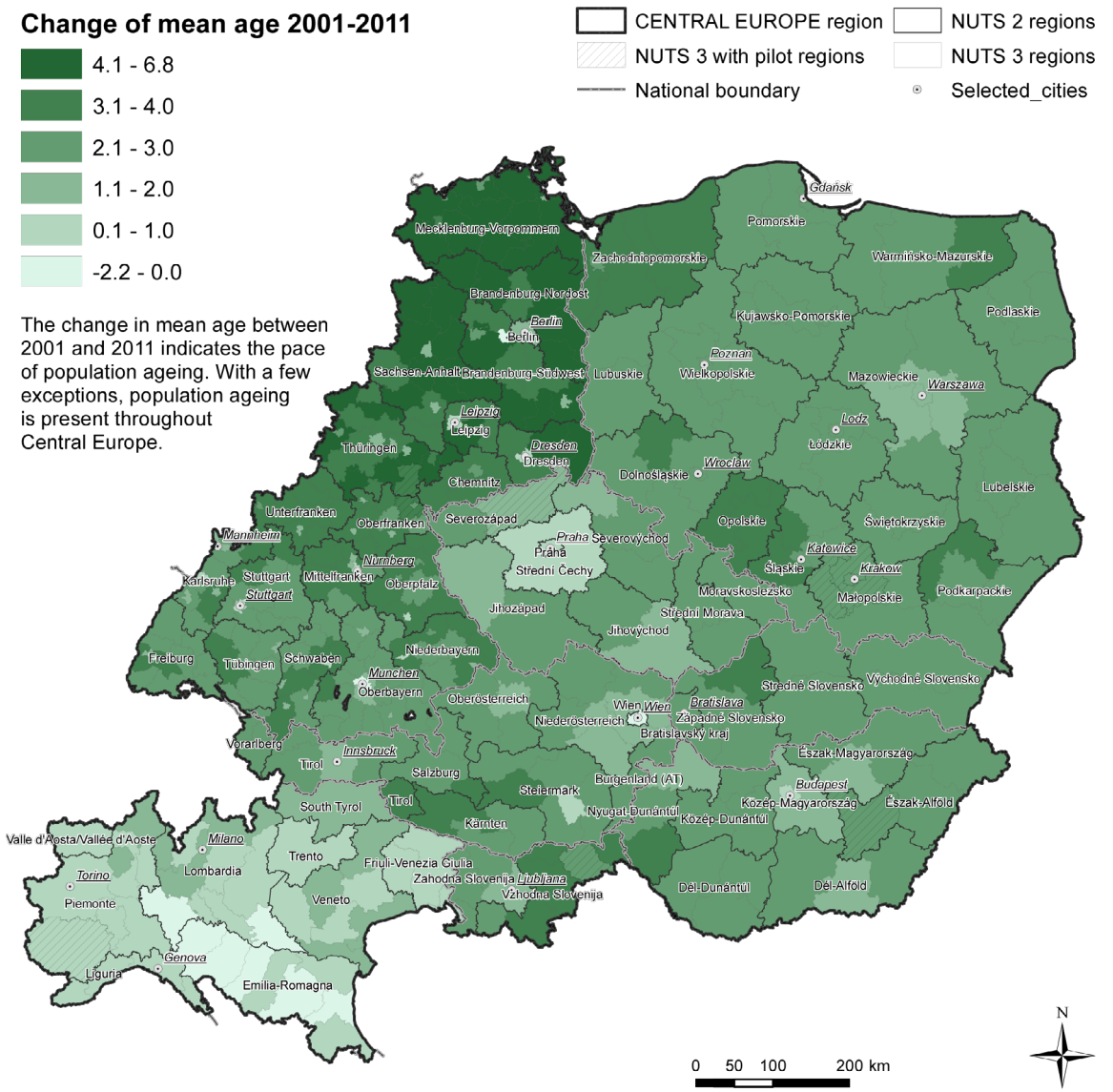
In the eastern part the cities are relatively younger than the rural areas around them, but they are still relatively old compared to the Central European average. In the western part of Germany there is a more complex patchwork

of younger and older regions. In general, urban and more peripheral regions tend to be older than average. In Austria mountain regions and rural regions have younger populations; only Steiermark, with exception of Graz Region and peripheral Burgenland, have older populations. To sum up, there are significant differences between countries in the level of population ageing. The level of population ageing within national borders is significantly shaped not only by migrations between regions but also by different urban-rural migration streams. It is assumed that the further advancement of population ageing could markedly change contemporary migration patterns.

2.2.1.2 Changing mean age 2001-2011

A supplementary indicator for evaluating contemporary demographic ageing is the changing mean age (2001-2011) which measures the pace of population ageing. The indicator of a changing mean age shows how quickly a relative share of older population cohorts grows or declines in relation to a relative share of younger population cohorts. Map 4 clearly shows that population ageing is a widespread phenomenon in Central Europe and the pace of ageing is fast.

Map 4: The pace of population ageing in Central Europe 2001-2011v



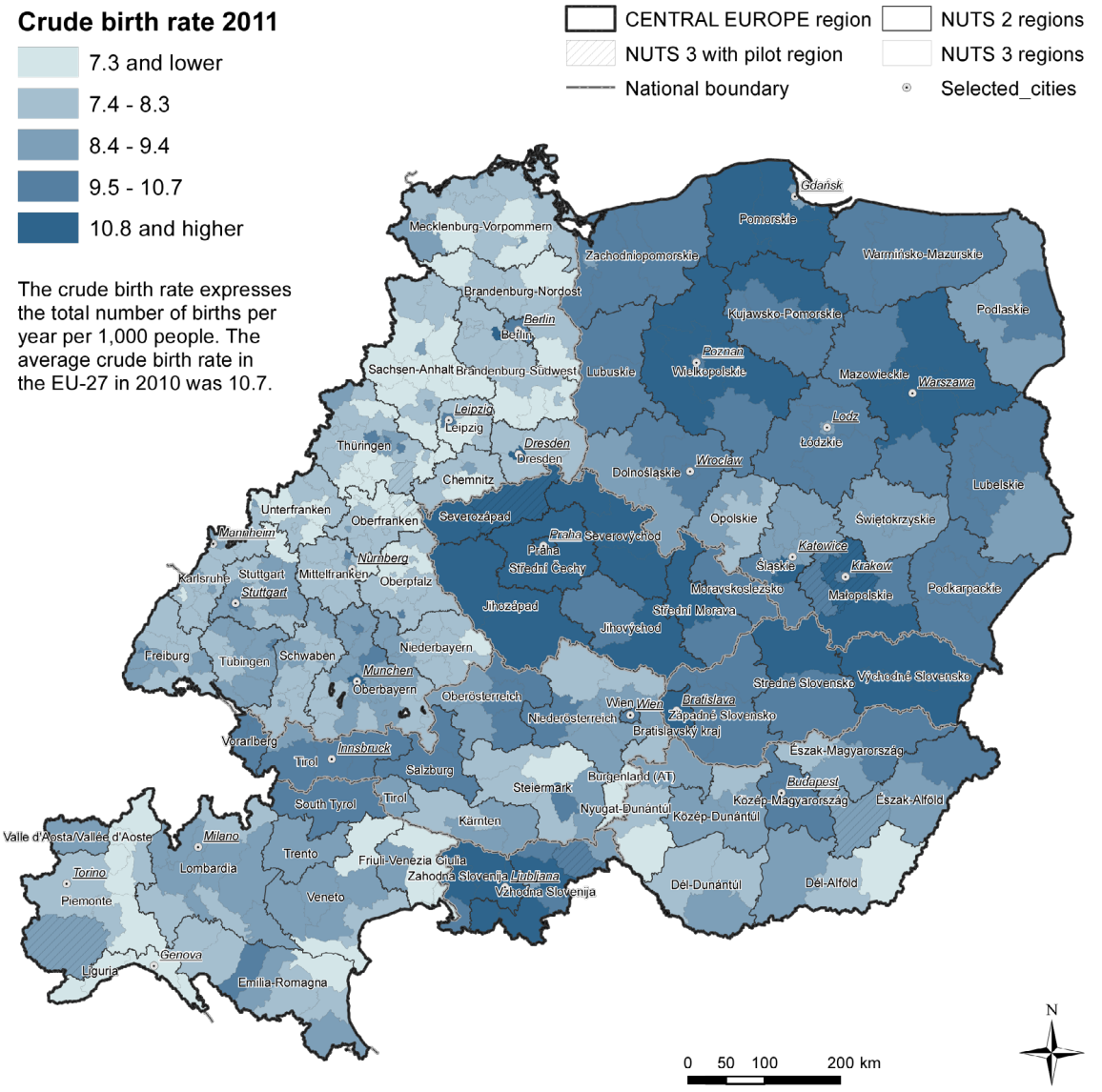
There are two exceptions to this pattern that need mention. At the country level there is a faster pace of ageing in eastern Germany, which is caused by the extremely high out-migration of the working-age population in the 90´s. A clear spatial division between former East and West Germany, as depicted in the map of the mean age in 2011, is more or less blurred and the pace of ageing is similar in Chemnitz Region, Thüringen, Unterfranken, Oberfranken or Oberpfalz. At the country level there is a slower pace of ageing in northern Italy, which is the result of the positive net migration of working-age populations from other parts of the country. Northern Italy is also one of the oldest regions in Central Europe; therefore the pace of ageing tends to be slower.

At regional level the effect of ageing is lower in the metropolitan regions of national capitals and in some other second tier metropolitan regions (e.g. Stuttgart, Innsbruck) due to their attractiveness for the younger labour force and for migrants. On the other hand, there are second-tier metropolitan regions which are ageing at an average level (e.g. Bratislava, Poznan, and Krakow) or at a higher than average level (e.g. Gliwicki, Bytomski and Tyski around Katowice), which might be indicative of a poor economic performance making them less attractive to the younger labour force. To sum up, the pace of ageing is fast in almost all the regions in Central Europe and the differences between countries and regions are small. The only exceptions to this pattern are regions with long-term migration gains (e.g. northern Italy) and metropolitan regions significant at the European level. Second-tier metropolitan regions and non-metropolitan regions seem to follow the average pace of population ageing.

2.2.1.3 Crude birth rate 2011

A birth is a basic demographic event that is represented by natality. The number of births is an indicator from which other indicators can be calculated, e.g. age-specific values or relative demographic rates. Map 5 shows the crude birth rate in 2011.

Map 5: Crude birth rate in Central Europe in 2011

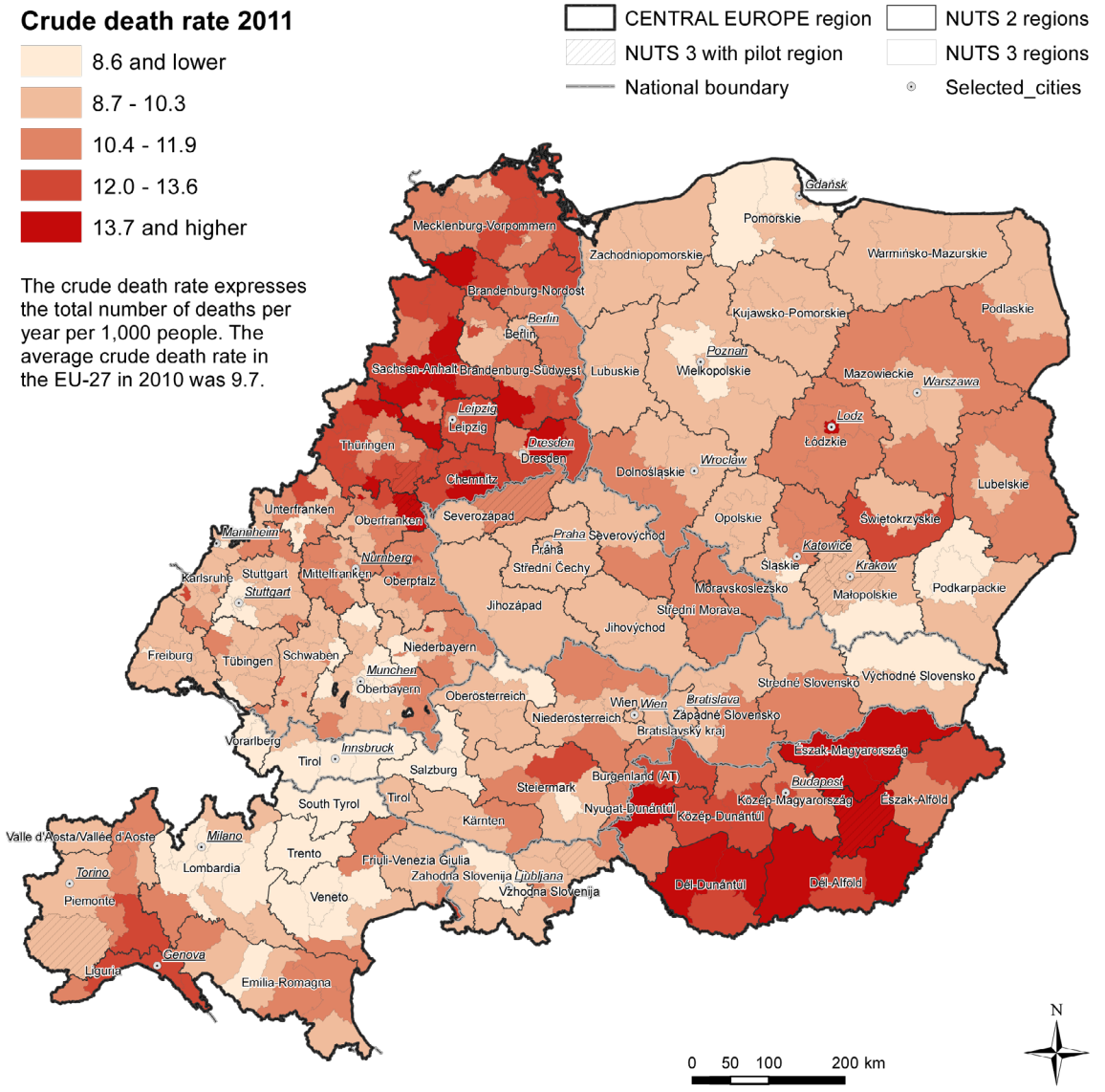


The crude birth rate expresses the total number of births per year per 1000 people. This indicator is relatively sensitive to short-term demographic fluctuations (e.g. changing number of women of fertile age). In the majority of regions the crude birth rate is not only below the EU-27 average (value 10.7), but it is low per se. Regions above the average are located in Poland, Czechia, Slovakia and Slovenia. The higher values in these regions are largely the result of past demographic development, as the populous cohorts born in 1970´s are now of child-bearing age.

2.2.1.4 Crude death rate 2011

A death is basic demographic event that is represented by mortality. The crude death rate expresses the total number of deaths per year per 1000 people. This indicator is also relatively sensitive to short-term demographic fluctuations. Map 6 shows the crude death rate in 2011. A higher crude death rate signalises a higher share of older people in the population, who have a significantly higher probability of dying at a certain age or experienced the worse living condition of population cohorts in the past, which increases the probability of dying at a certain age. The regional differences in crude death rate largely reflect the age structure of populations in regions. There is one special exception concerning former post-socialist countries and especially Hungary which warrants explanation. In former socialist countries there was `excess male mortality'. It is well known from genetics and demography that the average length of life of males and females differs – females live on average a few years more. In former socialist countries this difference between males and females was much larger than in other developed countries. Hungary was one of the countries with a very high excess male mortality and this pattern is still visible in the contemporary crude death rate. The higher male mortality in former socialist countries is usually explained as being the result of unhealthy lifestyle habits and bad socio-economic and working conditions.

Map 6: Crude death rate in Central Europe in 2011

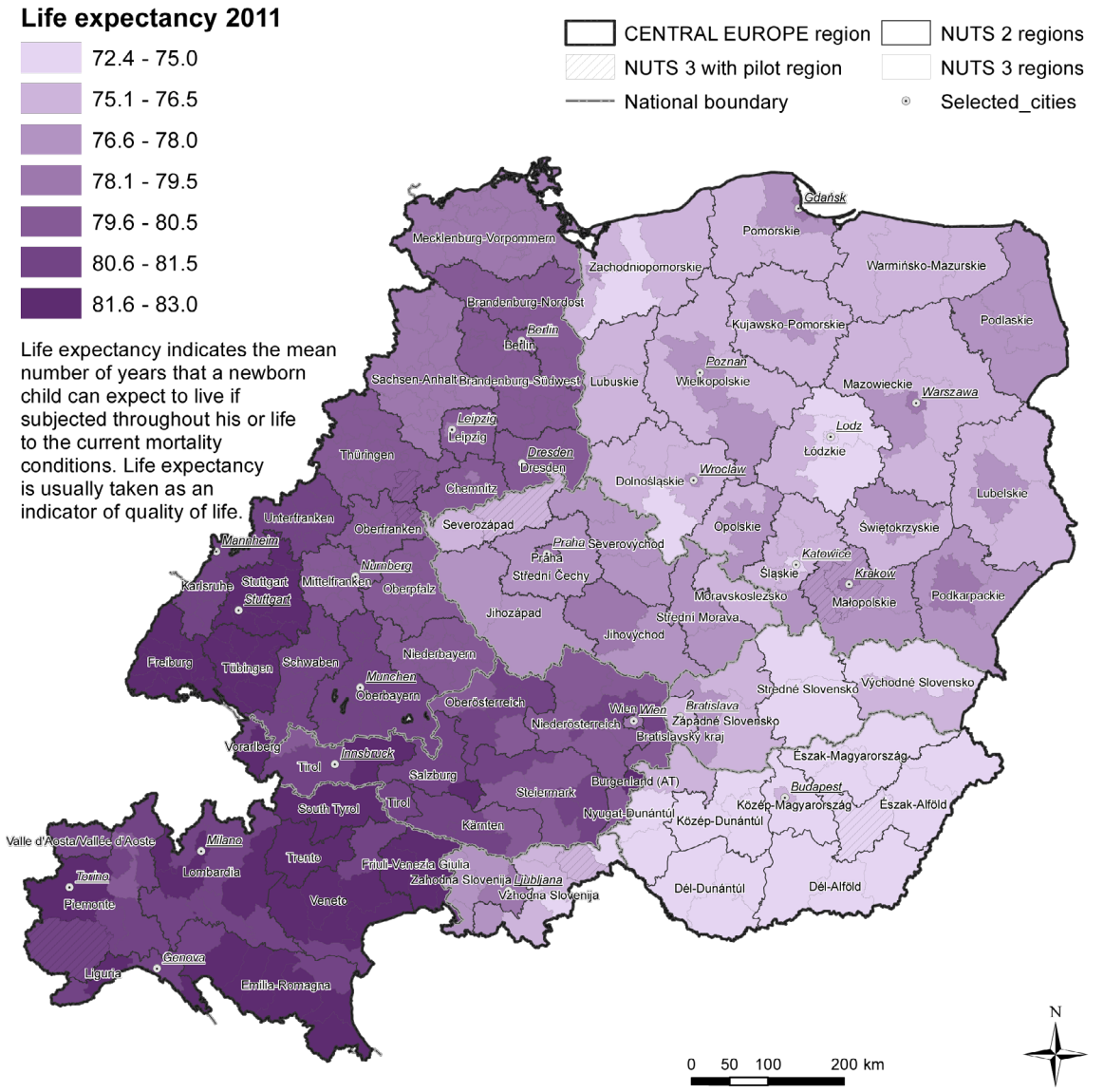


2.2.1.5 Life expectancy 2011

Life expectancy at birth is a synthetic indicator of quality of life which reflects past and current living conditions (the nature of jobs, quality of healthcare, economic and environmental conditions, etc.) and habits (consumption and eating habits, lifestyle, social conditions, etc.). Life expectancy is defined as the mean number of years that a new-born child can expect to live if subjected throughout his life to the current mortality conditions (age-specific probabilities of dying). It is important to note that rising life expectancy is often related to population ageing. More people living longer lives results in an increase in both the mean age of the population and life expectancy. Similarly, lower values of life expectancy also mean that the mean age of the population will also be lower (see the map 'Mean age 2011' for comparison).

Map 7 shows life expectancy at birth in 2011. The difference between the region with the highest and the region with the lowest life expectancy is ten years. At the country level the map shows a clear division between former western (four highest categories) and eastern countries (four lowest categories). In western countries (Germany, Austria, Italy) the level of life expectancy is very high with small regional differences. Less populated regions (Sachsen-Anhalt, Mecklenburg-Verpommern) have lower life expectancy, probably due to less accessible health services. In eastern countries (Poland, Czechia, Slovakia, Hungary, Slovenia) the level of life expectancy is lower and has a different spatial pattern. In general, urban regions tend to have higher levels of life expectancy (e.g. Prague, Budapest, Krakow, Gdansk, Ljubljana), but there are several exceptions with a lower level of life expectancy covering regions with heavy industry or mining (Severozápad and Moravskoslezko in Czechia, Slaskie and Lodskie in Poland, Stredné a Východné Slovensko). Higher levels of life expectancy are also found in some traditionally rural regions (Podlaskie, Podkarpackie in Poland, and Vysočina in Czechia). In Slovenia higher levels of life expectancy are in urban regions, whereas lower levels of life expectancy are in remote rural areas. In Hungary life expectancy is generally low in all regions. To conclude, life expectancy is a complex indicator which suggests future prospects of certain populations if mortality conditions remain the same. The level of life expectancy is significantly shaped by various past and contemporary conditions in regions. From a demographic perspective a higher life expectancy means a longer period of healthy active life but also a longer period of life with a need for health-care services.

Map 7: Life expectancy at birth in Central Europe in 2011



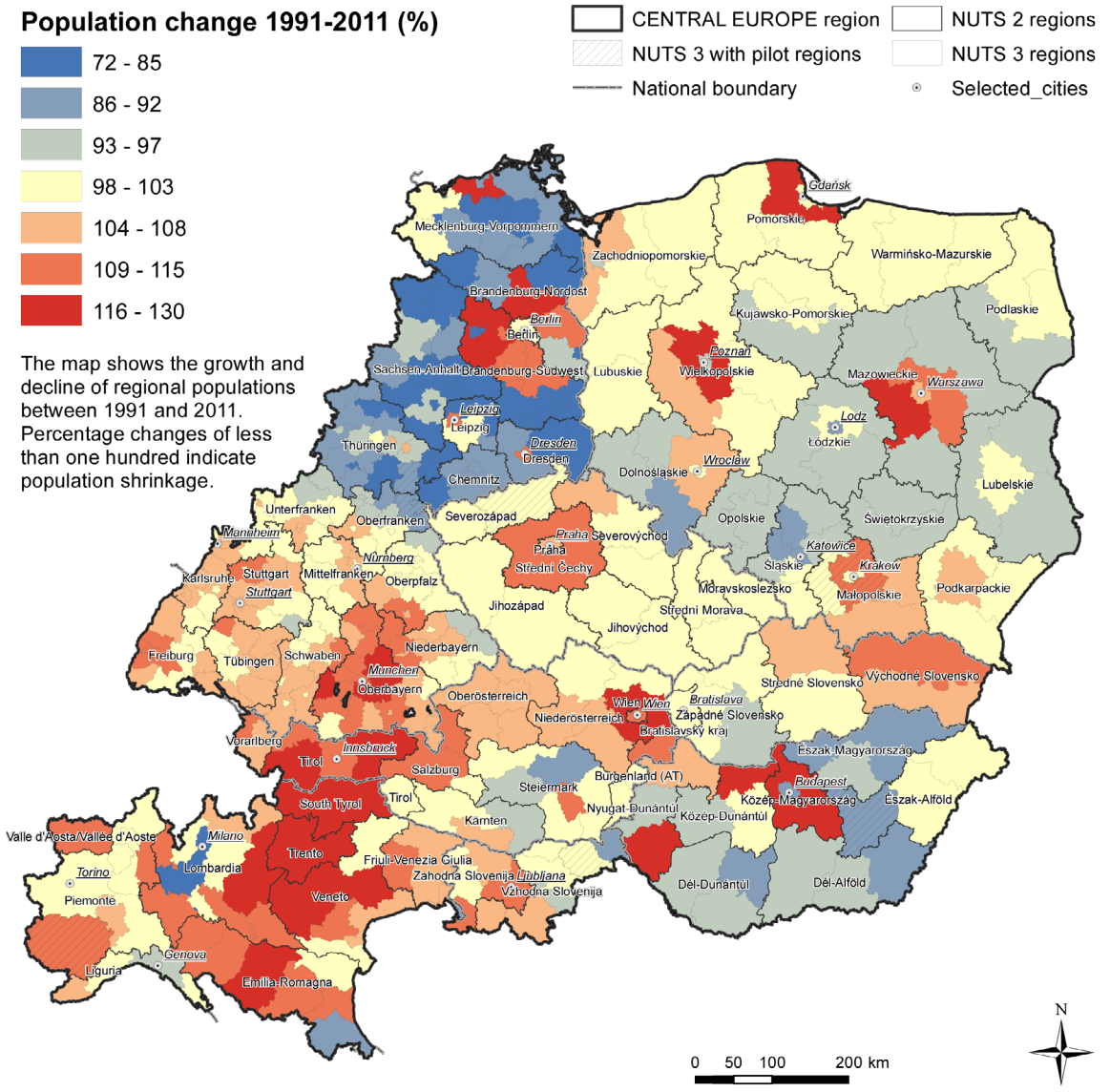
2.2.2 Indicators of shrinking

The shrinking regions in Central Europe are defined in chapter 3 and further elaborated in this chapter. Population change between 1991 and 2011 shows spatial patterns of population distribution in a longer-term perspective. The key role of nationally significant metropolitan regions and spaces of concentration at the European level is highlighted. The extent of population shrinkage is depicted by using absolute as well as relative indicators of population change. The values of the total fertility rate show serious risks for future population development, as all the regions in Central Europe have a fertility level below that required for natural population replacement. The additional indicator of regional differentiation of unemployment illustrates the economically more and less advanced regions. It is assumed that migration streams are usually motivated by the economic considerations of migrants. Therefore, migration is more likely directed from peripheral to metropolitan regions. (It is known, however, that every migration current has its opposite current. The migration of younger cohorts to urban areas is partly offset by the migration of older cohorts to rural areas.) It should be also noted that not all metropolitan regions are growth poles and attract a surplus labour force.

2.2.2.1 Population change 2011/1991

The map 'Population change 2011/1991' shows the basic pattern of population growth and decline in the last two decades. It can be compared to the map presenting shrinking regions (see chapter 3), which shows the period 2011/2001 and thus visualises a shorter-term perspective. The use of a longer time period in this map might draw our attention to generational effects and help us to interpret changes in population distribution.

Map 8: Population development in Central Europe 1991-2011



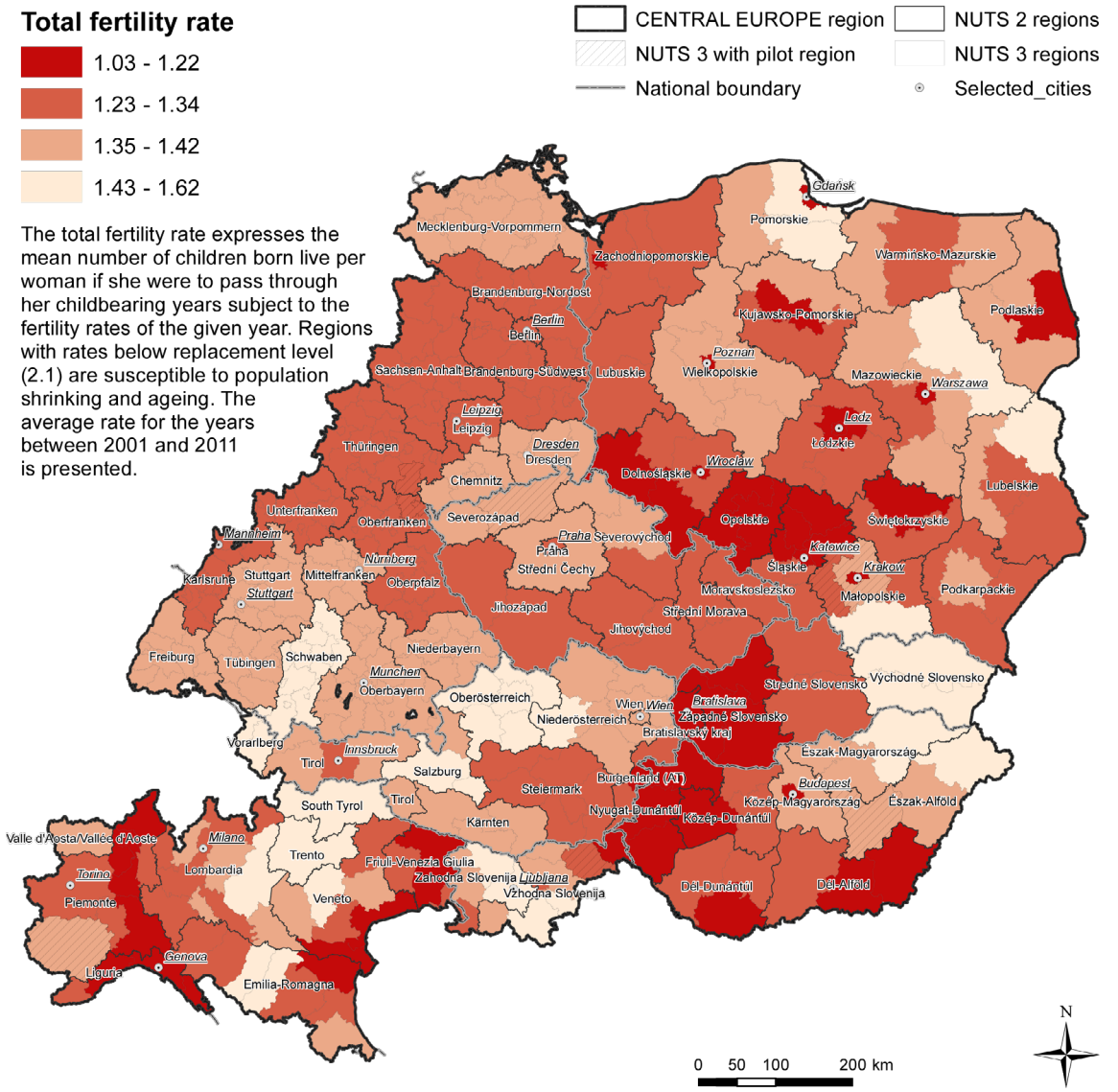
If we compare the population change between 1991 and 2011 with the population change between 2001 and 2011 we can see that the macro-regional pattern of population growth and shrinkage is relatively stable. Although this does not mean that there are no changes in population distribution within NUTS 3 regions. Examples of sub-regional variations of demographic change are visualised on maps defining shrinking regions at the sub-regional level (see chapter 3). At the regional level population decline has advanced mostly in East German, Polish, and Hungarian regions. There are also smaller areas of population decline in other countries.

It is important to note that population decline occurred in all types of regions – in rural, intermediate, and urban regions.[9] The spatial distribution of regions with a growing population can be described as follows: At the macro level, there is a belt of growing regions from the Italian north through Austria to south Germany. These regions rank among regions with a higher GDP per capita and higher disposable income in comparison with other Central European regions. In Poland, Czechia, Slovenia and Hungary the regions surrounding national and bigger regional urban cores are growing, whereas the urban cores itself might be experiencing population decline. In Slovakia there are growing regions in north and east due to younger population structures and higher levels of fertility.

2.2.2.2 Total fertility rate

The map of the total fertility rate provides a rather pessimistic picture of contemporary and future population development in Central Europe (Map 9).

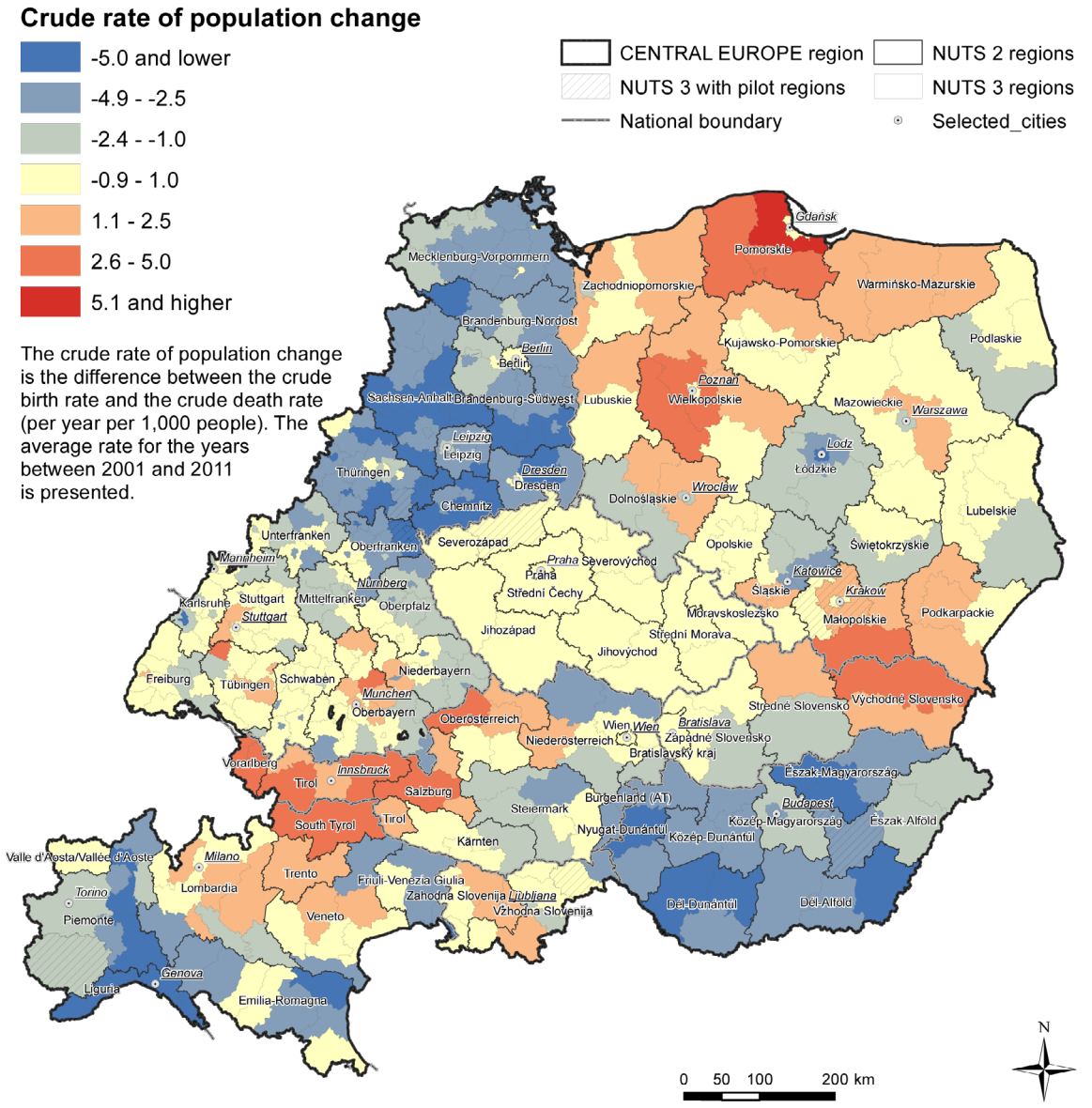
Map 9: Total fertility rate in Central Europe in 2011



9 See ESPON 2013 typologies in Annex.

The total fertility level indicates the mean number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the fertility rates by age in a given year. The total fertility rate is also used to indicate replacement level fertility. In developed countries a rate of 2.1 is considered to be replacement level. The development of the total fertility rate indicates the future prospect of possible population changes. The total fertility rates below replacement level mean that the current population is not sufficiently reproducing itself, i.e. it is prone to a decline in total population size. The impact of foreign migration is not taken into account in this case. Regions with a low total fertility rate (that is a rate less than 2.1), which are all NUTS 3 regions in Central Europe, are more prone to population shrinking and ageing. The total fertility rate map presents the average rates in 2001 and 2011. The reason for this adjustment is the development of total fertility levels in former socialist countries. After the fall of the socialist regimes fertility levels declined rapidly to extremely low values. Uncertain expectations about the future and insecure economic conditions led people to delay starting a family. The average age of a woman having her first child rose significantly. After this initial decline the total fertility rate increased and stabilised at the average level, which is close to the average in former western countries, but still markedly below replacement level. The regional differences in total fertility rate reflect differences in demographic behaviour. In principle, urban regions tend to have lower fertility levels whereas rural regions tend to have higher fertility levels (e.g. Východné Slovensko, north east Poland), but the current situation in Central Europe shows a more complex pattern. The slight increase in the total fertility rate observed in recent years may, in part, be attributed to a catch-up process following on the general pattern of postponing having children. The highest mean age of women at childbirth is in Italy (31.4), Germany (30.4) and in Slovenia (30.1) (Eurostat 2011).

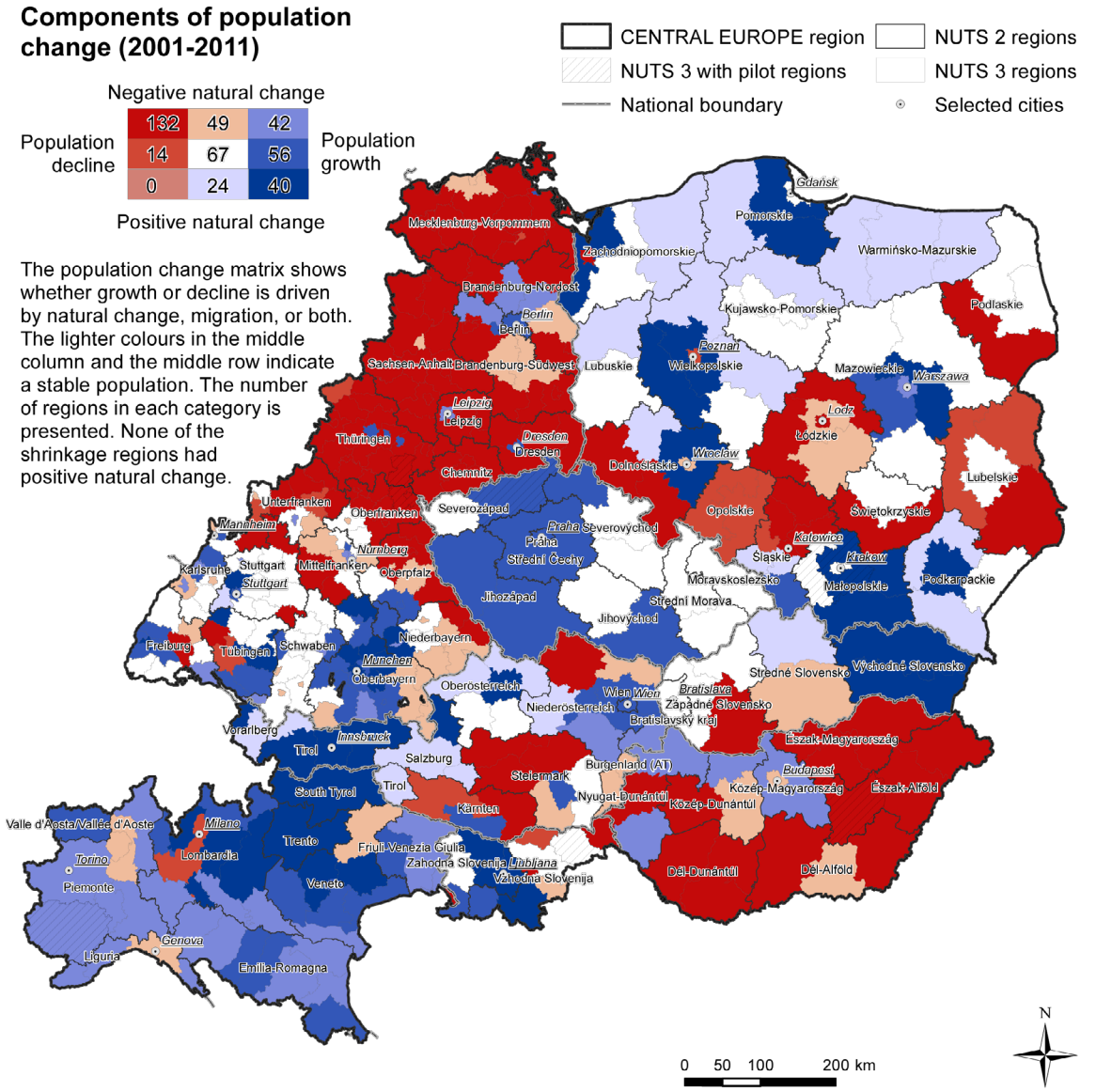
Map 10: Relative rate of population change in Central Europe in 2011



2.2.2.3 Crude rate of population change

The crude rate of population change is calculated as the difference between the crude birth rate and the crude death rate. The crude birth rate is defined as the number of live births in the population of a given geographical area during a given year per 1,000 inhabitants of the same region. The crude death rate is defined as the number of deaths in the population of a given geographical area during a given year per 1,000 inhabitants of the same region. The average value of the crude rate of population change in the years 2001 and 2011 is presented. A positive crude rate of population change means that natural change in the region produces additional population and these regions have growth potential. A negative crude rate of population change means that natural change in the region is not sufficient to reproduce the current total population and the region is prone to population shrinkage. It is important to note that the crude rate of population change does not take into consideration migration per se, only the impact of past migration on current rates of natural change. If we compare this map with the map depicting population change in 2001-2011 (see chapter 3) we can see the effect of migration on demographic change in regions, see Map 11.

Map 11: Natural change and migration as components of population change in Central Europe 2001-2011



2.2.2.4 Components of population change

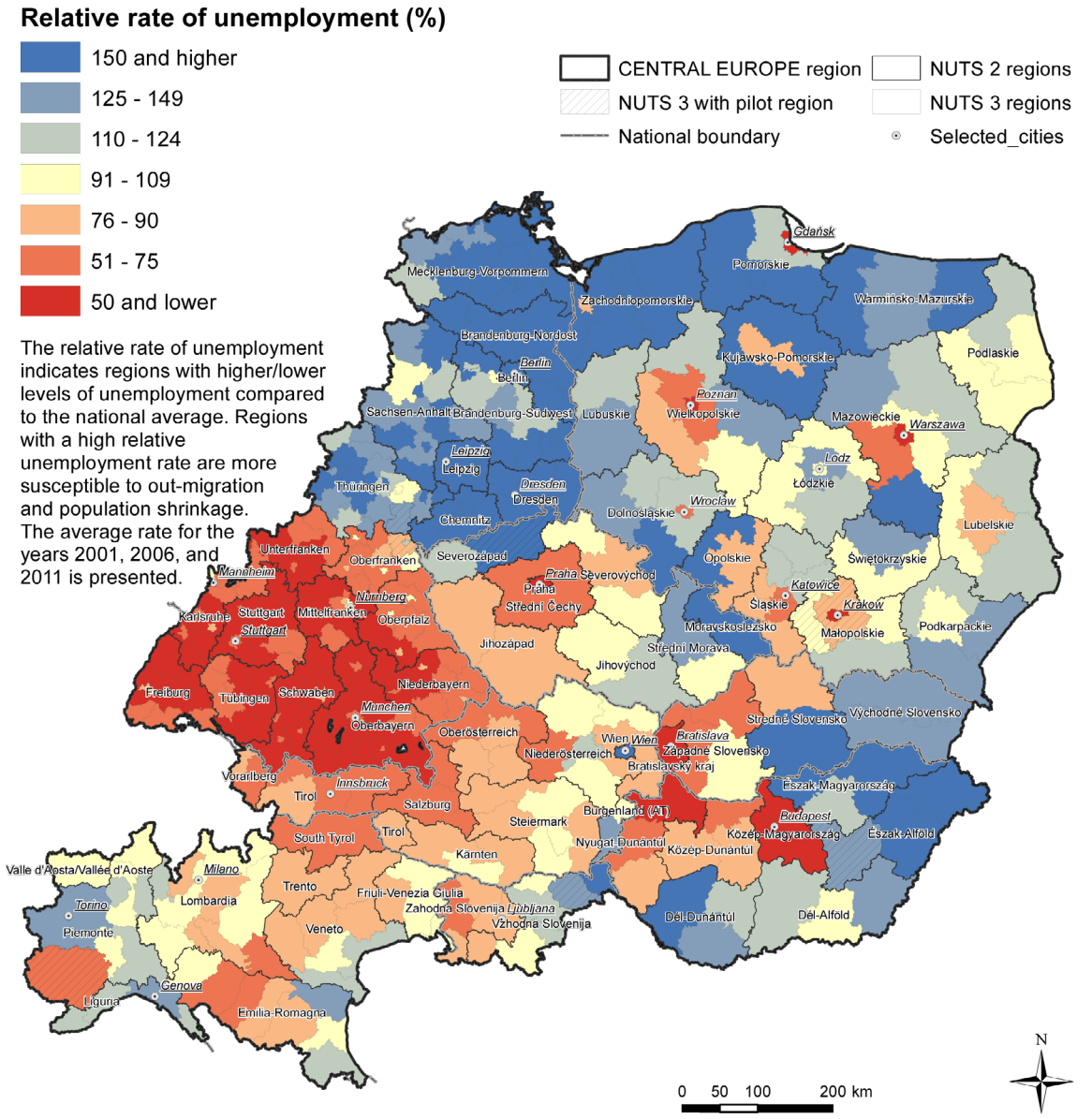
The map of components of population change below classifies all regions into nine different categories according to their population development and their natural change (Map 11). It allows us to distinguish whether the region is shrinking (growing) due to natural change or due to migration (regions with population growth, but with negative natural change). Three categories of change in the total population between 2001 and 2011 measured in relative terms can be distinguished (left-right axis): population decline (less than minus two per cent), a stable population (more than minus two per cent and less than two per cent), and population growth (more than two per cent). Similarly, the average value of the crude rate of natural change in the years 2001 and 2011 is divided into three groups on the top-bottom axis: negative natural change (less than minus one per cent), stable natural change (from minus one to one per cent), and positive natural change (more than one per cent). The number of regions in certain categories is noted in the component matrix. From a regional perspective the map shows that a large number of Italian regions that despite their negative natural change experienced population growth. This is due to migration from other parts of the country and from abroad. A similar situation

is in the north-western regions of Hungary and the metropolitan hinterland of Berlin. Shrinking regions where natural change is also negative cover most of the eastern German and Hungarian regions; a large share of non-metropolitan regions in Poland, middle-south Austria and south-west Slovakia. It is worth noting that none of the shrinking regions had a positive crude rate of natural change.

2.2.2.5 Relative rate of unemployment

The unemployment rate can be interpreted as an indicator of the economic performance of a region. Regions with low economic performance and high unemployment are prone to out-migration of working-age people and therefore are more vulnerable to demographic shrinkage. Accordingly, regions with low unemployment and a low supply of jobs are predisposed to attract further work-related migrants. Regions with high unemployment of young people are particularly prone to out-migration and shrinkage. In most regions that were already defined as shrinking regions the unemployment of young people is the highest in the country. The indicator displayed in the map requires a brief methodological comment. In the first step we collected three-year average data for years 2001, 2006 and 2011 (average value in every year) in order to eliminate annual effects. In the second step we decided to calculate the average value of the unemployment rate from longer-term data (2001, 2006 and 2011) in order to have one number characterising unemployment level in a longer perspective in each region. Because national definitions of the unemployment rate differ and methodological changes in the measurement of unemployment occurred, the level of unemployment in regions was related to the national average value and deviations from this value were expressed in relative terms. Therefore only differences within countries are displayed in the map. From all countries only regions included in the Central European area were taken into account. The map 'Relative rate of unemployment' shows a marked difference between the former East and parts of West Germany and relatively low differences between regions in Italy and Austria. In Slovakia, Hungary, and Slovenia an east-west gradient in unemployment levels is visible. In Czechia peripheral regions and regions with former mining areas shows higher levels of unemployment. In Poland the division between urban and rural regions seems to be a key variable influencing unemployment levels.

Map 12: Average value of the relative rate of unemployment in countries in Central Europe 2001-2011



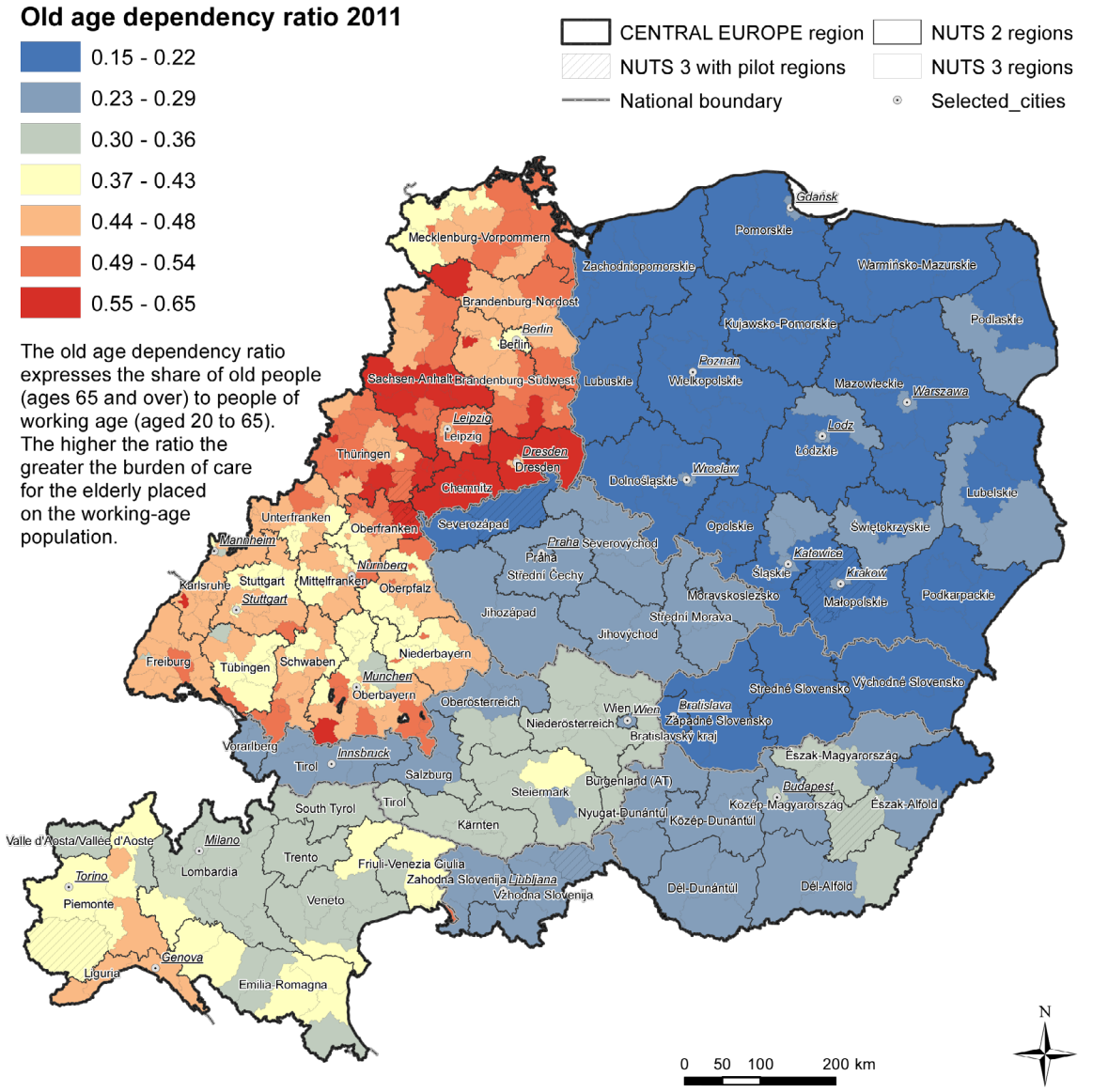
2.2.3 Age group indicators

A more detailed analysis of particular age groups and cohorts shed further light on population shrinkage and population ageing in regions and their dynamics. The old-age dependency ratio and young-age dependency ratio indicate the current level of economic dependency. Knowledge of the distribution of the population into different age subgroups is very important for economic reasons. The major state/regional government redistributive mechanisms like the pension system or the health-care system are significantly affected by the number of people contributing to the system via taxes and the number of people benefiting from the system via various subsidies. The development of young and old age cohorts gives us a clear picture of changes to age-related infrastructure like schools or nursing homes. Not only is the number of such facilities at stake, but also their regional distribution and accessibility for users.

2.2.3.1 Old-age dependency ratio 2011

The close linkage between the economy and demography is expressed in age-dependency ratios. In principle, the old-age-dependency ratio shows how many older people are in a region in relation to the working-age population in that region (Map 13).

Map 13: Old-age-dependency ratio in Central Europe in 2011



In our case the old-age-dependency ratio is defined as the share of people aged 65 and over in relation to people aged 20 to 65. The age groups selected approximately express the transitions from pre-productive age[10] (aged less than 20 years) to productive age (aged 20 to 65 years) and to post-productive age[11] (aged 65 and over). Such an assumption is justifiable in the case of the Central European area, although national and regional differences in average age when people join the labour market or leave for retirement exist. Alternatively, data about the economically active population might be used instead of the 20 to 65 age group. Such data are available

10 The term pre-productive means before entering the labour market.

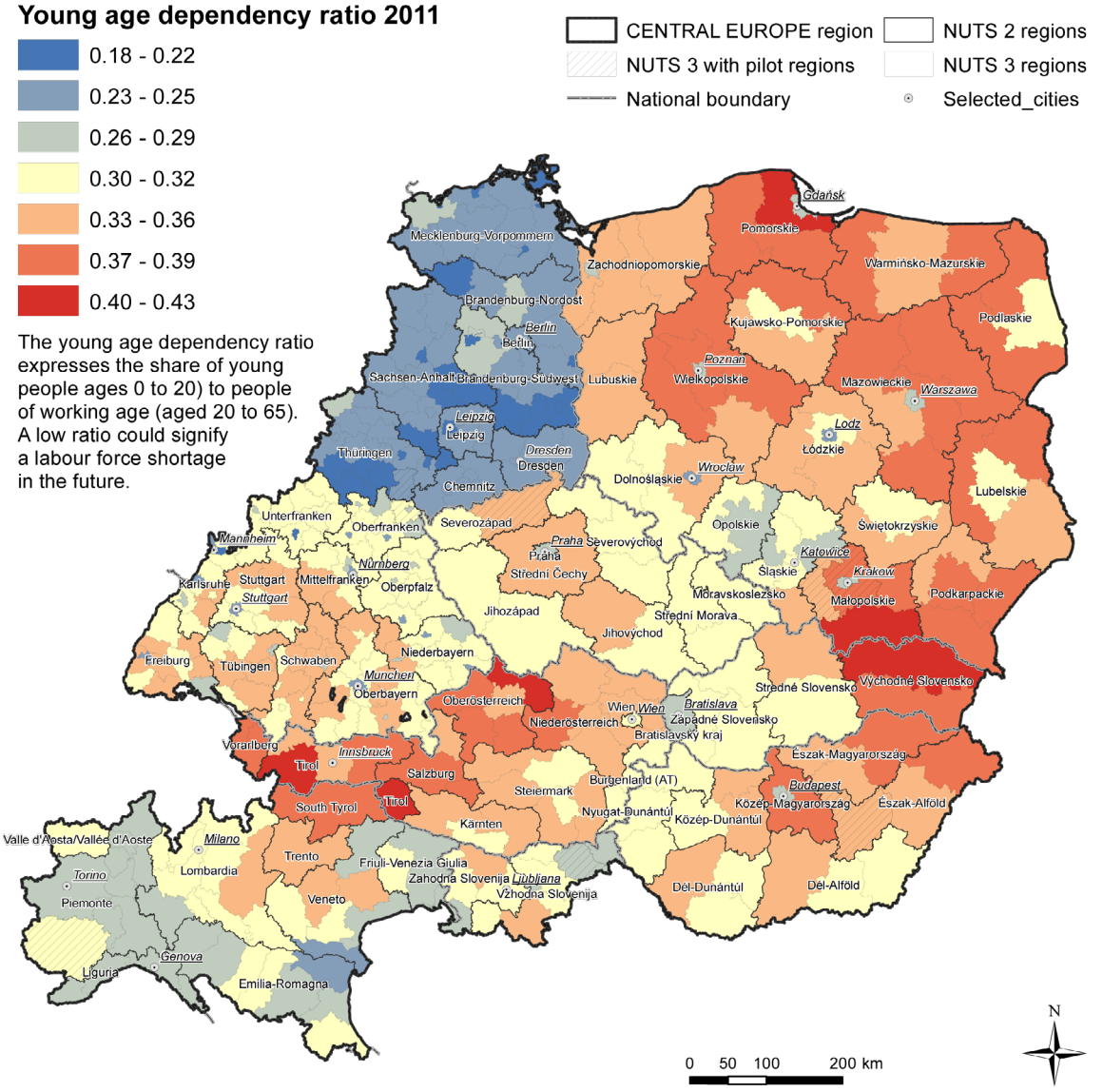
11 The term post-productive means after leaving the labour market.

but they are not readily comparable across countries due to methodological differences. The regional patterns of the old-age-dependency ratio in 2011 are very clear. Countries with a younger population and lower life expectancy such as Poland and Slovakia have a low old-age-dependency ratio. Slovenia, Czechia and Hungary have a medium old-age-dependency ratio, but as in the two previous countries it is expected that the value of the old-age-dependency indicator will rise in the next decade. The highest levels of the old-age-dependency ratio are in the East part of Germany. In general, the differences in the old-age-dependency ratio between regions in Central Europe are high. In the youngest regions there are one or two post-productive persons (aged 65 and over) to ten people of working age (aged 20 to 65) whereas in the oldest regions there are three or four post-productive persons to ten people of working age.

2.2.3.2 Young-age-dependency ratio 2011

Like the old-age-dependency ratio, the young-age-dependency ratio is defined as the share of people aged less than 20 in relation to people aged 20 to 65 (Map 14).

Map 14: Young-age-dependency ratio in Central Europe in 2011

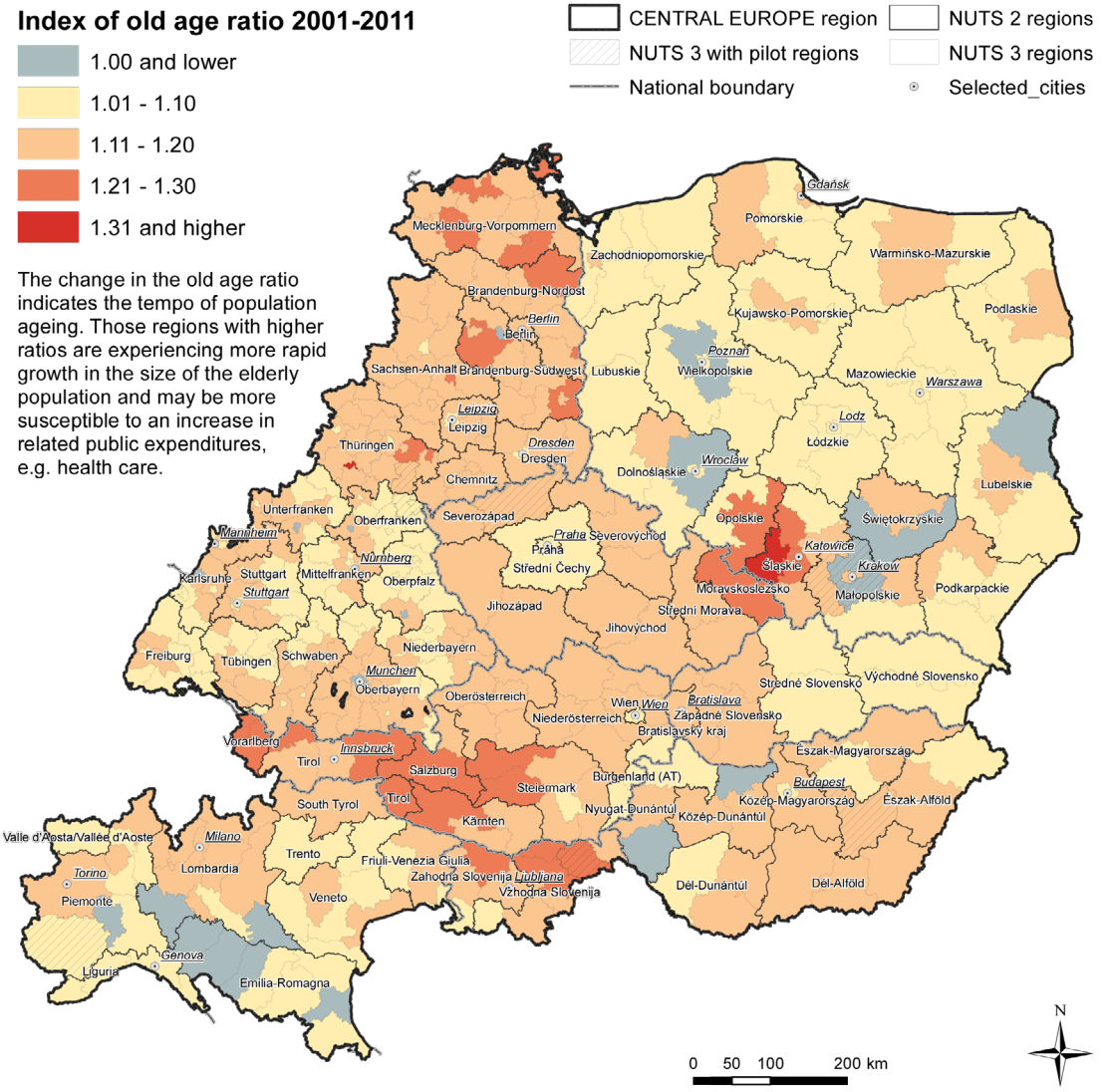


The age groups selected approximately express the transitions from pre-productive age (aged less than 20 years) to productive age (aged 20 to 65 years). A low young-age-dependency ratio suggests that a region might have problems with its labour force supply in the future. A higher young-age-dependency ratio indicates positive perspectives for future demographic development. Whereas the border between former Eastern and Western Europe was clearly visible in the old-age-dependency map, in the map of the young-age-dependency ratio it is not that clear. The average ratio of young people (aged less than 20 years) to the working-age population (aged 20 to 65) in regions is around 30 to 35 per cent. The exceptions from this pattern are East German regions where the young-age-dependency ratio is under 25 per cent. Another exception are the cores of metropolitan regions (München, Poznan, Bratislava) which tend to have an above average level of working-age populations and therefore also have a lower young-age-dependency ratio. The north Italian regions rank among regions with a low young-age-dependency ratio and a relatively small change in mean age 2001-2011, which is the result of positive net migration of working-age populations from other parts of the country.

2.2.3.3 Index of the old-age ratio 2001-2011

The index of the old-age ratio shows a change in the share of old people aged 65 and over between 2001 and 2011 (Map 15).

Map 15: Development of the old-age ratio in Central Europe in 2001-2011

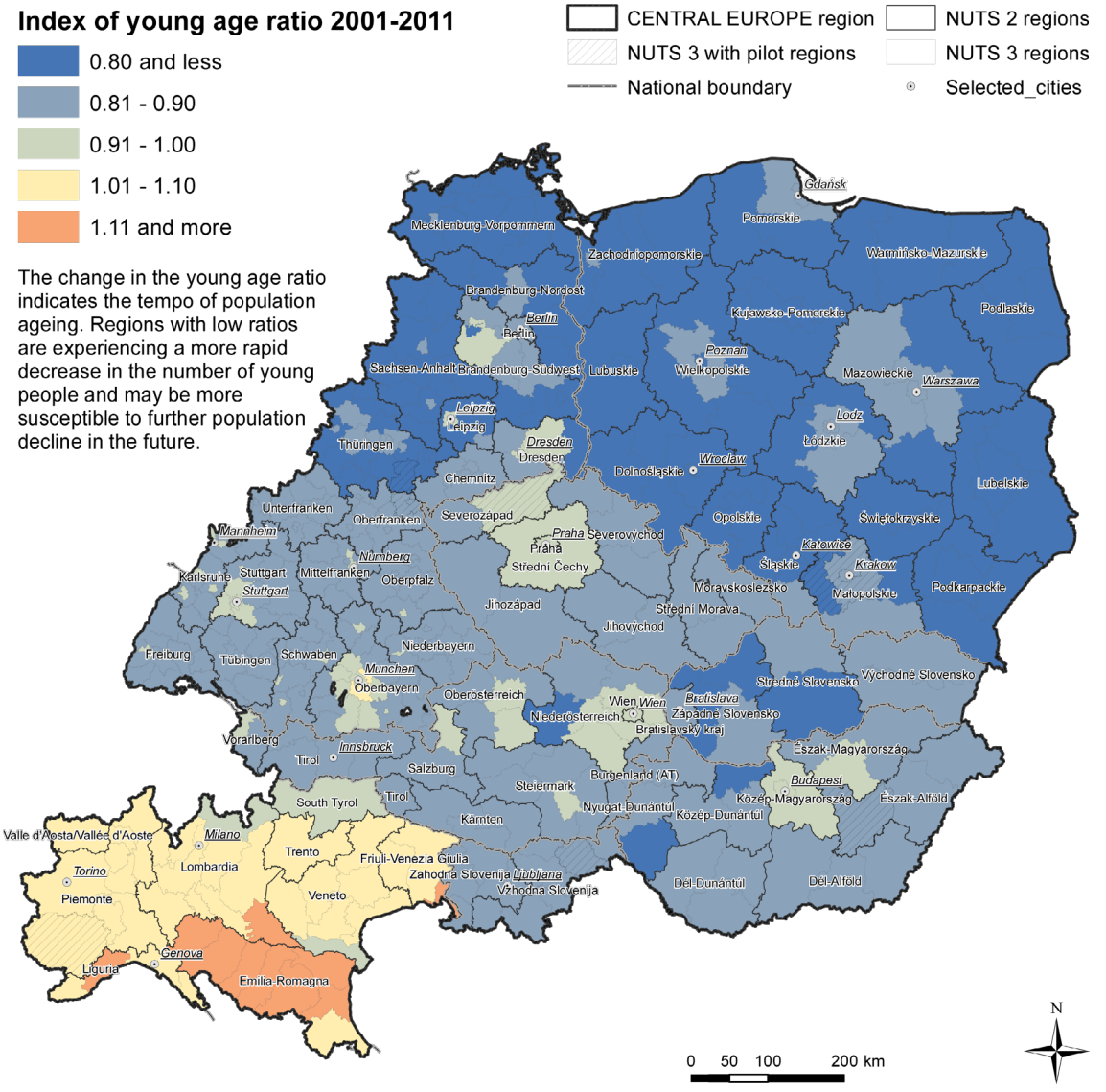


There has been more than ten per cent growth in the number of old-aged people in the majority of Central European regions. From a regional perspective the growth has been slightly slower in the Polish and Slovakian regions due to a younger age structure there, and also in the north Italian and south German regions which already had a relatively old age structure in 2001. Regions in which the index of the old-age ratio grew had faster growth of older population cohorts and may be more susceptible to a growth in age-related public expenditures, e.g. health-care expenditures.

2.2.3.4 Index of the young-age ratio 2001-2011

The index of the young-age ratio shows a change in the share of young people aged less than 20 years between 2001 and 2011 (Map 16).

Map 16: Development of the young-age ratio in Central Europe in 2001-2011



All the regions in Central Europe except the Italian ones experienced a decrease in the number of young people in relation to the working-age population. On the macro-regional level there is a clear north to south gradient, and the Polish, East German and Slovakian regions experienced the biggest decrease. Specific positions in this

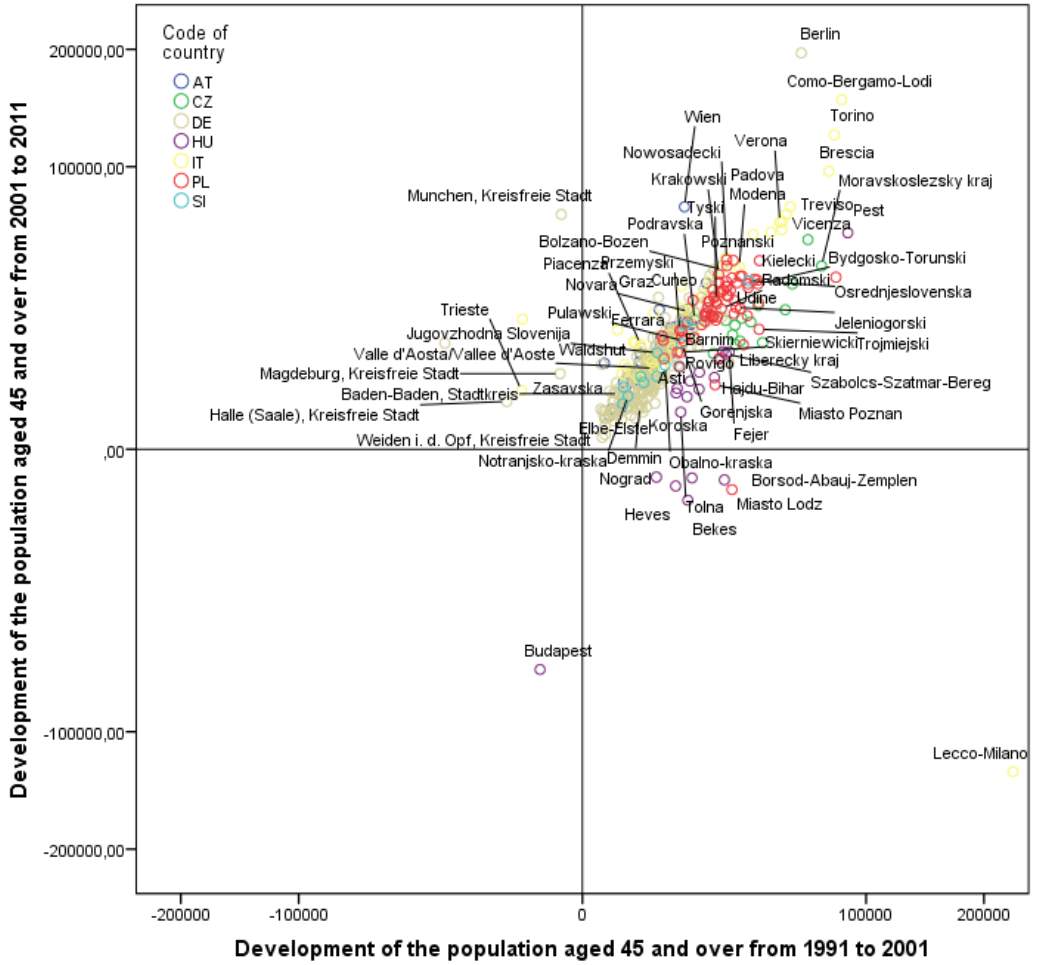
macro-regional pattern are occupied by the metropolitan regions, which tend to attract younger populations and thus have a lower decrease in the share of young people. Although this is not true for all metropolitan regions, some smaller metropolitan regions do not differ in terms of the index of the young-age ratio from their surrounding regions.

2.2.4 Future prospects of population development

The chapter focusing on demographic analysis concludes with a short look at the expected population development in Central Europe in the future. For this purpose three figures are presented. Firstly, the development of the population aged 45 years and over is shown in order to illustrate the progress of population ageing and its uniformity in regions in Central Europe. Secondly, the development of the population aged 0 to 45 years is presented. It points to a continuous decline in the younger population cohorts in the majority of regions and indicates the future expansion of shrinking regions. Thirdly, a map depicting the population outlook for the years 2011-2030 based on a simple demographic model is presented.

The scatter plot graph 'Development of the population aged 45 and over in the period 1991-2011' provides a clear picture of the progress of population ageing in Central Europe in the past two decades (Figure 1).

Figure 1: Development of the population aged 45 and over in the period 1991-2011

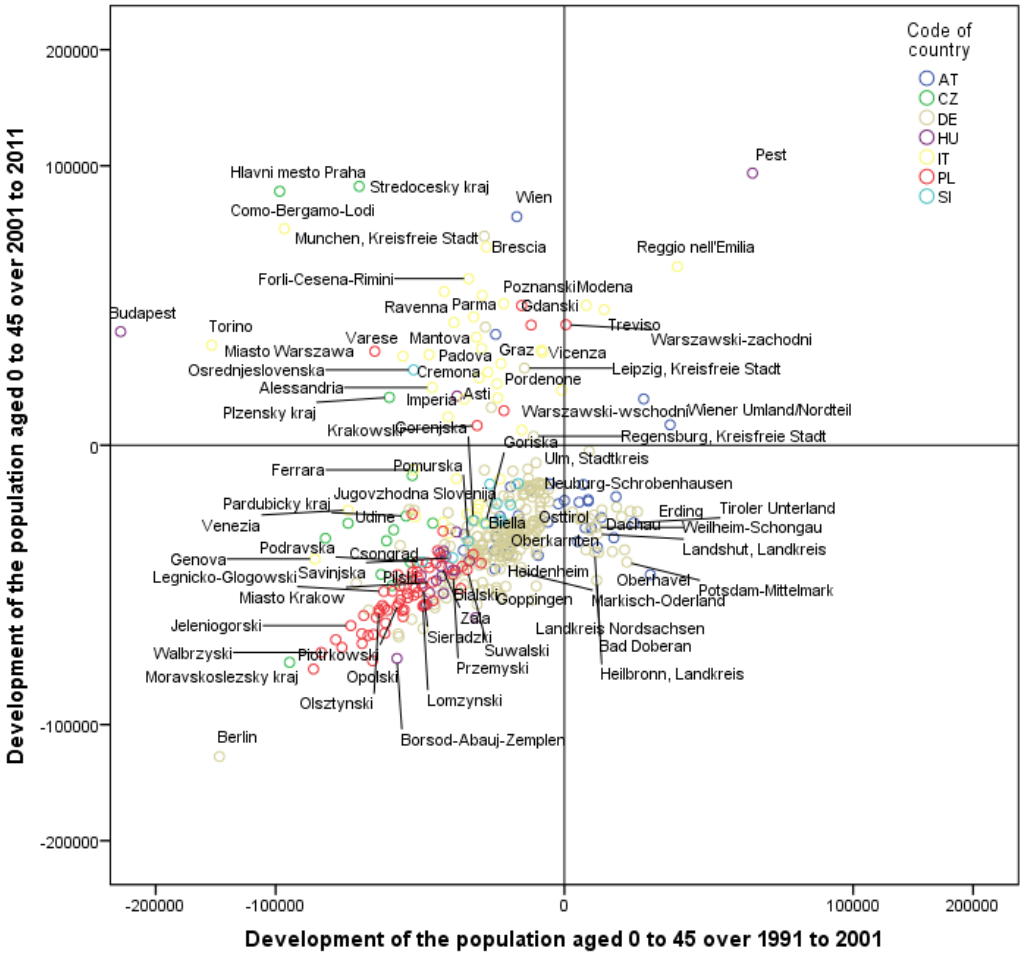


Almost all the regions with the exception of a few untypical outliers experienced stable growth of the population aged 45 and over in both the 1991-2001 and 2001-2011 periods. A minor exception from this general trend are some Hungarian counties (Bekes, Heves, Nograd; bottom right part) which experienced a decline in

the population aged 45 and over in the last decade. This is caused by low life expectancy in Hungary and longer-term depopulation in those regions. Another exception is represented by a few German regions (see top left part) which lost population aged 45 and over in the 1990´s due to extensive out-migration. It is important to stress that growth of the older population delays the potential onset of population shrinkage.

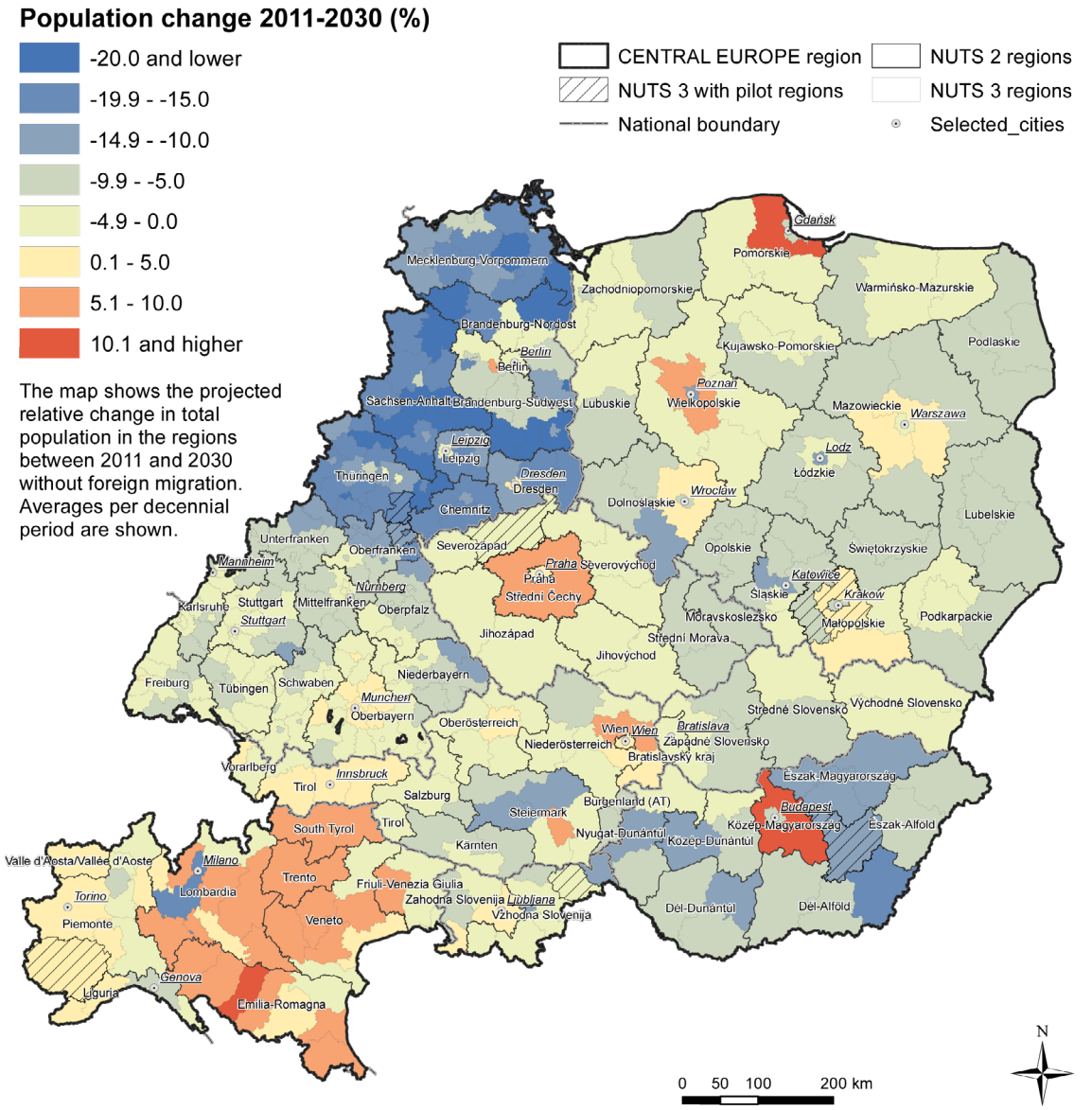
The second scatter plot graph 'Development of the population aged 0 to 45 in the period 1991-2011' (Figure 2) provides an important insight into the population shrinkage process.

Figure 2: Development of the population aged 0 to 45 in the period 1991-2011



The graph clearly shows that the majority of regions has experienced a decline in younger population cohorts (see bottom left part). This suggests that such regions will be more vulnerable to population shrinkage in the next decades. Exceptions from this pattern are mostly metropolitan cores or regions in metropolitan hinterland and the north Italian regions (see the top part of graph). The changing spatial pattern of regions with growing younger population cohorts shows that whereas only a small number of metropolitan regions were growing between 1991 and 2001 the trend has changed. Thus, in the period from 2001 to 2011 a larger share of metropolitan regions grew. This development indicates the increasing role of metropolitan regions as spaces of concentration for younger population cohorts and also suggests the demographic profile of these regions will be better in the next decades.The future prospects of shrinking regions in 2030 are presented in Map 17.

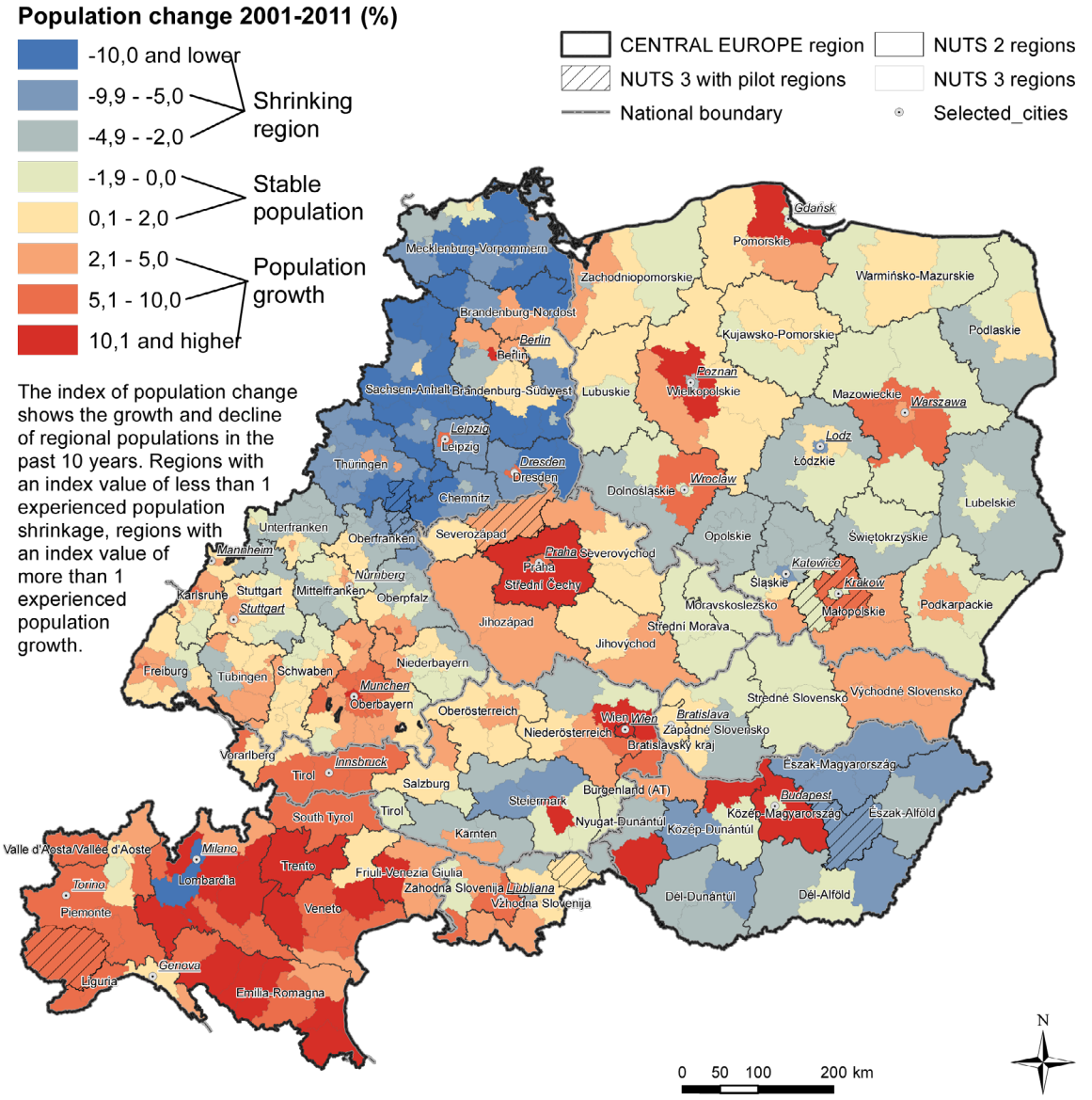
Map 17: Future prospects of shrinking regions in 2030



The map shows the expected relative change in the total population in the regions between 2011 and 2030 which is expressed as average values per decennial period. The model is based on data on population structures in regions and on data characterising population development in the past ten years.[12] A stable number of births as in the last 20 years are presumed. The model does not count directly with foreign migration. The detailed formula used is described in a note below. It has to be stressed that the model presented is an estimation of population development based on currently available data and has to be read and interpreted accordingly. The regional dimension of population change shows the prevalence of shrinking over growing regions in Central Europe (compare with Map 18 - Shrinkage regions in Central Europe in 2001-2011).

12 The standard demographic projection was not calculated due to the too small size of NUTS 3 regions in Central Europe; such projection will not be reliable. A demographic projection at the NUTS 2 level is available from ESPON 2013 project DEMIFER.

Map 18: Shrinking regions in Central Europe in 2001-2011



The metropolitan hinterlands around the metropolitan cores (Budapest, München, Poznan, etc.) have the best prospects for future demographic development, although the metropolitan cores could lose population and therefore be considered as shrinking cities. Macro-regional patterns of population change are relatively stable due to the iterative development of generations. Rural regions with contemporary younger population structures will have positive demographic development also in the medium term outlook (e.g. eastern Slovakia, western Austria, and north-western Poland).

The parameters of the demographic model

The model has two main parts which are summed together. The first part uses weighted ratios between main population cohorts which shifted the population structure 19 years forward.

Formula, first part: {([pop11_0020 / pop01_0020 * pop11_0020] + [pop11_0020 / pop01_0020 * pop11_0020] + [pop11_2045 / pop01_2045 * pop11_2045] + [pop11_2045 / pop01_2045 * pop11_2045] + [pop11_4565 / pop01_4565 * pop11_4565] + [pop11_4565 / pop01_4565 * pop11_4565] + [pop11_65m / pop01_65m * pop11_65m] + [pop11_65m / pop01_65m * pop11_65m]) * 4 / 5 * 19 / 20}

The result value is further adjusted by a simple indicator using population development in the last ten years. This adjustment is necessary because the model does not include foreign migration and we know from empirical data analysis that the processes of spatial distribution of the population are relatively stable in time. Therefore the difference in total population numbers in 2001 and 2011 is weighted into a decennial perspective and divided by invariable three.

Formula, second part: {[tpop11 - tpop01] *2 /3}

The variable 'pop11_0020' is read as the population in the age category 0 to 20 years in a region in 2011; the variable 'tpop01' is read as the total population in a region in 2001.

3 Definitions of 'shrinking regions' (WP 3.1.4)

A key component of the Socio-economic background report is the definition of shrinking regions **(Output WP 3.1.4)**. The following chapters provide a short methodological background for the definition of shrinking regions at two spatial levels: a) NUTS 3 regions, b) sub-regional level. In principle, the methodology for the delimitation of shrinking regions is the same at the NUTS 3 level as well as at the sub-regional level, but the interpretation of figures at distinct spatial levels is different. **Population shrinkage is defined as the relative decline in the total population size in a region in a ten-year period**. Further methodological remarks are described below.

According to the information from all project partners there are no officially accepted definitions of population shrinkage in Central European countries. The partners agree that in principle population shrinkage occurs when death rates are higher than birth rates and when migration cannot balance this gap between the birth and death rates in a region.[13] But on the other hand the issue of defining thresholds for delimiting shrinking regions comes up. Population shrinkage can be measured in absolute as well as relative terms. From the perspective of the ADAPT2DC project it is more meaningful to define population shrinkage in relative terms as a relative decline in the absolute size of the population in a region in ten-year time period. Such a definition is relatively simple in statistical terms, but it captures the core message of the population shrinkage process. The definition of population shrinkage in absolute terms can be misleading due to the different population sizes of regions. A decrease of certain number of population poses a more serious challenge for local and regional stakeholders in sparsely populated rural areas than in high density urban regions. The project partners agreed that the definition of shrinkage in relative terms better captures the pace of shrinkage and its relevance for policy makers. It should be noted, however, that **the relative decline of the total population size in a region in a ten-year period** also depends on the population size of the region.

At European-level study titled `Shrinking Regions: a Paradigm Shift in Demography and Territorial Development` (Shrinking Regions Study) was developed[14] as part of the `Green Paper "Confronting demographical change: a new solidarity between generations"'[15]. It states that population shrinkage is a relatively new concept and that declines in total population size occur in urban as well as rural areas. Like in the ADAPT2DC project the authors of the 'Shrinking Regions Study' chose a simple definition of a shrinking region. Population shrinkage is defined as a reduction in the number of inhabitants in a particular region over the course of a generation. The analysis presented in the study is done for the whole of Europe, but only at the NUTS 2 level. Our analysis from the ADAPT2DC project is different; we provide a more detailed picture of demographic change at the NUTS 3 level, but just for the Central European area. A shift from NUTS 2 to NUTS 3 regions allows us to see a more detailed patchwork of growing and shrinking regions in Central Europe. In principle the use of a more detailed spatial scale will reveal bigger differences in population growth/shrinkage between regions.

13 Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) im Bundesamt für Bauwesen und Raumordnung (2009) (Hrsg.): Raumordnungsprognose 2025/2050, Bonn, p. 14; Gans, Paul; Leibert, Tim (2007): Grundzüge der demographischen Entwicklung in Europa, in: Michael Horn, Bernhard Köppken (Hrsg.): Demographischer Wandel in Deutschland - die lokale und regionale Perspektive, Berlin: Logos Verlag, p. 15-16.

14 IP/B/REGI/IC/2007-044, version 11. 7. 2008, available at: http://www.europarl.europa.eu/meetdocs/2004_2009/documents/dv/pe408928_ex_/pe408928_ex_en.pdf

15 Commission Green Paper, March 2005

Key points from the study **`Shrinking Regions: a Paradigm Shift in Demography and Territorial Development'** that are relevant to the present study can be summarised as follows:

- the problem of demographic decline must be met by means of a multilevel approach within the EU and must be included in various parts of the EU cohesion policy
- population decline has come to affect entire regions, including urban areas; the nature of regions in demographic decline is diverse
- shrinking regions are poorer in general, but various interregional transfers are changing the situation and reducing the revenue gap between different demographic types of regions
- isolated and sparsely populated rural areas are most vulnerable to demographic change due to low densities
- population decline lowers the capacity of a region to adapt to demographic change
- population ageing accelerates the disintegration of certain services, but also ushers in a new set of needs
- wealth redistribution at the national level is crucial, but other redistributive schemes also apply
- two 'trouble spots' in Central and Eastern Europe are: the shortage of public resources and the crisis or inter-territorial solidarity
- the impact of demographic change at the national level and at the local/regional level is very different; the impact of demographic change in localities and regions requires new approaches and policy tools
- demographic decline and ageing form a complex system of interactions involving economic, social, political and environmental aspects and has to be dealt with accordingly

One particularly important part of the `Shrinking Regions Study' focuses on multi-scalar governance and shrinking regions. It suggests a preliminary framework of ways to deal with the statistical evidence of shrinking regions and how to include them in policy documents and tools at various spatial scales. This framework and recommendations will be used in the next steps of the ADAPT2DC project to review strategies and governance models in selected shrinking regions and to elaborate a `European Strategy for counterbalancing depopulation trends'. From the current state-of-the-art of the ADAPT2DC project we confirm or extend some of the recommendations. At the European Union level we agree with the use of simple and reliable indicators describing and anticipating demographic trends as a marker for policy evaluation.

On the other hand, we are sceptical of the uncritical use of more complicated indicators. The same values of one indicator may be the result of different demographic processes and may lead to misleading interpretations and policy conclusions. The use of more complicated indicators of demographic change would require detailed scrutiny among experts in spatial demography, population geography, and other relevant fields. At the national level regional patterns of wealth redistribution will be challenged. A new situation could occur in countries experiencing a total population decrease, where shrinking regions will be more common and typical than in regions with a stable population or population growth. At the regional level it should be stressed that the reorganisation or downsizing of services and facilities will necessarily be spatially selective. As aptly noted in the `Shrinking Regions Study': `The question here is to know whether the regional policy for the reorganization of the spatial framework for the local population and the provision of facilities would be better directed by giving priority to economic efficiency or by seeking to protect social equity and sustainable development' (2008 : x).

The changing extent of population shrinkage in regions could shape very core questions concerning the main redistributive channels between regions and thus be a crucial political issue for regional and national governments. At the local level (and also the regional level in some countries) successful adaptation to the negative effects of population decline requires communication and cooperation among various stakeholders

and local authorities at the intercommunal or regional level. The 'Shrinking Regions Study' points out several risks resulting from insufficient cooperation between local authorities in shrinking regions. The adaptation of infrastructure to demographic shrinking, for instance through the reduction of facilities (e.g. the closure of a school) or downsizing, creates a NIMBY (Not In My Backyard) effect, which could not only hinder a cost-saving policy, but could even result in the opposite effect.

3.1 Shrinking regions at the NUTS 3 level

Population change in regions in Central Europe is diverse; there are both shrinking and growing regions. Population shrinkage in a NUTS 3 region is measured as the relative decline in the total population size in a region in a ten-year period, in our case between the year 2001 and the year 2011. Three main types of development are distinguished. **Shrinking regions** have experienced a decline in the total size of the population higher than two per cent. These include the majority of East German and Hungarian regions and a large share of Polish regions. **Stable population** regions have experienced either small relative growth up to two per cent or small relative decline up to two per cent. Examples of these are a large share of Polish, Czech, Slovak, Austrian, Slovenian, and West German regions. The regions with **Growing population** have experienced relative population growth and are not imminently vulnerable to population shrinkage. Examples of those are Italian regions and metropolitan regions from all other countries.

From a future perspective it might be expected that **Shrinking regions** and regions with **Stable population** will be prone to population shrinkage in the next decade. The reason why there will be more shrinking regions is based on the following rationale. The total fertility level is markedly below replacement level in all regions in the Central European area, the population in almost all regions in Central Europe is experiencing population ageing, therefore it is probable that the majority of regions in Central Europe will experience milder or sharper population decline in the next decade. Because of this, the regions with small relative growth or decline in the last decade will shift towards population shrinkage. A geographical interpretation of the map of shrinking regions at the NUTS 3 level should be sensitive to differences in the population size of regions and to the settlement structure within regions. Several examples of sub-regional patterns of population change are presented in the next section.

From a methodological point of view, there are ideas that could be useful for future research on population shrinkage and for elaborating definitions of shrinking regions. Firstly, functional regions instead of administrative regions[16] might be better for the evaluation of population shrinkage. Such an approach would allow us to see whether population shrinkage is a result of the redistribution of the population within a functional region or whether it is part of a broader pattern of shrinkage. Secondly, an analysis of change in population distribution at municipal level or with the use of a population grid would allow us to see whether there is a trend of rural-to-urban migration, urban-to-rural migration or migration to the metropolitan hinterlands, etc.

3.2 Shrinking regions at the sub-regional level

The maps of shrinking regions at the sub-regional level display two types of indicators. The relative level of total population change in a ten-year period (2001-2011) indicates the pace of population shrinkage. Like on the NUTS 3 level, three main types of development are distinguished (Shrinking regions, regions with Stable population, regions with Growing population) based on the same criteria. It should be noted that relative population change directly depends on total population size, in particular in the case of LAU 2 units. Quite obviously, smaller units might easily show higher degrees of growth or decline. The total size of the population in an LAU 2 unit characterises the level of urbanisation in the region. It also shows whether population decline is more typical for rural or urban or all LAU 2 units. Population change in the NUTS 3 regions in which the

16 Administrative regions are usually used for statistical purposes for various levels of governance and tend to have broadly similar territorial/population size. Functional regions reflect spatial functional relations in a territory such as commuting and accessibility of services. Functional regions tend to have different sizes according to the size of regional cores and its hinterland.

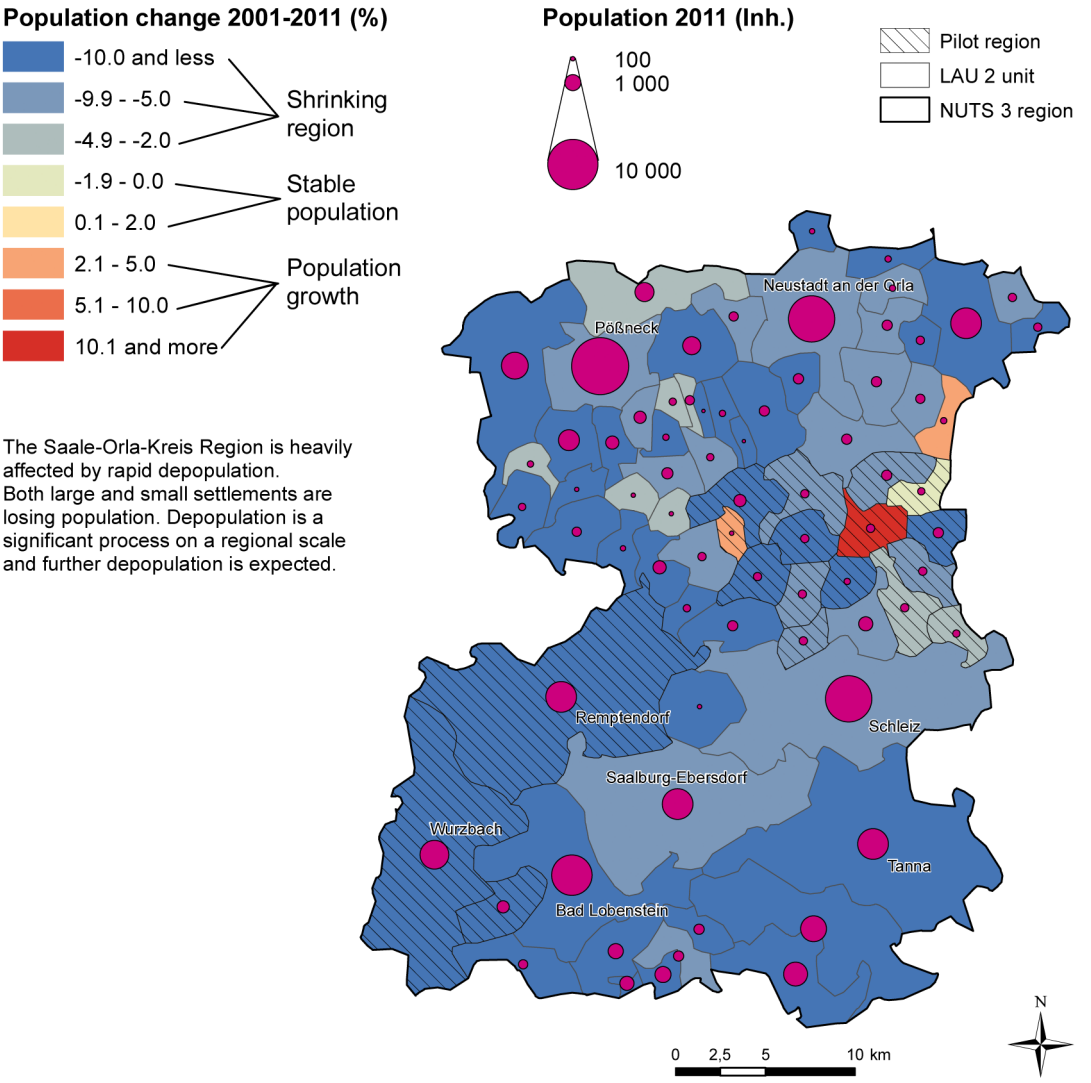
Pilot regions are located exhibits big differences in the nature and extent of population shrinkage. In Germany the rural Saale-Orla-Kreis Region is located on the inner-country border between Thüringen and Bayern. It has undergone rapid depopulation, occurring in all the municipalities and towns. The impact of shrinkage is profound with a population decline of more than 20 per cent between 2001 and 2011. A slightly less rapid population decline is occurring in Jasz-Nagykun-Szolnok Region in Hungary, and further shrinkage and convergence with the German pattern is to be expected. In Cuneo Region in Italy, population decline seems to be significant only in the sparsely populated high mountains regions. The more densely populated lowlands are experiencing population growth. A different situation can be observed in the last three NUTS 3 regions. Krakowski and Oswiecimski Regions in Poland are shrinking only in their peripheral parts; the municipalities closer to Krakow are influenced by suburbanisation and are showing population growth. A similar situation is in the municipalities around Maribor in Slovenia, but Maribor as a city itself is losing population. The same case is the Ústí Region, where the population in big cities is decreasing, while their hinterlands are experiencing population growth. Smaller rural municipalities in the region's periphery are vulnerable to population shrinkage, too.

Definition of shrinkage at the sub-regional level – Pilot regions:

- Saale-Orla-District (Thuringia, Germany)
- Jász-Nagykun-Szolnok County (Hungary)
- Vejprty Region (Czechia)
- Po Valley (Italy)
- North-western Małopolska - Poviats: Miechowski, Chrzanowski, Olkuski, Proszowicki (Poland)
- Podravje Region and Maribor (Slovenia)

3.2.1 Saale-Orla-District (Thuringia, Germany)

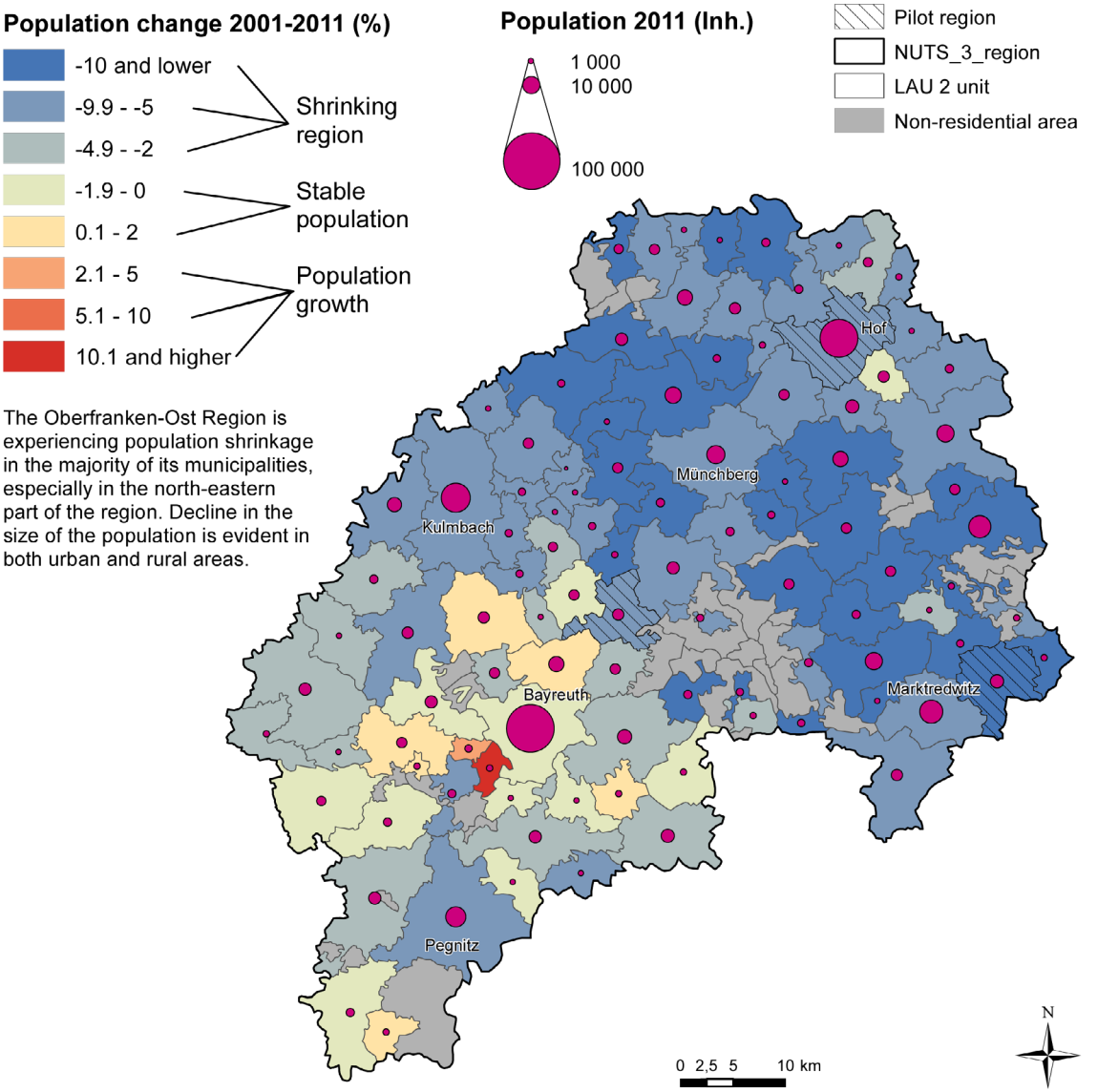
Map 19: Population shrinkage in Saale-Orla-District 2001-2011



The Saale-Orla-Kreis Region is heavily affected by rapid depopulation. Both large and small settlements are losing population. Depopulation is a significant process on a regional scale and further depopulation is expected.

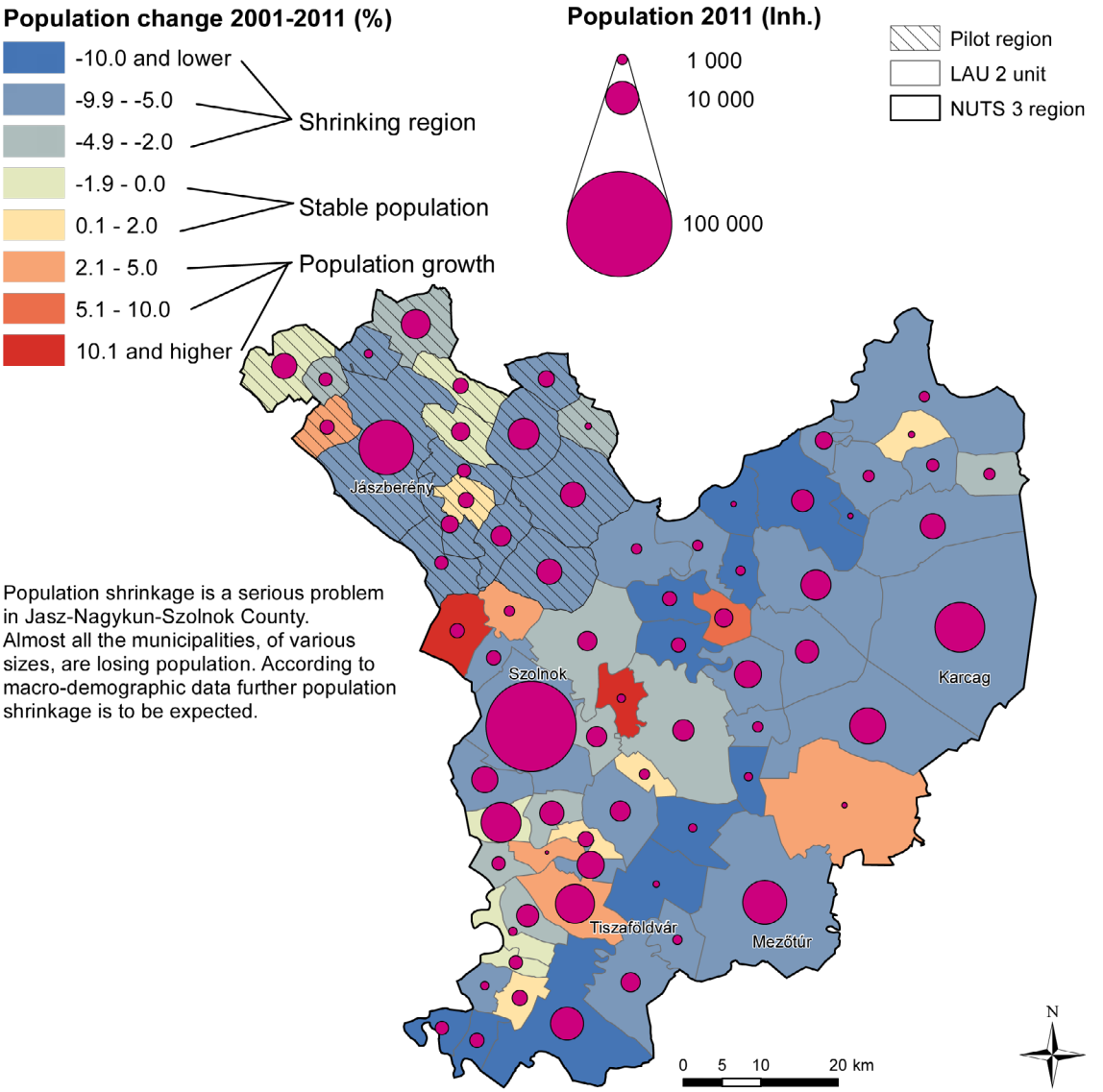
3.2.2 Oberfranken-Ost Region (Bavaria, Germany)

Map 20: Population shrinkage in Oberfranken-Ost Region 2001-2011



3.2.3 Jász-Nagykun-Szolnok County (Hungary)

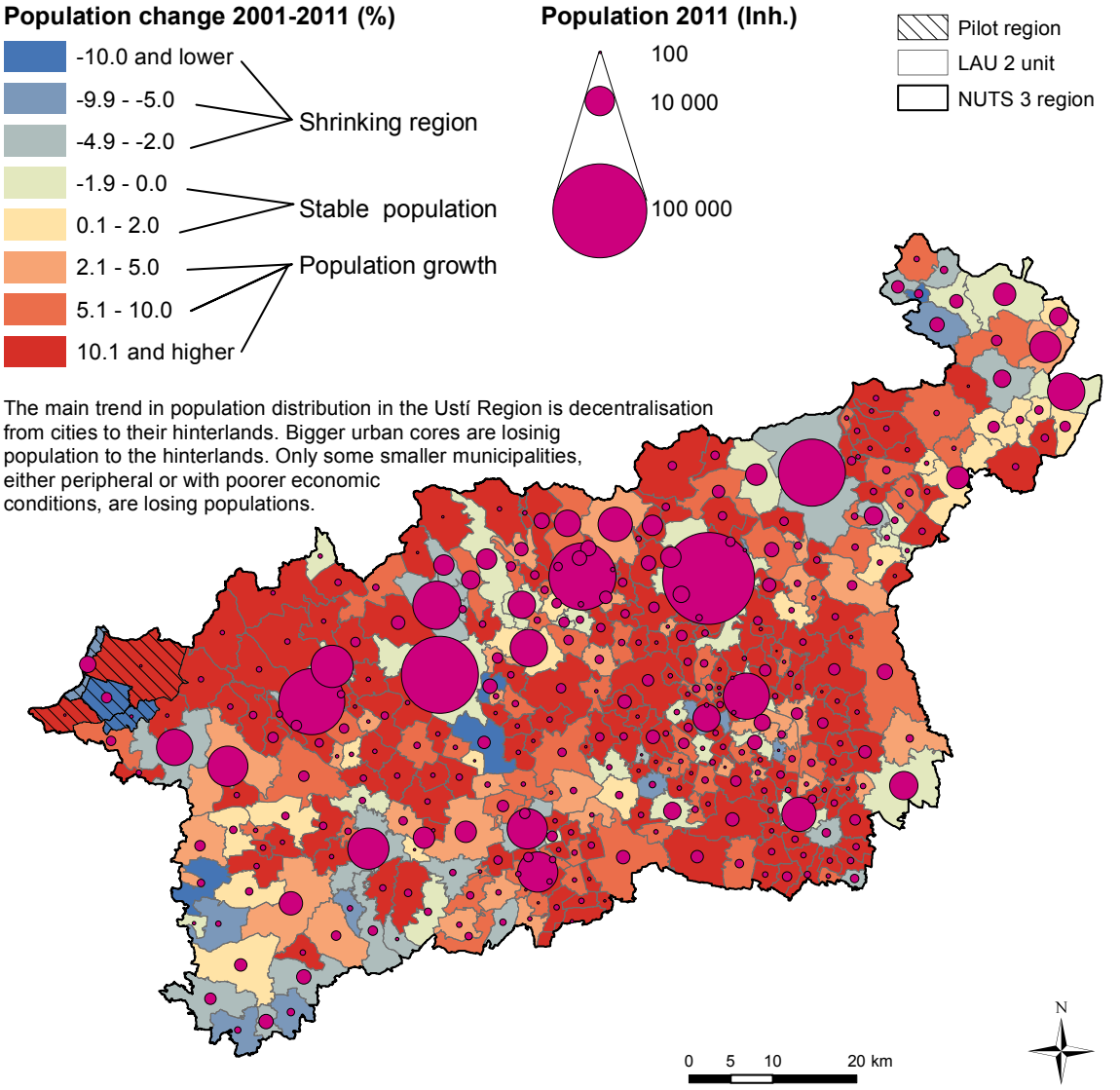
Map 21: Population shrinkage in Jász-Nagykun-Szolnok County 2001-2011



Population shrinkage is a serious problem in Jasz-Nagykun-Szolnok County. Almost all the municipalities, of various sizes, are losing population. According to macro-demographic data further population shrinkage is to be expected.

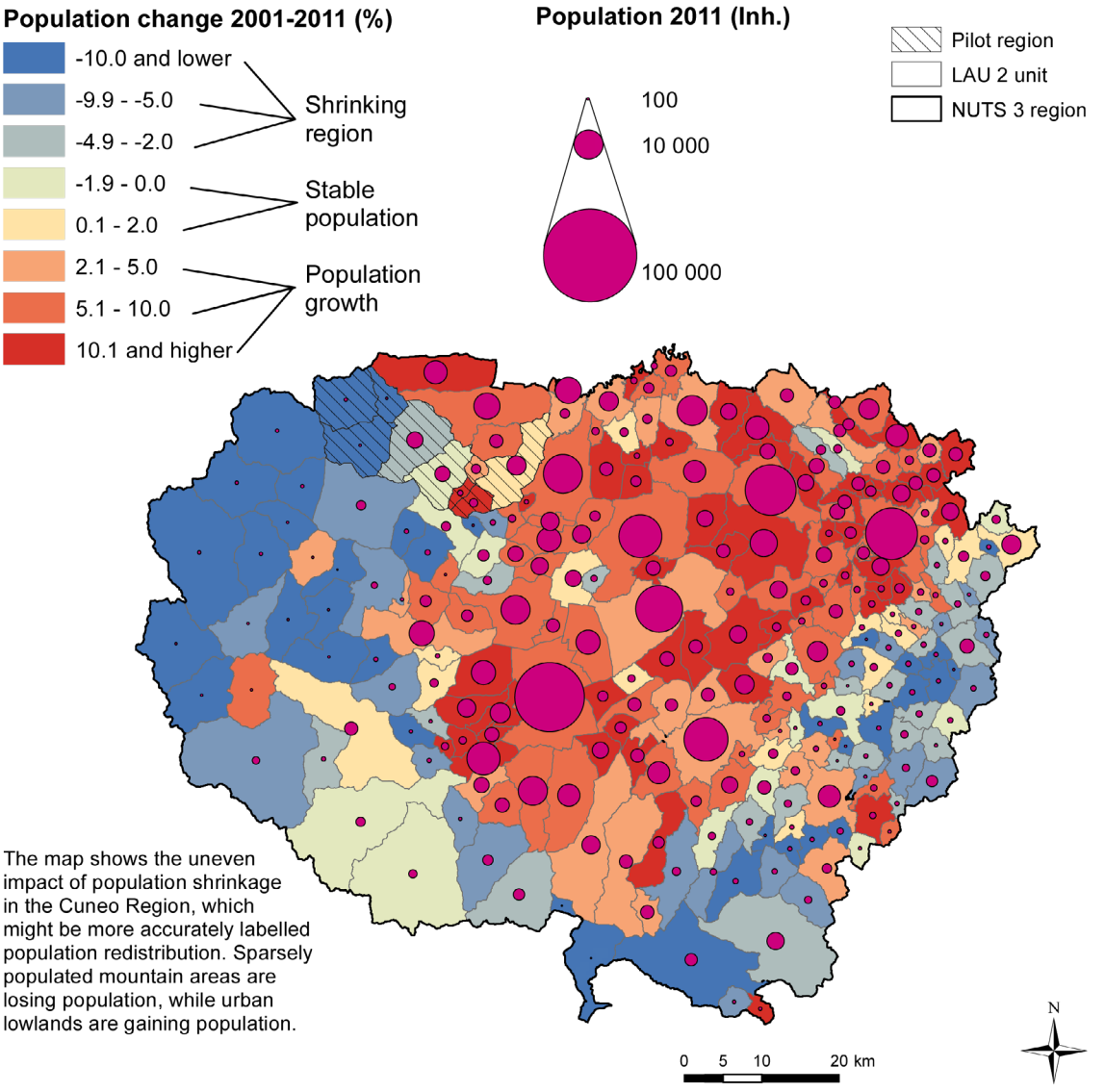
3.2.4 Vejprty Region (Czechia)

Map 22: Population shrinkage in Ústí Region 2001-2011



3.2.5 Po Valley (Italy)

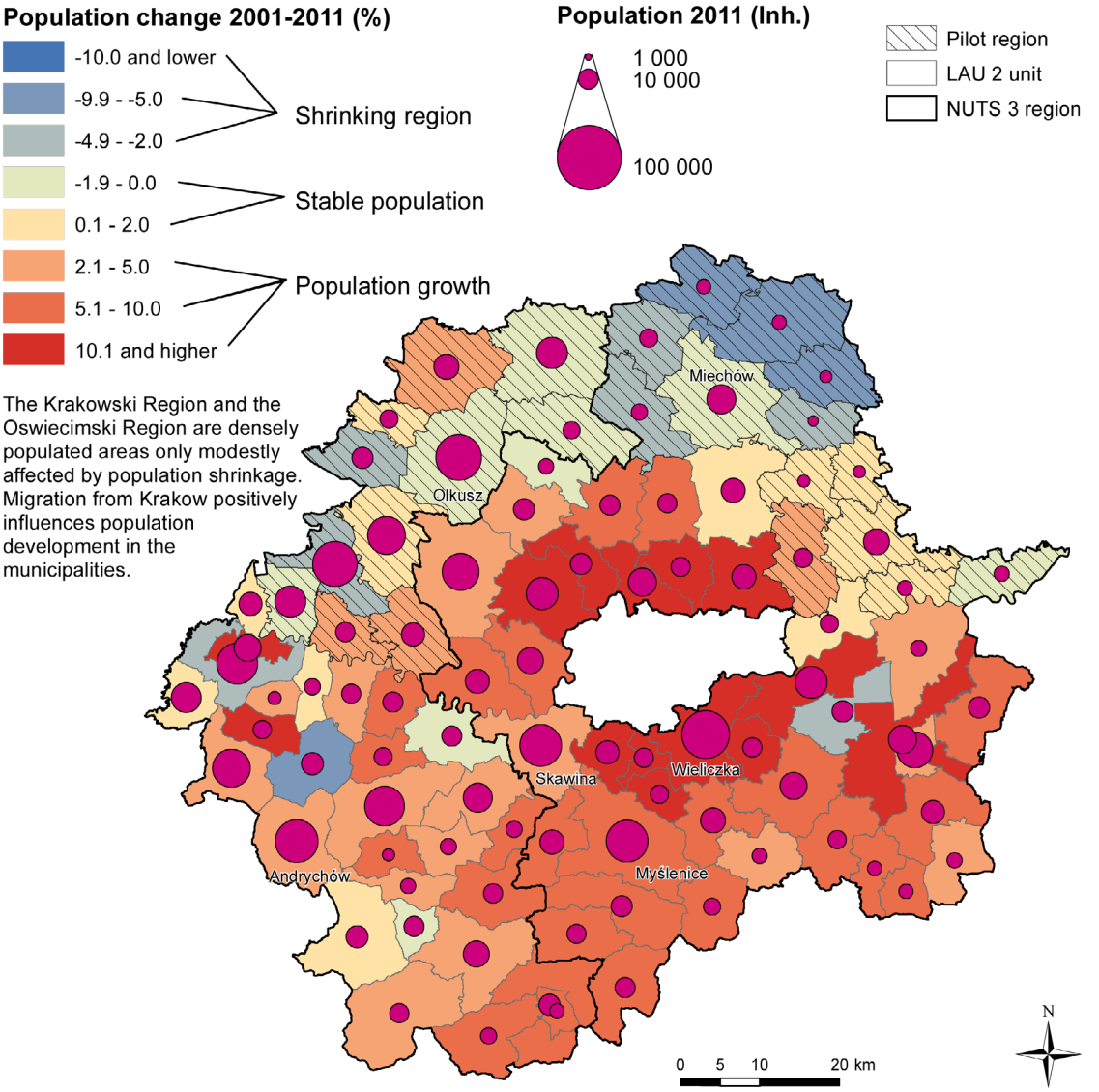
Map 23: Population shrinkage in Cuneo Region 2001-2011



The map shows the uneven impact of population shrinkage in the Cuneo Region, which might be more accurately labelled population redistribution. Sparsely populated mountain areas are losing population, while urban lowlands are gaining population.

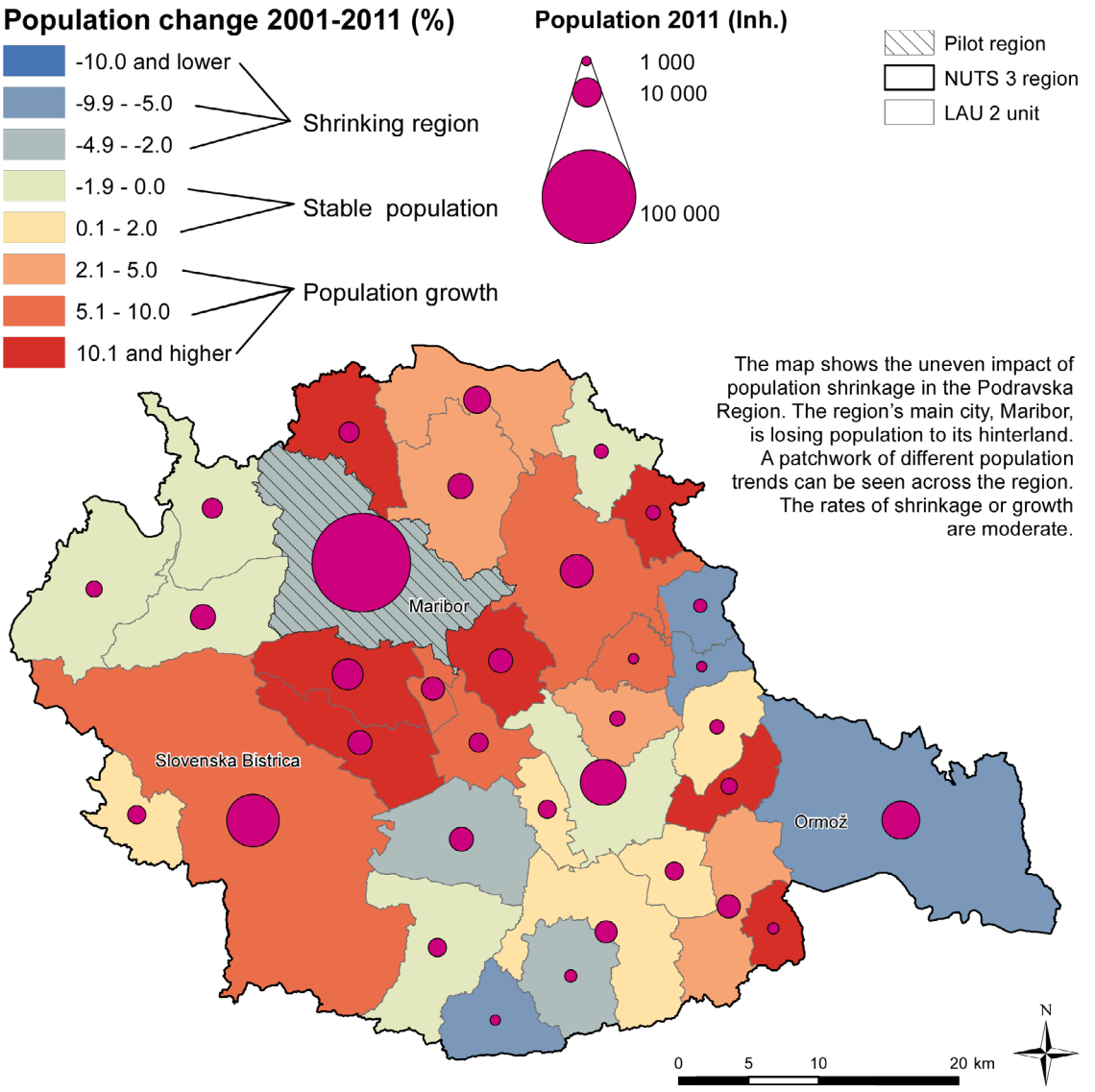
3.2.6 North-western Małopolska - Poviats: Miechowski, Chrzanowski, Olkuski, Proszowicki (Poland)

Map 24: Population shrinkage in Małopolska Region 2001-2011



3.2.7 Podravje Region and Maribor (Slovenia)

Map 25: Population shrinkage in Podravje Region 2001-2011



4 Policies related to demographic change in Central Europe

This comparative socio-economic background analysis of shrinking regions and cities in Central Europe consists not only of data analysis but also of policy analysis. In the policy analysis all project partners were asked to conduct a review of policy documents which are in some way related to demographic change and to adaptation to demographic changes (e.g. shrinking cities, shrinking regions, depopulation, population ageing, rural/urban out-migration, demographic transition) according to instructions provided. Project partners focused only on policy documents which at least partly touch on issues related to demographic changes.

The review was done at two levels: national and regional. At the national level, partners reviewed national policy documents, e.g. the National development strategy, Government priorities 2012, strategic documents of particular ministries, etc. At the regional level, partners reviewed documents at different levels of administration (territorial governments at the NUTS 2, LAU 1, and LAU 2 levels) below the national level, e.g. regional government development priorities, Regional development strategy, Municipal cooperatives strategy, etc. This regionally focused analysis mainly concerns different levels of regions in which there is a pilot region. A short policy review focused on the EU level is also included.

The following outputs from partners are summaries with a thick description of policies at a) the national and b) the regional level. It includes a structured description of policies sorted according to different bodies of government/governance. Partners were encouraged to write not only whether processes of demographic change were mentioned in a policy document, but also how they were dealt with, how important they were perceived to be, how they were related to other policy documents and their implementation.

4.1 Policy review: European Union
Author: ISCAS

There are many documents created by the European Union concerning the ageing of the European population and future trends in society, but not many that deal with solutions, especially specific solutions to these problems in regions. In the Conclusion of one policy document by the European Commission it is said that combination of the ageing and low fertility will lead to crucial economic, budgetary and social problems.

Population ageing also poses significant challenges for the economies of the European states and for their welfare systems. The EC warns that without making the necessary institutional and conceptual changes these demographic trends will considerably affect our society, eat away at intergenerational solidarity and burden future generations. Moreover, demographic changes are expected to have substantial consequences on public finances in the EU. On the basis of current policies, age-related public expenditures (pensions, health-care and long-term care) are projected to increase by 4.1 percentage points to around 29% of GDP between 2010 and 2060. Public pension expenditure alone is projected to rise by 1.5 percentage points to nearly 13% of GDP by 2060. Demographic changes will also influence potential development and will lead to strong pressure to increase public expenditures not only in the areas of health care and retirement pensions but also in the areas of infrastructure, housing and education.

The particular goals set by the European Council aim to create better conditions for families and for demographic restoration[?revival], mostly improving the conditions for work-life balance, e.g. by decreasing the taxes of the second-wage earner in a partnership or by making investments into high quality care for children. Other goals concerns increasing participation in the labour market and increasing employment: in particular increasing the employment rate among older people, reforming the tax system and the social benefits system with the goal of improving the use of labour, and investing into a healthier older population so that it can work to a higher age and with bigger productivity. One of the main goals is to increase the productivity, recruitment and integration of migrants and ensure the sustainability of public finances. The European Council says that coordination on the European level could simplify the adoption of best practises, foster cooperation and decrease negative impacts.

One of the main documents concerning the problems of ageing is the Lisbon strategy which provides the general frame for any other strategies. The Lisbon strategy notes that, given the projected budgetary impact of ageing populations, ensuring the long-term sustainability of public finances has become a key policy objective. A three-pronged strategy has been pursued to ensure fiscal sustainability, consisting of faster debt reduction, pension and health-care reform, and labour market reforms (in particular the extension of working lives).

The European strategy for active ageing strives to create more opportunities for older people to continue working, to stay healthy longer and to continue to contribute to society in other ways. The challenges associated with ageing need to be turned into opportunities for increased labour participation and productivity, job creation in health and social services, and the creation of new markets, generating a ´silver economy´ that encompasses a broad range of economic activities, from health and care products to services, mobility and ambient assisted living. Five main policy areas are employment, access to social services, mobility and accessibility of transport, adapted housing for the ageing population and social inclusion.

Ageing is a problem for states as a whole. On the regional level problems of depopulation concern mainly the departure of young and educated people from the countryside for towns. Differences in the economic and social sphere are regulated to a certain extent on the European and national level through regional politics. In the regions the basic goal is to reorganise services and the utilization of buildings to accommodate demographic changes but without altering the quality and variability of services, e.g. the consolidation of schools or the supplying of health care or social services. It is also necessary to appeal to the regions and municipalities to cooperate and to solvie their problems concerning demographic change together and therefore more effectively.

References:

- Active Aging: Local and Regional Solutions. 2011. European Union
- Shrinking Regions: a Paradigm Shift in Demography and Territorial Development. Study. 2008. Regional development. Policy Department B: Structural and Cohesion Policy
- European Commission, Eurostat - Demographic report 2010. Older, more numerous and diverse Europe
- Commission Communication - The demographic future of Europe – From challenge to opportunity, /* COM/2006/0571 final */ - European Commission 12.10.2006
- 2009 Aging Report: economic and budgetary projections for EU – 27 Member States. European Economy
- Demography Report 2010. Older, more numerous and diverse Europeans. Eurostat
- Dealing with the impact of an ageing population in the EU (2009 Ageing Report). Commission of the European Communities. Brussels. 29.4.2009
- Green Paper "Confronting demographical change: a new solidarity between generations", Commission Green Paper, March 2005,
  Available at: http://europa.eu/legislation_summaries/employment_and_social_policy/situation_in_europe/c10128_en.htm
- Working group for ageing and sustainability. European Policy Committee –The 2012 Ageing Report

4.2 Policy review: German policies on the national, federal and regional level

Authors: Kornelia Ehrlich and Matthias Schaarwächter (IfL)

Summary policies dealing with demographic change in Germany at the national government level:

The issue of demographic change is being addressed widely by the Federal Government of Germany. Several policy and strategic documents have been published and/or adopted *(e.g. Regionalstrategie Daseinsvorsorge - Denkanstöße für die Praxis, Daseinsvorsorge im demografischen Wandel zukunftsfähig gestalten, Demografiebericht der Bundesregierung)*. The Federal Government and its Ministries also initiated a number of model projects in regions that are already experiencing the consequences of demographic change (e.g. Stettiner Haff and Südharz-Kyffhäuser). Here, innovative solutions are being tested in order to adapt the different infrastructures, services, administration and others to the consequences of demographic change. The experiences and results of such model projects are then integrated into policy and strategic documents.

The latest publication of the Federal Government related to the aspect of demographic change is the *Demografiestrategie der Bundesregierung* (National Demography Strategy) (2012). On the one hand, it bundles the measures that have already been introduced on different levels; on the other hand, it presents further possibilities for the adaptation to demographic change. In the above-mentioned documents mainly the following areas of social and technical infrastructure and services are being addressed: schools, public transport, mobility, health care, care for the elderly and the disabled, sewage water treatment, water provision and waste treatment.

In the documents the issue of dealing with demographic change is described as very important for the future development of the country. Hence, the issue is linked also to other (policy) fields that need to be addressed. Amongst them is the promotion of life-long learning, adaptation to climate change and support for resource efficiency, the further extension of health protection and adaptation to the skilled worker shortage.

The documents describe several possible innovative solutions in different infrastructure and service fields. Amongst them are:

(A) Water, waste and energy:

- The development of decentralised concepts
- The creation of new income sources (linkage of energy generation and sewage water (treatment)
- Flexible technical solutions
- The establishment of a central waste collection system in rural areas
- The introduction of efficient management and optimized technologies

(B) Mobility:

- Demand-based public transport provision
- Merging private and public mobility forms (public transport and car-sharing, call busses)
- Access to public transport as the central criterion for planning social infrastructure
- Increased profitability of public transport: the combination of goods traffic and passenger services
- The development of new offers for new consumer groups (e.g. tourists)
- The development and application of modern communication instruments

(C) Health care:

- Supporting health prevention and personal responsibility

- Stronger networking between medical care and nursing care
- Counterbalancing the expected shortage of doctors (funding programmes, flexible working models)

(D) Communication:

- Extensive broad-band provision
- Maintenance of post services through the development of new organizing models

The suggestions also go beyond single infrastructure areas and present solutions that need to be applied in the public administration; for example:

(1) The introduction of a demographic check for planning new infrastructure

(2) Alternative finance and organisation models (e.g. revolving funds, time banks, cooperatives)

(3) Demographic coaching: professional support for those responsible in communes and for citizens relating to the problems and opportunities arising from demographic change; the development of new ideas for the provision of infrastructure

(4) Support for voluntary engagement in the organization and financing of infrastructures and services

(5) The development of small and middle-sized towns as anchors of infrastructural provision

The majority of the aforementioned documents and strategies do not directly deal with the problem of less and less public funds for the provision with infrastructures and services. In the *Demografiestrategie der Bundesregierung* the consolidation of public budgets is being recommended.

Summary policies dealing with demographic changes in Germany at Federal State level:

There are several policies on the federal state level of Thuringia and Bavaria dealing with demographic change, most of them published by the Federal Ministries. Besides analysing the development, the current status and projections of demographic data, practical recommendations on how to adapt different infrastructures and services and administration to demographic change are given. The focus is not only put on specific infrastructure and service fields but also on the consequences demographic change might have for other fields like economy and employment, finances, climate change, administration and education.

The broadest publication on the federal level is Daseinsvorsorge im demografischen Wandel zukunftsfähig gestalten, which is the result of cooperation between the Federal Government and the Federal States of Eastern Germany. Like on the national level, suggestions, measures and guidelines are formulated on how to adapt fields like employment, education, health services and administration to demographic change. Furthermore strategic aims are formulated on the basis of guidelines. The recommended procedures address local authorities, companies and the civil society.

The aspect of less and less public finances and thus the application of alternative financing models are addressed in some publications (e.g. Landesentwicklungsplan 2025 Thüringen, Demografietest Sachsen).
The following section bundles strategic documents and initiatives that have been introduced in the two Federal States that are involved in the ADAPT2DC project.

Thuringia:

- The Thuringian Ministry for Building, Regional Development and Infrastructure (TMBLV) established a Coordinating Council in 2004 that is responsible for demographic change. This group develops projects and initiatives that address the consequences of demographic change.

- The establishment of a Service Agency of Demographic Change in 2011 by the TMBLV and the Foundation Schloss Ettersburg: a service agency for politicians, the administration, the economy, associations and citizens who are concerned with questions arising from demographic change.
- The Thuringian Demographic Conference
- The Thuringian Strategy for Sustainability bundles the guiding principles and focal points. These are, amongst others, related to the adaptation of infrastructure to demographic change in Thuringia. Connections to other fields like support for families and employment in order to attract young people to move to Thuringia; support for the integration of migrants coming from abroad to Thuringia and supporting tolerance amongst the population.
- Reports on Demography (published since 2006): These reports are functioning as guidelines for practitioners from the economy, administration, politics and associations who are dealing with the provision of technical and social infrastructure and services.
- Landesentwicklungsplan 2025 Thüringen (State Development Plan 2025) presents the guiding principles for regional planning. Amongst them are the creation of equal (but not identical) living conditions in all areas of Thuringia; demand-based provision of public infrastructure; the application of alternative financing and organization models and the decentralised concentration of public infrastructure. A specific focus is put on rural regions that shall be supported as natural-resource and culturally important areas. All measures for regional planning shall consider demographic change and its consequences for the provision of infrastructure. Differentiated solutions for different spatial entities must be developed (small towns, cities, rural regions). The principle of central places that function as anchor points in the regions must be maintained. The plan stresses that these central places must be connected with rural regions which means that the development of a functioning public/private transport system is fundamental.
- Thuringian Future Prize: Since 2012 this prize is awarded every second year to initiatives and projects that are dealing in an innovative way with demographic change.
- The development of qualified employees needed in Thuringia: Published since 2008 every second year, the studies inform about the number of employees required in different sectors and give recommendations for the improvement of the situation.
- Representative for the Coexistence of Generations (since 2010): He/she shall support the dialogue between generations and give advice concerning demographic change and the coexistence of generations to political stakeholders.

Bavaria:

- Aktionsplan demografischer Wandel (action plan): The plan presents measures in different fields that have to be taken in order to tackle the issue of demographic change in Bavaria. Amongst them is the financial support for the economy and communes through reform of the redistribution of income between the national, Federal State and communal level; the strengthening of inter-communal cooperation and regional economic promotion; support for education, families and infrastructure through research funding; extended child-care services in rural areas; support for multi-generational projects; promoting the settling of family doctors in rural areas; the development of innovative solutions for reducing the costs of providing water and sewage water treatment and broad-band in all rural areas.
- Landesentwicklungsprogramm 2006 (State Development Programme): This is the central document for the spatial development of Bavaria, with a special focus on the development of rural regions. It is a guideline for the spatial development of the Free State of Bavaria. Pivotal stipulations are formulated as aims, amongst them are: maintaining/preserving and

establishing living and working conditions of equal value in all parts of the country, devoting special attention to rural areas and the introduction of primacy principles for rural areas lacking in infrastructure, and the provision of basic infrastructure, such as day-care facilities for children or schools, even during a decrease in capacity utilization. The primacy principle in support of rural areas which are lacking in infrastructure is unique nationwide. It is essential for the supply of infrastructure, as well as for the classification of assisted areas, the implementation of assistance measures and the allocation of funds.

- Generationenfreundliche Zukunft (Generation-friendly Future): The brochure bundles relevant issues for planning and policy practice that are related to demographic change in the form of questions. It shows how the issue of demographic change is related to other policy fields like family policy (the issue of child- and family-friendly communes), senior policy (care for the elderly, living at home), education and employment (the integration of employees with different backgrounds, like migrants and lone parents; life-long learning), civic participation (a framework in communes for the support of civic participation), inter-generational cooperation (which networks and projects are available in communes) and gender equality (which measures have been introduced in order to tackle this issue). The brochure also mentions cross-cutting issues for coping with demographic change like inter-communal cooperation, public transport and support for socially disadvantaged families.

Summary policies dealing with demographic changes in Germany at the regional level:

The level below the Federal States level, the regional level, also addresses the issue of demographic change. An important institution in Germany on the regional level is the regional planning association. Due to the involvement of two pilot regions in the ADAPT2DC project, the regional planning associations of Oberfranken-Ost (Bavaria) and Ostthüringen (Thuringia) are particularly relevant. They formulated Regionalpläne (Regional Development Plans) that present central aims and measures for the planning region.

The Regional Development Plan Oberfranken-Ost addresses the aspect of demographic change widely: the formulated aims and measures refer to the consequences that demographic change (already) has for the region. The plan is divided into two sections: the first is interdisciplinary and refers to general aims (the creation and securing of equal living and working conditions), aims concerning the population and the economy (maintaining population numbers, attracting new inhabitants) and the spatial structure (improving public transport). The second section bundles aims and measures for single infrastructures like water and energy provision or health care. In general the focus is on improving the provision of infrastructures and services and the creation of equal living conditions comparable to other Bavarian regions. The aspect of cost saving is mentioned, but no concrete or direct options are presented.

The mentioned planning documents refer to two aspects: the creation of equal living conditions in the regions and the concept of central places. The first has been integrated into the constitution of Germany (article 72) and has thus shaped national, federal and regional policies. However, different authors (Back 2006, Maretzke 2011) have stressed the need to introduce a new paradigm within regional planning that does not follow the aim of equal living conditions but rather the provision of basic supplies. The latter relates to the concept of central places, a system of spatial planning which, based on the size groups of inhabitants, determines which tasks the communes have to fulfil (Bartl 2011: 86). It functions as an instrument for regional stabilisation and directs the (de)-concentration of infrastructures and services. The concept is neither directed towards growth nor shrinkage; it enables adaptation in both directions. Zeck stresses that it is a question whether this concept needs to be adapted to the new demographic context (Zeck 2003).

References - national level:

- BMVBS/BBSR/BBR (Hrsg.) (2011): Regionalstrategie Daseinsvorsorge - Denkanstöße für die Praxis, *http://www.region-schafft-zukunft.de/cln_032/nn_253258/DE/ProjekteNordfriesland/RegionalstrategieDaseinsvorsorge/Regionalstrategie/LeitfadenRegionalstartegie,templateId=raw,property=publicationFile.pdf/LeitfadenRegionalstartegie.pdf*
- Beauftragter der Bundesregierung für die Neuen Bundesländer (Hrsg.) (2011): Daseinsvorsorge im demografischen Wandel zukunftsfähig gestalten. Handlungskonzept zur Sicherung der privaten und öffentlichen Infrastruktur in vom demografischen Wandel besonders betroffenen ländlichen Räumen, *http://www.bmi.bund.de/SharedDocs/Downloads/BODL/Themen/Demografie/daseinsvorsorge1.pdf?__blob=publicationFile*
- Bundesministerium des Inneren (Hrsg.) (2011): Demografiebericht. Bericht der Bundesregierung zur demografischen Lage und künftigen Entwicklung des Landes, *http://www.bmi.bund.de/DE/Themen/PolitikGesellschaft/DemographEntwicklung/Demografiebericht/demografiebericht_node.html*
- Bundesministerium des Inneren (2012): Jedes Alter zählt. Demografiestrategie der Bundesregierung, *http://www.demografiestrategie.de/DGS/DE/Demografiestrategie/demografiestrategie_node.html*

References- national level:

- Thüringer Staatskanzlei (2011): Die Thüringer Nachhaltigkeitsstrategie, *http://www.nachhaltigkeitsbeirat-thueringen.de/images/pdf/informationsmaterial/thueringer_nachhaltigkeitsstrategie2011.pdf*
- Beauftragter der Bundesregierung für die Neuen Bundesländer (Hrsg.) (2011): Daseinsvorsorge im demografischen Wandel zukunftsfähig gestalten. Handlungskonzept zur Sicherung der privaten und öffentlichen Infrastruktur in vom demografischen Wandel besonders betroffenen ländlichen Räumen, S. 64-70, *http://www.bmi.bund.de/SharedDocs/Downloads/BODL/Themen/Demografie/daseinsvorsorge1.pdf?__blob=publicationFile*
- Thüringer Ministerium für Bau, Landesentwicklung und Verkehr (2012): Zweiter Demografiebericht
  Teil1: Population Development of Thuringia and its Regions
  Teil 2: Challenges and Approaches to secure selected issues of services of general interest
  Teil 3: Special part
  http://www.thueringen.de/th9/tmblv/landesentwicklung/demografisch/bericht/
- Bayerisches Staatsministeriuim für Wirtschaft, Infrastruktur, Verkehr und Technologie (2011): Aufbruch Bayern. Aktionsplan demografischer Wandel, *http://www.laendlicherraum.bayern.de/fileadmin/Dokumente/PDF/Demographischer_Wandel/Aktionsplan_demographischer_Wandel.pdf*
- Bayerisches Staatsministeriuim für Wirtschaft, Infrastruktur, Verkehr und Technologie (2006): Landesentwicklungsprogramm Bayern 2006, *http://www.laendlicherraum.bayern.de/themen/landesentwicklungs-programm.html*
- Bayerisches Staatsministerium für Arbeit und Sozialordnung, Familie und Frauen (2012): Generationenfreundliche Zukunft. 30 Fragen zu kommunalen Demografiestrategien aus dem Sozialbereich, *http://www.verwaltung.bayern.de/egov-portlets/xview/Anlage/4016121/Generationenfreundliche%20Zukunft.pdf*

References- regional level:

- Regionaler Planungsverband Oberfranken-Ost (1987) : Regionalplan, *http://www.oberfranken-ost.de/deu/m3/index.html, last visited: 18.09.2012*
- Regionaler Planungsverband Ostthüringen (2012): Regionalplan Ostthüringen, *http://www.regionalplanung.thueringen.de/rpg/ost/regionalplan/rrop/voe/, last visited: 19.09.2012*
- Back, Hans-Jürgen (2006): Allgemeine Befunde - Konsequenzen für die räumliche Planung, in: Back, Hans-Jürgen (Hrsg.): Konsequenzen aus der demographischen Entwicklung für Regionen in Nordwestdeutschland, Hannover: Verlag der ARL, S. 54-65
- Maretzke, Steffen (2011): Die demographischen Herausforderungen Deutschlands konzentrieren sich auf die ostdeutschen Regionen, in: Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) im Bundesamt für Bauwesen und Raumordnung (BBR) (Hrsg.): Demografische Spuren des ostdeutschen Transformationsprozesses. 20 Jahre deutsche Einheit, BBSR-Online-Publikation 03/2011, Bonn, S. 12-27
- Zeck, Hildegard (2003): Zentrale Orte als räumliches Konzept für Anpassungsstrategien, in: BBR (Hrsg.): Demographischer Wandel und Infrastruktur im ländlichen Raum - von europäischen Erfahrungen lernen, Informationen zur Raumentwicklung, Heft 12/2003, S. 725-736

4.3 Policy review: Hungary and Észak-Alföld Region

Author: ONEP, ÉARDA

Summary policies dealing with demographic change in Hungary at the national government level

In Hungary, the birth rate is typically low and decreasing, the mortality rate is high. The number of inhabitants has diminished for more than two decades; in the past 20 years, the population has diminished by approx. 5%. Forecasts assert that this tendency will continue, which highlights the importance of demographic issues. Even so, Hungary has a lack of exclusively demography-related policy papers or strategies. On the national level there are several operative policy documents and strategies that have demographic relevance but the issue is usually connected to other policy fields.

The Hungarian National Strategic Reference Framework/the New Hungary Development Plan (NHDP), 2007-2013 (2007) – The Plan has just indirect relevance to demographic changes. The NHDP focuses on raising the level of employment and establishing conditions underpinning permanent growth. The Plan highlights initiatives focusing on targeting social renewal.

New Széchenyi Plan (2011) - The economic development programme of the Hungarian government responds to the demographic challenges Hungary is facing, and ensures a growth scenario that can be sustained over the long term. The main objectives are improving Hungary's competitiveness by creating one million new jobs within ten years.

S**ocial Renewal OP (SROP/TÁMOP)** - The purpose of the SROP is to implement interventions in the programming period 2007-2013, which affect the entire population of the country. The specific objectives of the SROP: improving the alignment of labour market demand and supply; reducing regional differences in activity; promoting adaptability to changes; promoting lifelong learning; improving the state of health and ability to work; strengthening social inclusion, promoting equal opportunities.

Social Infrastructure OP (SIOP/TIOP) - SIOP focuses on the development of the physical infrastructural background of human public services. Accordingly, it involves developing the infrastructure of education and training, the health-care system, the labour market and social services.

The Széll Kálmán Plan (2011), containing Hungary's Structural Reform Programme (2011-2014)

On the basis of political decisions concerning structural reforms, a detailed action plan has been prepared with the relevant schedule and legislation in order to maintain secure fiscal positions in 2013/2014 in Hungary. The described structural changes indirectly effected the demographic situation of the country. For example: The Programme contains strategic directions, or reform conceptions, in which some critical areas (such as the system of self-governments, pensions in kind, social services, affairs of public finance, community traffic) can be improved.

Széll Kálmán 2.0 Plan (2012), containing the National Reform Programme of Hungary 2012 and the Convergence Programme of Hungary 2012

Continuing the above-mentioned Structural Reform Programme 2011-2014/ Széll Kálmán Plan, the Széll Kálmán Plan 2.0 implements further steps to secure fiscal sustainability for Hungary. The Programme focuses on the tackling of unemployment and the social consequences of the crisis, such as making significant efforts to increase the employment of disadvantaged groups. Indirect demographic relevance has the following reforms of the document:

- Reforming the health-care system (reorganization of health care according to the Semmelweis Plan – among others to make specialised outpatient and inpatient care a state responsibility (instead of local governments), to coordinate the developments planned in the health sector and the social sector).

- Reforming the education system (among others to strengthen a practice-oriented learning and training, to organise public education better adjusted for actual labour market needs. In higher education, government roles will be reconsidered in size and nature with a view to a smaller share to be undertaken, reduction of the number of student posts with public financing.)
- Reforming the labour market (the main goal is to channel people who are able to work but are presently inactive back into the labour market by means of more efficient labour market incentives and regulations as well as a more targeted labour market, training or social subsidies)
- Reforming elderly care and active ageing (efforts are made to push back various forms of early retirement in addition to the separation of insurance, solidarity and social elements of the existing system from one another. The main goal of realigning the social protection system is to offer working opportunities rather than social aid to people long-term out of work.)
- Modernisation of public administration

The National Spatial Development Concept (NSDC/Országos Területfejlesztési Koncepció) (2005)

The NSDC defines Hungary's spatial vision, the comprehensive, long-term spatial policy objectives necessary for achieving that vision, and medium-term spatial objectives, outlines spatial policy priorities, sets out the conditions for institutions and instruments of policy implementation, and contains conceptual objectives for the individual regions. The Concept has a strong focus on the socio-economic perspective. Next to other things it deals with: attracting investment to ensure a high level of job creation in regions struggling with concerns about employment; and improving the ability of hamlets and geographically peripheral areas to retain their populations and attract new residents. The document highlights the importance for the successful implementation of decentralization that the developmental resources of the towns/villages are also increased so that that they control their own developmental resources.

National Development 2020 (under public consultation till 31 Jan 2013, expected approval around April 2013) / National Development and Territorial Development Concept of Hungary

Renewal of the above-mentioned National Spatial Development Concept (2005). The new strategy also meets the challenges of the programming period of 2014-2020. The concept analyses the current demographic situation of Hungary in an international context and projects the national demographic scenario till 2021. It also deals with the expected demographic effects of the above-mentioned structural reforms. The Concept defines integrated actions to solve demography-related problems on the national level. For example, it emphasises the importance of strengthening local communities.

New baby boom discussion paper (2012)

The discussion paper was implemented by the so-called 'Population Roundtable', which is an important platform for demographic issues in Hungary. The Roundtable was founded in 2009 by the Hungarian Academy of Science in order to advance the demographic situation in Hungary. Eight working groups from different spheres (scientific, NGOs, church, business, etc.) are working monthly together to elaborate proposals to increase the number of births in Hungary. The proposals are sent to the Hungarian Government, where the preparation process of family-related legislation is based. The most important proposals of the Roundtable were published under the title **'The new baby-boom – the parenting revolution of the Hungarian middle class'.** The main topics of the documents are the following: flexible working hours, the creation of a flexible childcare system, transferability between subsidies given by cash and services supporting childraising, family-friendly workplaces, local governments, higher education, housing allowances for youth, etc.

The National Rural Development Strategy 2012-2020/ Darányi Ignác Plan (2011)

The Strategy sets out the objectives and basic principles of rural development's focuses on sustainability

and the values of rural life. One of the five strategic objectives of the Strategy is 'The Strengthening of Rural Communities, Improving the Quality of Life of the Rural Population'. Among others it defines actions to stop migration out of rural areas and contains incentives for young people to take up farming, undertake a rural life and remain in rural settlements (in the framework of the 'Demographic Land Programme' [Demográfiai földprogram] it supports young farmers with preferential, permanent [25 to 50-year] leases of rural infields), and it restores the close relationship between the city and its rural surroundings.

Summary policies dealing with demographic change at the regional level - Észak-Alföld Region

In the Észak-Alföld Region there are several regional development documents that have relevancy in the field of demographic change. The **Észak-Alföld Regional Development Strategy** has five specific aims, and some of its priorities are relevant to the field of demographic changes. The most important goal according to social issues is the fifty specific aim of the development strategy, which endeavours to decrease regional differences, strengthen social cohesion and increase employment in the region.

According to the **Észak-Alföld Region Operational Programme** regarding the issue of human resources, one of the priorities of the operational programme is the development of human infrastructure. Human resources development requires the consistent education conforming to the appropriate standards, starting from the nursery-school level. In this field the regional optimisation and development of public services of a personal nature plays a special role. The priority axis favous supporting the development of nursery and lower levels of primary education near the home. One of the operational objectives of the priority axis is the improvement of the quality of public services in settlements within the region.

All three counties in the Észak-Alföld Region have their own Regional Development Concept. All these concepts are currently being restructured but the preliminary assessments of the current situation are available for public consultation. The **Regional Development Concept of Jász-Nagykun-Szolnok County** presents potential development possibilities in reference to demographic figures and with a focus on improving the situation of the local population and among other things supports innovative cooperative initiatives between municipalities, institutions, and NGOs.]. The assessment of the current situation in the **Regional Development Concept of Hajdú-Bihar County** states that to improve the human capital in the country the development of education is planned and the population-retention of the county will be increased by focusing on employment centres in rural areas. In the **Regional Development Concept of Szabolcs-Szatmár-Bereg County** however the expansion of employment is one of the planned interventions, while the role of and thus support of day-care services is neglected.

Besides the aforementioned documents on regional development there is also the **Semigra Case Study Report of the Észak-Alföld Region** which was elaborated within the framework of the ESPON 2013 Programme. This case study report concluded that without a dramatic rethinking of national demographic policy, the negative effects of the migration being experienced today cannot be overcome. The most important fields of development are job creation, education, youth policy, and village and rural development, and among the latter the importance of the early development of skills, starting with kindergarten-age children, is emphasised.

References

National level:

- Hungarian National Strategic Reference Framework/ the New Hungary Development Plan (NHDP), 2007-2013 (2007)
  http://www.nfu.hu/the_new_hungary_development_plan
- New Széchenyi Plan (2011)
  http://ujszechenyiterv.gov.hu/strategy
- Social Renewal OP (SROP/TÁMOP)
  http://www.nfu.hu/doc/357
- Social Infrastructure OP (SIOP/TIOP)
  http://www.nfu.hu/doc/358
- The National Spatial Development Concept (NSDC/Országos Területfejlesztési Koncepció)) (2005)
  http://www.vati.hu/static/otk/eng/nsdc2005eng.pdf
- Széll Kálmán Plan (2011), containing Hungary's Structural Reform Programme (2011-2014)
  http://www.kormany.hu/download/b/23/20000/Hungary%27s%20Structural%20Reform.pdf
- *Széll Kálmán 2.0 Plan (2012), containing the National Reform Programme of Hungary 2012 and the Convergence Programme of Hungary 2012*
  http://ec.europa.eu/europe2020/pdf/nd/nrp2012_hungary_en.pdf
- *National Development 2020 (under public consultation till 31 Jan 2013, expected approval around April 2013) / National Development and Territorial Development Concept of Hungary*
  http://www.nth.gov.hu/files/download_files/504/oftk_tarsadalmi_egyeztetes_1217.pdf
- *New baby boom discussion paper (2012)*
  http://www.kormany.hu/download/b/dc/80000/%C3%9Aj%20baby%20boom20120509.pdf (HU)
- *National Rural Development Strategy / NemzetiVidékstratégia2012-2020/ Darányi Ignác Plan (2011)*
  http://www.terport.hu/webfm_send/2767 (HU)

Regional level:

- *Észak-Alföld Regional Development Strategy 2007-2013.*
  http://www.eszakalfold.hu/userfiles/hun/fejlesztesi_dokumentumok/strategia/EAR_Strategia_0804.pdf__20080421_092113.pdf
- *Észak-Alföld Region Operational Programme 2007-2013.*
  http://www.eszakalfold.hu/userfiles/hun/fejlesztesi_dokumentumok/eAOP/EAOP_adopted_en.pdf__20070813_104816.pdf
- *Regional Development Concept of Jász-Nagykun-Szolnok County,*
  http://www.jnszm.hu/feltolt/File/tfi/tanacs/koncepcio_01_vizsgalat.pdf
- *Regional Development Concept of Hajdú-Bihar County*
  http://www.hbmo.hu/upload/68/1328/03A_Hajdu-BiharmegyeTeroletfejlesztesikoncepciojatmegalapozofelaroertekelovizsgalat_munkanyaga.pdf
- *Regional Development Concept of Szabolcs-Szatmár-Bereg County 2012*
  http://www.szszbmo.hu/dokumentumtar/doc_download/2520-a-szszb-megyei-terueletfejlesztesi-koncepciot-megalapozo-helyzetfeltaro-ertekel-dok-es-mellekletei
- *Espon-Semigra Case Study Report: Észak-Alföld Region Version 28 March 2012*
  http://www.espon.eu/export/sites/default/Documents/Projects/TargetedAnalyses/SEMIGRA/SEMIGRA_Draft-Final-Report_Annex_2D_Eszak_Alfoeld.pdf

4.4 Policy review: Czechia and the Ústí Region

Author: ISCAS

Policies at the national level

On the national level the main authority concerning ageing is the Government Council for Seniors and Ageing of the Population, which was created in 2006 as a government advisory board for this topic. The Council tries to create conditions for a healthy, active and dignified old age in Czechia and for the active engagement of older people in the economic and social development of society. The Council suggests conceptual and legislative solutions of the significant questions concerning the life of older people and the ageing of the population and initiates partnership between public authorities, social partners and civil society organizations. It also reviews and evaluates EU documents and documents created by other international institutions dealing with this topic and consequently the Council submits suggestions for their implementation in specific policies to the government. The Council has 28 members and it falls under the Ministry of Labour and Social Affairs.

The Government Council for Seniors and the Ageing of the Population initiated the creation and ratification of the National Programme of Preparation for Ageing (Quality of Life in Old Age) for years 2003-2007 and 2008-2012 (*http://www.mpsv.cz/cs/2857*). The programme posits that it is necessary to focus on these strategic themes and priorities to improve the quality of life in older age and to successfully address the challenges connected with demographic change – active ageing, an atmosphere and community open to old age, the improvement of health and health care in old age, support for the family and social workers, and support for the participation of older people in society, and human rights protection. These priorities must be supported horizontally across sectors and at all levels of public administration. One of the goals specifically mentioned is to decrease social and regional differences in access to public services.

The Ministry of Agriculture has a Programme for Country Development which also tackles ageing and population shrinking. It aims to support farmers in disadvantaged areas but also to promote the restoration and development of villages, public infrastructure and services; it promotes establishing new companies in the countryside and their development, and promotes the preservation and development of village heritage and tourism. The other goal is to implement regional development strategies. The promotion of the projects is mentioned in the Green Paper 2010.

The Ministry of Regional Development's strategy of regional development defines decreasing unfavourable regional differences and the development of specific problematic regions as its main goals. Financial resources should target modernization and diversification of the economic structure of these regions hit hard by economic restructuring, the improvement of economic efficiency of economically weak regions, the development of the labour market in regions with high unemployment, and the economic diversification of rural regions and peripheral regions lying outside development axes. The strategy also defines which regions can gain support from certain development programs.. One of the main goals is to halt tendencies towards economic underdevelopment and the shrinking and depopulating of small municipalities.

Policies at the regional level

All the regions have their own programme documents concerning the future development of the region and strategies for this development. Most of the regions are aware of demographic trends connected with population ageing and depopulation, mostly in remote areas. However, only some regions consider ageing a significant problem that needs to be tackled with specific policies. In their programme documents some of the regions mention selective out-migration from the countryside connected with the transformation of the economic base and problems with civic amenities and public services in smaller municipalities.

The goal of policies at the regional level is stabilization of the population in the countryside, maintaining housing in the smaller municipalities and maintaining the network of elementary schools in the countryside. Among activities designed to stop the depopulation of remote areas the following projects are mentioned:

improving transport infrastructure and above all transport services to nearby centres where services and jobs are concentrated, promoting housing and projects for the revitalization and modernization of buildings used for public services in smaller municipalities. Other significant aims commonly include the promotion of employment and job creation in the countryside, the development of IT infrastructure for businesspeople in the countryside, the promotion of rural tourism and the use active employment policies. Another aims is to widen the portfolio of economic activities for decreasing the level of countryside's dependence on cities and suburban zones. Some regions also mention the need to increase the competitiveness of agriculture and landscape management as a stabilizing element of the countryside. It is also necessary in all areas to ensure the provision of good-quality health care and social services accommodating demographic changes. Some projects focusing on the promotion of local communities and civic initiatives.

References:

- Program rozvoje územního obvodu Středočeského kraje
- Program rozvoje Jihočeského kraje
- aktualizovaná verze Programu rozvoje Plzeňského kraje
- Program rozvoje Karlovarského kraje
- Strategie udržitelného rozvoje Ústeckého kraje
- Strategie udržitelného rozvoje Libereckého kraje
- Strategie rozvoje Královéhradeckého kraje
- Program rozvoje Pardubického kraje
- Program rozvoje kraje Vysočina
- Strategický plán hl. m. Prahy
- Program rozvoje Jihomoravského kraje
- Strategie rozvoje Zlínského kraje
- Program rozvoje Moravskoslezského kraje
- Program rozvoje územního obvodu Olomouckého kraje
- Regionální operační programy jednotlivých regionů soudržnosti

Policies in the Ústí Region and the Vejprty Region pilot area

All the programmes and analytical documents concerning the problems of the Ústí Region mention the demographic changes in the region but population decrease is not yet considered a significant problem. The Ústí Region is at present one of the youngest regions in Czechia, as is noted in the Problem Analysis of the Ústí Region, but even there it is possible to observe population ageing. This trend will deepen according to the analysis and in the Ústí Region it will be much more intensive than in other parts of Czechia due to the actual young age structure the region inherited from resettlement of the region after World War II. All the documents also point out big differences among various parts of the region. While in the big cities of the Ústí Region the decrease in the population is on a smaller scale than in other regions of Czechia, the population decrease is already observed in remote municipalities in the Ore Mountains area. Until recently the population of the region was decreasing due to natural decrease, but this has been offset by significant immigration (mainly international immigration). During the economic crisis some factories closed and unemployment rose. This led also to an increase in out-migration from the region. Mostly young and educated people from small municipalities leave for bigger cities in search for jobs.

The Development Programme of the Ústí Region mentions deepening regional differences in the quality of living conditions and poorer access to jobs and services in remote areas. One of the main priorities for the region is the development of public transport on the micro-regional level with the goal of modernizing it and consequently attracting more users. Another priority is the promotion of regional development, which in practice means projects for the embellishment of villages and for the restoration and development of the village housing, and also projects aimed at the development of information and communication technologies. The goal is to decrease unemployment through the creation of new jobs based mostly on local and regional production, the promotion of small and mid-sized enterprises, especially in the service sector, handcrafts, tourism and social services.

References:

- Účast v mezinárodním projektu YURA zaměřeném na projekty řešící demografické změny.
- Účast v mezinárodním projektu EURUFU
- Problémová analýza Ústeckého kraje. Krajský úřad: Odbor regionálního rozvoje
- Strategie rozvoje venkovských oblastí Ústeckého kraje, 2005
- Program rozvoje Ústeckého kraje 2008-2013, aktualizace 2010

4.5 Policy review: Italy, the Piedmonte Region
Author: UNCEM

Focus: Policy documents related to demographic changes and to adaptation to demographic changes at the national and regional level.

Policies at the national level

In Italy, at the national level, the basic relevant documents related to demographic changes and adaptation to them are the National Operational Programmes (NOP) edited by the Italian Ministry of Labour and Welfare, the Ministry of Education and the Ministry of University and Research jointly with the Ministry of Economic Development.

As indicated in the National Strategic Framework, the Ministry of Labour and Welfare is responsible for a two National Operational Programmes (NOP): **'System Actions - Regional competitiveness and employment' and 'Governance and system actions – Convergence'.** The objectives of these NOP are three. The first is to contribute to a balanced relationship between the regional dimension of the strategy and operations and to ensure a 'national system' of necessary actions in terms of capacity-building guidance and the monitoring and evaluation of the overall process of creating standard devices and common ties with European processes. This will involve the implementation of measures such as defining standards, developing nationally important tools, monitoring, evaluation, analysis, and knowledge on a national scale, aimed at guiding the choice of specific topics and, more generally, policies. The second is to play an active role in educational reform, training, work and public administration, adapting systems to European standards and to recommendations addressed at Italy for the implementation of the Lisbon Strategy, in particular in the area of the European strategy for employment and the construction of a system of lifelong learning. The third is to take particular care of Convergence Regions, whose systems require special attention, and provide effective and appropriate assistance and support.

The NOP strategic priorities are:

1. *Adaptability:* to help increase the adaptability of workers, enterprises and entrepreneurs and to promote organizational innovation in the workplace;
2. *Employability:* to support policies for improving access to employment, preventing unemployment, and in support of sustainable inclusion and increased participation in the labour market;
3. *Human capital:* to strengthen human capital in support of reform processes, improving the quality and interaction of education, training and work;
4. *Equal Opportunity and Non-discrimination:* to promote and to strengthen policies in support of gender equality and to combat all forms of discrimination;
5. *Institutional Capacity:* to promote and to strengthen the skills of public administration;
6. *Transnationalism:* to develop the European dimension of education, training and work;
7. *Technical Assistance:* to improve the efficiency and overall effectiveness of the ESF programme, to further operational implementation and integration with the other funds and enhance the effects on regional operational programmes and systems.

The Ministry of University and Research and the Ministry of Economic Development are responsible for the National Operational Programme (NOP) '**Competitiveness and research**'. The general objective of the NOP is to contribute to the promotion of convergence towards the EU average development through the regional advancement of the ability to produce and use research and innovation to trigger a lasting and sustainable development. The NOP priorities are: support for structural changes (including actions that, through highly selective interventions at the structural level, pursue the goal of changing production specializations); support

for innovation (through actions that tend to enhance the focus on innovation and development by companies and to change the factors of the entrepreneurial impulse to action); and technical assistance and support for activities - including all actions which increase the efficiency and effectiveness of the interventions planned and the optimization of the strategic management of the NOP.

The Education Ministry is responsible for one National Operational Programme (NOP) '**Competences for development**'. The three objectives of the NOP strategy are: to raise the levels of learning and key competences, to increase access to vocational education and training; to increase participation in educational opportunities throughout life; to strengthen, integrate and improve the quality of education, training and work and their connection to the given territory.

Policies at the regional level – the Piedmonte Region

At the Piedmonte regional level, where demographic analysis and studies on occupations suggest that the Piedmonte population is changing, one can stress that demographic change, in particular in relation to the ageing of the population and in relation to the Alpine space (with an increase in polycentric organization instead of the previous model with Torino at the centre of every spatial relation), will represent one of the most important challenges that Piedmonte will face in the next few years. This is what is expressed in the Strategic Preliminary Regional Paper 2007-2013 edited by the Regional Council (2005). According to this document, the specific objectives pertaining to demographic change concern the employment axis (increasing job market participation among the young and elderly people and among women; sustaining lifelong learning; the valorisation of elderly people, job mobility and professional careers to prevent unemployment and job precariousness) and cooperation (overcoming the problems of periphery; defining common projects of spatial management; sustaining innovative knowledge-pooling, job market integration, the exchange of experiences and competences, the creation of an integrated trans-border system). Similarly orientated is the Rural Development Programme 2007-2013 edited by the Piedmonte Regional Board. In this document, four types of areas in the region are identified: 1) urban centres, including urban and peri-urban areas: 17.6% of the land, 61.8% of the population; 2) rural areas with intensive agriculture: 17.3% of the land, 13% of the population; 3) intermediate rural areas: 22% of the land, 14.4% of the population; 4) rural areas with development problems (particularly mountain areas): 43.1% of the land, 10.8% of the population. Additionally, according to EU Council Regulation 1698/2005, LFA (Less Favourite Areas) in the Piedmonte Region are localised mostly in mountain territories. Nearly the same territory can be individuated using indicators suggested by IRENA in point number 17 (Marginalization), according to which marginal areas are those in which more than 40% of agricultural enterprises have a household head over the age of 55 and gross income equal to less than half of the regional average. In the document, four strategic axes are identified: Improving the competitiveness of the agricultural and forestry sectors; improving environment and rural areas; quality of life and rural economy diversification; Leader programme. The related objectives are the following: economically sustaining the settlement of young farmers and the structural adequacy of their enterprises (the funds are given to people under the age of 40 who are the owners of an enterprise, who have adequate professional knowledge and a strategic business plan (Axis I, Measure 112); allowances for mountain farmers (the funds are given to farmers who operate in a disadvantaged area for at least five years from the time of the first payment (Axis II, Measure 211); sustaining the creation and development of micro-enterprises (Axis III, Measure 312); incentives for tourist activities connected to the sustainable use of rural territory (Axis III, Measure 313).

The Piedmonte Region, after the promulgation of the Italian Act on Local Autonomies (L.142/90, afterwards converged in D.Lgs 267/00), had passed its previous Urbanism Act in 1997, which contained the first Regional Territorial Plan. The new Regional Territorial Plan replaces the previous one and was approved by the Regional Council and adopted in DCR 122-29783 on 21 July 2011. In this document, five strategies for the Piedmonte Region were identified: 1) territorial re-qualification and landscape valorization; 2) environmental sustainability, energy efficiency; 3) territorial integration of mobility, logistic and communication infrastructures; 4) research, innovation and economic-productive transition; and 5) human resources and institutional knowledge valorization. In relation to demographic change, the most important objectives are: the promotion of quality and the

accessibility of health benefits, approaching regional services and healthcare services to citizens; the promotion of social policies for vulnerable people, families and children and to reduce social conflict; the improvement of regional education; the development of systems for training and supporting the adaptability of workers and of policies and services to promote competitiveness and entrepreneurship; the increased efficiency, effectiveness, quality and inclusiveness of labour market institutions; the implementation of active and preventive labour market policies, with particular regard to the integration of migrants into the labour market; active ageing, self-employment and business starts; the integration of disadvantaged people into employment and fighting all forms of discrimination in the labour market; the improvement of women's access to employment and reducing gender disparities; the increased participation in learning opportunities throughout life and raising the levels of learning and knowledge and increasing networking between universities, research centres, and the technological, institutional and productive world with particular attention to the promotion of research and innovation.

It is also important to mention the Regional Landscape Plan, which was prepared to disseminate knowledge about the strategic role of the Piedmonte landscape and was officially adopted in DGR 53-11975 on 4 August 2009. This focuses mainly on territorial cohesion, polycentric development and co-planning and it has five main goals: the redevelopment of environmental protection and the enhancement of the landscape; environmental sustainability; energy efficiency; the regional integration of infrastructures of mobility, communication and logistics; research, innovation and economic restructuring; human resources and institutional skills.

References

- Ministry of Labour and Welfare, National Operational Programme – Governance and system action, Rome, 2007 (rev. 2011).
  Available at: http://www.lavoro.gov.it/lavoro/europalavoro/sezioneoperatori/programmazionefse20072013/programmioperativi/pon_gas
- Ministry of Education, National Operational Programme – Competences for the development – ESF, Rome, 2007.
  Available at: http://www.dps.tesoro.it/documentazione/QSN/docs/PO/In%20adozione/PON_Istruzione_FSE_SFC2007.pdf
- Ministry of University and Research, Ministry of Economic Development, National Operational Programme – Competitiveness and Research, Rome, 2007.
  Available at: http://www.ponricerca.it/OrganizationFolders/PonRicerca/6661.PDF
- Piedmont Regional Council, Strategic Preliminary Regional Paper 2007-2013, Turin, 2005.
  Available at: http://www.dps.tesoro.it/documentazione/QSN/docs/regionali/Piemonte_DSR.pdf
- Piedmont Regional Board, Rural Development Program 2007-2013, Turin, 2008 (rev.2009).
  Available at: http://www.regione.piemonte.it/agri/psr2007_13/documentazione/versioni.htm
- Piedmont Regional Board on Urbanism, Spatial Planning, Construction and Law, Regional Territorial Plan, Turin, 2008 (rev. 2009).
  Available at: http://www.regione.piemonte.it/sit/argomenti/pianifica/pianifica/informa/piano.htm
- Piedmont Regional Board on Territorial Politics, Regional Landscape Plan, Turin, 2009.
  Available at: http://www.regione.piemonte.it/sit/argomenti/pianifica/paesaggio/ppr.htm
- Piedmont Regional Council, Unique Text on Mountain Laws (Regional Law 2 of July, 1999, n. 16), Turin, 1999.
  Available at: http://arianna.consiglioregionale.piemonte.it/base/leggi/l1999016.html

4.6 Policy review: Poland and Małopolska Region

Author: UEK

Poland 2030

'**Poland 2030**' is a governmental initiative aimed at diagnosing and discussing the main challenges of socio-economic growth in Poland to the year 2030. It is promoted as a key report and think-tank based activity for the strategic planning of state and regional policies. The report identifies ten key challenges; challenge number 2 addresses the issue of the demographic situation. According to the report – as of 2009 – the Polish population was still relatively young. Demographic trends identified within the report however envision this situation changing. A visible decrease in the total fertility rate after 1990 is considered the key factor of the long-term negative demographic trend in Poland. Social attitudes towards starting a family and having children have directly influenced this factor. Other conditions are described as indirect.

In further analyses the report targets the issues of:

- family models, the economic behaviour of families and family fertility,
- women's employment and employability,
- the demographic and age structure of the female population in urban and rural areas,
- life expectancy and the increasing elderly population,
- migration,
- the impact of ageing and depopulation on the economy, labour market, health care and social insurance schemes.

Challenge no. 7 identified in the report addresses solidarity and cohesion. One of the key issues identified there is the strong threat of increased depopulation in the eastern regions of the country, caused by international and domestic migration, especially of women aged 20-35 years.

Poland 2030 – the Long-term Development Strategy of Poland

The '**Long-term Development Strategy of Poland'** has been built upon diagnoses and assumptions made in the "Poland 2030" initiative. Therefore it is very much aligned with the document described above.

Among others, the following strategic and operational objectives were agreed:

- Improving the demographic situation (not diminishing the professional activity of parents) and the use of demographic reserves:
  - Increasing the total fertility rate,
  - A common balanced pension system,
  - Longer employment of men and women.

Positive net migrations are indirectly targeted by the strategy. This issue is not, however, clearly linked to specific territories affected by the threat of depopulation.

The Foundations of Population Policy in Poland 2012

The document 'Foundations of Population Policy in Poland 2012' is a policy project presented by the Governmental Population Board (GPB). The GBP is a support body for the Prime Minister and therefore the document is not a part of official legislation. The document updates former policy (2004) and reflects upon up-to-date issues including the European perspective and social trends.

The document aims to set up a strategic agenda to address the societal, economic and political conditions of demographic processes in Poland. It focuses on the national (state) perspective, but it also calls for governance mechanisms such as multi-level public and wide-range private involvement.

The state policy presented in the document can be summed up as follows:

- to target the process of family formation and families' living conditions by focusing on fertility, health and migrations,
- to use any available measures of national social and economic policy to support this,
- to operate at the national and lower territorial levels, hence to involve as many non-governmental (civic, social) actors as possible.

Therefore, the policy pinpoints the following fields of strategic interest:

- labour adaptability and entrepreneurial attitudes,
- social security and insurance,
- real estate,
- health prevention and treatment,
- education.

There are four strategic goals described in the document that can be summed up as follows:

- to create sound conditions for families (support for marriage and procreation),
- to create sound conditions for integration into an ageing society (support for the elderly, the excluded and disabled people),
- to improve health conditions and reduce the death rate,
- to influence migration.

The goals are further translated into operational activities and include practical measures addressing all the above-mentioned strategic fields of interest. Respective actors and sources of funding are presented. The document offers a set of evaluation/monitoring indicators.

Based on national statistic and EUROSTAT data as well as several documents from experts the document thoroughly diagnoses current and projected demographic changes, labour income and pension schemes, ageing and migration processes in Poland.

Strategy of Human Capital Development

The document 'Strategy of Human Capital Development' is a governmental project promoted by the Prime Minister's Team of Experts as one of nine supportive strategic documents to facilitate the complex implementation of national development strategies (long- and mid-term strategies). The document naturally refers to the Europe 2020 strategy.

The tools are priority oriented and therefore they target particular challenges but their influence should be noticed more horizontally. For example:

- Higher availability and quality of elementary education (kindergartens) in villages. The solutions offered for implementation include new and flexible institutional arrangements and financial support for communities. The economic activity of young parents can thus also be supported.
- Support of territorial mobility by means of a housing policy that focuses on the economic activity of people, parenthood and life-long learning. The residential rental market has been identified as limited in cities. The solutions offered for implementation include new regulation schemes designed to expand the residential rental market, support for rental community housing, and the pursuit of joint development housing formulas.
- The extension of the effective age of economic activity 'deactivation' targeting the elderly. The huge potential of knowledge and experience possessed by early retirees could be lost and the cost of pension schemes could rise dramatically as a result of depopulation. Thus, 50+ programmes and other employment mobilization schemes can be of significant value with respect to depopulation and the ageing of society.
- Higher availability and quality of medical support for elderly people. The shortage of quallifed medical personnel and the increasing number of 60+ people make medical treatment more costly and reduce the potential of activity among the elderly. Higher qualifications and more geriatrists are needed and relevant educational programmes should be implemented into medical studies.

The strategy offers a total of 64 tools with a clear intention to challenge social trends, tools such as flexibility and learning adaptability, job mobility, depopulation and ageing, and various types of migration processes.

National Regional Development Strategy

The 'National Regional Development Strategy' (201 pages, approved by the government in July 2010) formulates three strategic objectives for state regional policy. Objective no. 2 – strengthening territorial cohesion and countering the marginalisation of problem areas – is partly focused on issues relating to depopulation and demographic change.

As it could be quoted from the strategy: due to fact that numerous territories are particularly challenged by depopulation caused by ageing, migrations or negative relations between birth and deaths indexes, it is of critical importance to:

- plan investments in infrastructures and public services in a manner relevant to the expected number of future customers / beneficiaries,
- support urbanisation processes,
- put more efforts into activities related to human capital development.

It is strongly stressed in the strategy that rural areas and Eastern regions of the country are 'locked-in' in a situation in which economic underdevelopment and poor public service not only influence family models but also prompt young people to migrate outside the area.

There are no direct expressis verbis objectives or instruments in the 'National Regional Development Strategy' that directly address demographic change and depopulation. These issues seem to be addressed horizontally across the document as a whole under various policy propositions.

Spatial Development Perspective – Poland 2030

The 'Spatial Development Perspective of Poland to 2030' reflects the findings of the aforementioned documents. Like the 'National Regional Development Strategy', demographic change and depopulation seem to be addressed horizontally across the document as a whole in the framework of various recommendations. In other words the 'Spatial Development Perspective' proposes indirect actions relating to demographic issues rather than offering a package of policy instruments towards them. The main finding of the 'Spatial Development Perspective' pertaining to demography refers to the expected strengthening of metropolitan areas, while surroundings (especially rural and nature preservation areas) will lag behind, affected by the migration of young people and a decreasing fertility rate.

Strategy of Social Policy for 2007-2013

The document 'Strategy of Social Policy for 2007-2013' was adopted by the Government as an official document for the National Development Plan 2007-2013. The Ministry of Social Policy was the promoter of the document. The strategy is a response to EU legislation and strategic actions and therefore has been prepared according to the assumptions of the European Social Model, including state responsibility, social and societal human rights, multi-sectorial and multi-level policy, demographic challenges and trends. It also deals with the national policy framework including documents focusing on social integration, civic society, education, culture and youth.

The state policy presented in the document can be summed up as follows:

- to target the process of developing an integrated state policy,
- to uphold the social rights of all the citizens, improve the conditions of families and support groups at risk of exclusion,
- to operate via citizens' governance.

Therefore, the policy pinpoints the following strategic goals/priorities:

- sound conditions for families and support for youth education and development,
- an active social policy enabling social activity and integration],
- the integration of disabled people,
- a support system for people aged 65+,
- the mobilisation of local partners,
- a public-private partnership formula for social services development,
- the social and labour integration of immigrants.

The goals are further translated into operational activities and include practical measures. The document comprehensively diagnoses current and projected demographic changes, social spending for 2005-2020, and the financial consequences and implementation plans for the proposed policy. It diagnoses territorial and social disparities and their influence on education, health, housing, culture and transportation.

Regional level - Challenges of Małopolska in the Context of an Ageing Population

Małopolska Region (a pilot region in Poland) is strongly focused on issues of demographic change. The regional development strategy calls for an array of activities concerning services dedicated to senior citizens, with the idea of promoting a 'silver economy'. One of the key strategic activities defined for the region is the implementation of a regional strategy relating to an ageing society.

In 2010 Małopolska published a strategic document delivered under the INTERREG IVC project 'PEOPLE Innovation for Societal Change' entitled 'Challenges of Małopolska in the Context of an Ageing Population'. The starting point of the document is similar to the national-level policy documents, i.e. it states that the current demographic situation is not bad, but prospects for the future are not so optimistic.

The document tackles the issues of:

- needs related to health care and long-term care for elderly people,
- the needs and potential of Małopolska in the area of health and outdoor activities related to tourism,
- the needs of elderly people related to living conditions,
- the educational and social potential of Małopolska,
- the cultural and touristic potential of Małopolska,
- the economic potential of Małopolska.

The final part of the document is devoted to comprehensive policy recommendations towards strengthening the 'silver economy' in Małopolska. The proposed approach focuses on improving regional resources. As a consequence the recommendations are split according to a typology of 12 kinds of resources and some (1-8) linked policy measures or projects. Altogether 34 policy measures / projects are listed. Moreover, 7 key regional investment projects are proposed as well as a draft dissemination plan.

References

- Raport Polska 2030, Kancelaria Prezesa Rady Ministrów, Zespół Doradców Strategicznych Prezesa Rady Ministrów, Warszawa, 2009
- Długookresowa strategia rozwoju kraju. Polska 2030. Trzecia fala nowoczesności. Kancelaria Prezesa Rady Ministrów, Warszawa, listopad 2011
- Założenia polityki ludnościowej Polski 2012, Rządowa Rada Ludnościowa, Warszawa, listopad 2012
- Strategia rozwoju kapitału ludzkiego, Zespół Doradców Strategicznych Prezesa Rady Ministrów, Warszawa, lipiec 2012
- Krajowa Strategia Rozwoju Regionalnego 2010-2020, Ministerstwo Rozwoju Regionalnego, Warszawa, lipiec 2010
- Koncepcja Zagospodarowania Przestrzennego Kraju 2030, Ministerstwo Rozwoju Regionalnego, Warszawa, 2012
- Strategia polityki społecznej na lata 2007-2013, Ministerstwo Polityki Społecznej, Warszawa, wrzesień 2005
- Wyzwania Małopolski w kontekście starzenia się społeczeństwa. Podejście strategiczne, Małopolskie Studia Regionalne, Nr 2-3/19-20/2010, Urząd Marzałkowski Województwa Małopolskiego, Kraków, październik 2010

4.7 Policy review: Slovenia, Podravje Region and Maribor

Author: Vlasta Vodeb, Franc Zakrajšek (UPI Slovenia)

Summary of policy documents at the national level

Slovenia has been faced with demographic changes that have already affected the functioning of the Slovenian economy. As other European countries the Republic of Slovenia has been adopting several documents in the last years to cope with the negative effects of demographic changes. To combat the undoubted ageing of the population, a strong bias towards the promotion of active ageing can be found. Priority areas in the documents and measures and other activities given special attention and support include: integrating the third generation in employment, assuring adequate pensions, introducing insurance for long-term care and social security programmes in the field of ageing, supporting preventive health programmes, promoting and supporting life-long learning, accessible transport, housing and financing research on ageing.

The Development Strategy of Slovenia (2005) considers demographic changes and the issue of shrinking within five development priorities, such as economic competitiveness and faster economic growth, the creation and use of knowledge for economic development and quality employment, an efficient and less costly state, a modern social state and increased employment, the interconnectivity of measures aimed at achieving sustainable development.

The National Development Plan of Slovenia 2007-2013 (2007) is primarily based on the Development Strategy of Slovenia. Its objectives relating to demographic change are reflected in proposed measures to increase economic, environmental and social capital and to increase efficiency in terms of economic competitiveness and quality of life.

Improving the welfare of Slovenian inhabitants by supporting economic growth and job creation, strengthening human capital, and ensuring balanced regional development is the main goal of the **National Strategic Reference Framework 2007-2013 (2007)**. To achieve these objectives emphasis is also placed on improving institutional and administrative competency, especially in the public sector, which is essential in order to accelerate economic growth in Slovenia.

Population ageing is one of the largest economic and social challenges in Slovenia. The Slovenian government undertakes measures to alleviate the negative consequences of ageing, especially by adopting **active ageing policies** regarding economic growth and productivity.

A comprehensive strategy for dealing with ageing at the national level is the **Strategy for the Protection of Older People by 2010 – Solidarity, Coexistence and Quality Ageing (2006).** The strategy has been adopted by the Government of the Republic of Slovenia for the purpose of creating conditions conducive to solidarity among generations and quality ageing.

The strategic document **Measures to Promote Active Ageing** (2010) is the action programme, issued to upgrade the Strategy for the Protection of Older People by 2010. The measures aim to increase the activity and employment rate of the older Slovenian population and contain mechanisms in support of the activation of older people in the labour market, education and training options for older employed and unemployed persons, awareness-raising campaigns to dispel ageing stereotypes, increasing health and safety at work and improving public employment services. Tailor-made job search assistance and social activation as preconditions for the employability of older people take centre stage. A new Strategy for Quality Ageing, Solidarity and Coexistence of Generations in Slovenia by 2020 is under preparation.

Several other national documents indirectly influence demographic policies, such as the Act on Encouraging Harmonised Regional Development (2005), the Programme of Reforms to Implement the Lisbon Strategy in Slovenia (2005), the Regional Development strategy of Slovenia (2001), the Spatial Development of Slovenia (2004), the National Strategic Plan for Rural Development 2007-2013 (2006), the Resolution on National Social

Services for the Period 2006-2010 (2006).

The National Development Programme for Slovenia 2007-2013 (2007) outlines the basic framework for regional development programmes.

Regional level – Podravje Region and the City of Maribor

The Regional Development Program for Podravje Statistical Region 2007-2013 is an essential programme and implementation document and it reveals that demographic trends in Podravje Region and Maribor are similar as elsewhere in Slovenia. The 41 municipalities included in the Podravska Statistical Region are among those who are experiencing above-average population shrinkage within Slovenia. Policies and national measures are taken into consideration at the municipal level in different areas of intervention, such as the economy, traffic, the environment, education and quality of life.

On the regional level Podravje and Maribor City are mostly covered by the **Regional Development Programme for Podravje Statistical Region 2007-2013** (2007). This programme includes analyses of the region, defines development opportunities, presents a vision, goals and priorities for development, and contains financially valuated programmes and projects. It also contains sectorial analyses, changes and development programmes development forecasts, an outline of the state's and the municipalities' tasks in the economic, social, spatial, and environmental fields and for cultural development in the region. The Regional Development Programme 2007-2013 for Podravje Region includes an agreement between forty-one municipalities. Analyses done to prepare the programme revealed problems of depopulation, population ageing and rural/urban outmigration. Adaptation to demographic changes is tackled directly and indirectly within three developmental priorities. The first developmental priority concerns the creation of a connected, successful and visible region. The second developmental priority (entrepreneurship, competitiveness and knowledge for rapid development) represents a range of competences in the field of entrepreneurship, including increasing employability, competitiveness and investment in human resources. The third regional developmental priority concerns achieving balanced and sustainable development with a focus on the promotion of the principles and measures of sustainable development, social inclusion, an information society and universal access to public infrastructure.

The Regional Development Programme 2007-2013 for Podravje Region is the base for the **Implementation Plan for Podravje Region** where feasible public and private projects are prioritised and harmonised with financial resources.

The Development Strategy of Maribor (draft, 2010) aims to improve the situation in Maribor, which is recognised as shrinking. The draft covers important topics such as the economy, traffic, the environment, education and quality of life. These issues are addressed in reference to combating demographic problems and shrinking. The trend of a shrinking region should be reversed by implementing measures to ensure the creation of new jobs and conditions for a small economy, and to decrease the amount of migration.

References

- Development Strategy of Slovenia (2005), Government of the Republic of Slovenia
- National Development Plan of Slovenia 2007-2013 (2007), Government of the Republic of Slovenia
- National Strategic Reference Framework 2007-2013 (2007), Government of the Republic of Slovenia
- Strategy for the Protection of Older People by 2010 – solidarity, coexistence and quality ageing (2006), Government of the Republic of Slovenia
- Measures to Promote Active Ageing (2010), Government of the Republic of Slovenia
- Act on Encouraging Harmonised Regional Development (2005), Government of the Republic of Slovenia

- Programme of Reforms to Implement the Lisbon Strategy in Slovenia (2005), Government of the Republic of Slovenia
- Regional Development Strategy of Slovenia (2001), Government of the Republic of Slovenia
- Spatial Development of Slovenia (2004), Government of the Republic of Slovenia
- National Strategic Plan for Rural Development 2007-2013 (2006), Government of the Republic of Slovenia
- Resolution on National Social Services for the Period 2006-2010 (2006), Government of the Republic of Slovenia
- National Development Programme for Slovenia 2007-2013 (2007), Government of the Republic of Slovenia
- Regional Development Plan for the Podravje Development Region 2007-2013 (2007), Maribor Development Agency
- Implementation Plan for Podravje Region (2007), Maribor Development Agency
- The Development Strategy of Maribor (draft, 2010), Maribor

4.8 Summary of Policy Analysis *(ISCAS)*

Analysis of policies related to demographic change in Central Europe shows substantial differences in the importance of demographic change for decision makers. It is not surprising that policies reflect the history of demographic change in regions. In counties with a significant share of shrinking or/and ageing regions, relevant policy documents are more developed. Policies at the national and also the regional level usually include demographic change as a part of the wider background for policy documents; policies exclusively focused on demographic change are not common. In general, policies aimed to tackle the problem of demographic ageing are more common and developed in more detail than policies focused on population shrinkage. From the perspective of individual countries the main conclusion learned from policy analysis could be summarised as follows. In Germany demographic change is a widely addressed topic at different levels of governance, at the national, federal and regional level. For key stakeholders demographic ageing and shrinking is also very relevant to the future development of a country. There are research fields focusing on demographic changes and the practical application of projects in pilot regions. Key topics related to demographic shrinking include the cost of infrastructure (social, technical), the consolidation of public budgets and life-long learning. Hungary, despite its long experience with population decline, has a lack of exclusively demography-related policy papers or strategies. On the other hand, policies related to demographic changes are included in other policy documents at the national level and also at the regional level. Policies focused on structural changes such as improving the economic situation is seen as a cure that will lead to a positive change in the demographic situation. In Czechia policies on population ageing exist, mostly as a part of other sectorial policies, but policies focused on population shrinkage at the national level are virtually non-existent. At the regional level there are policies focused on the countryside, where population shrinkage in seen as a part of depopulation processes in rural peripheries. In a broad view, population change is not a key topic and it is usually dealt with only partially in policies focused on regional development or policies dealing with unemployment issues. In Italy demographic change is included as a part of other policy documents, mostly at the ministry level, and it is considered of secondary importance. At the regional level it is dealt with in policies focused on polycentric development, sustainability, agriculture, or on an alpine space such as a rural mountain area with development problems. In Poland, there are several strategic documents at the national level dealing partially with demographic change. Quite often demographic changes are included in documents focused on broader economic development, but there are also specific population policy documents. At the regional level policies are focused on population ageing, health care and the development of a 'silver economy'. In Slovenia population ageing is considered one of the largest economic and social challenges. The policy analysis indicates that the main theme of policies related to demographic change is active ageing and intergenerational solidary. At the regional level a strategy for coping with urban shrinkage has been developed. In sum, the policies dealing with population change (and especially with population shrinking) and the subsequent policy implications for practical use in the regions need to be developed further. This task must be done in accordance with other major European policies like cohesion policy, regional development policy, and agricultural policy. In general the policies dealing with demographic ageing are more developed and are also often incorporated into relevant policy documents at all levels of governance.

5 Chapters about the ADAPT2DC Pilot Regions

The background demographic analysis and definition of population shrinkage in regions is further extended by qualitative information about pilot regions per se. The aim of the chapters about pilot regions is to present detailed information about the regions, their demographic development, and planned pilot actions (see table 4). The different pace and extent of population changes as described in chapter 3, 'Definition of Shrinkage at the Sub-regional Level', should be taken into account. The chapters about the ADAPT2DC regions are divided into three sections. The first section presents general information about the regions, providing a description of the territory's geographical characteristics, population distribution and economic situation. The second section presents information about the demographic situation in the region and describes the current population structure and development and the main demographic processes in the region. Special attention is focused on current policy challenges related to demographic changes. The third section presents brief information about planned pilot action in the region, describing the problem, the aim of the pilot action, and the expected results.

Table 4: An overview of demographic issues and planned pilot action in regions

Pilot region	Demographic issue	Pilot action
Saale-Orla-District (Thuringia, Germany)	Rapid population shrinkage and ageing	Demographic coaching for management/efficient planning of different infrastructure and service areas
Jászság Microregion Jász-Nagykun-Szolnok County (Hungary)	Mild population shrinkage and ageing	Higher women participation in labour marker, rationalisation of nursing services.
Vejprty Region (Czechia)	Long-term slow depopulation	Energy costs in public building maintenance
Po Valley (Italy)	Depopulation in mountain areas	Multi-service centre as a joint project
North-western Małopolska (Poland)	Mild population shrinkage and ageing	Telemedical services for senior citizens as a tool for optimising health-care costs
Podravje Region and Maribor (Slovenia)	Population ageing and urban shrinkage	Potential of culture for development

5.1 Pilot region: Saale-Orla-District (Thuringia, Germany)

Author: TMBLV, Erfurt

General information about the region

The pilot region Saale-Orla-District occupies a total area of 1,148 square kilometres in the federal republic of Thuringia in the central part of the Germany. It is a former border region between GDR and BRD; today the border is between Thuringia and Bavaria. It is the third biggest district of Thuringia. About half of this low mountain region is used for agriculture; another 40% is covered by forest. In the region there are three dams on the river Saale, and one of them, Bleiloch Talsperre, with 9.2 square kilometres of surface water, is the biggest in Germany. The Saale-Orla District has 86,906 inhabitants. There are 12 towns and 5 administrative communities. The population density is 106/km2. In 2012, 3,599 inhabitants were unemployed resulting in an unemployment rate of 7.7%, while the Thuringia average at that time was 9.8%.

The Saale-Orla-District has a diverse economy. It is predominantly a rural area, but its inhabitants have managed to combine tourism with industrial settlings in an idyllic landscape. With its more than 5,300 companies in industry, agriculture, small and medium-sized businesses and handcrafts, the Saale-Orla-District is one of the economically strongest in the Free State of Thuringia. East Thuringia has the highest density of jobs in the processing industry. As a result, 99 out of 1,000 inhabitants are employed in a manufacturing firm or an industrial company in the region. That is much more than the average in Thuringia (54 people in 2007). The pre-conditions for new industrial settlings are ideal because of the good infrastructure of the 33 industrial estates with fast access to the A9 motorway.

The spectrum of companies in the Saale-Orla-District includes one of the biggest printing houses in Europe, the Grafischer Großbetrieb GGP Media in Pößneck, which belongs to the Bertelsmann Group, a lumber firm in the Blackenstein/Friesau Region that produces cellulose, vehicle manufacturing and a multisided high-tech supply industry. The Saale-Orla-District is a market leader in East-Thuringia with 50 companies (and more than 50 employees) in the processing industry. Companies in the district work on a high international level. The export rate amounts to 35% whereas the average in Thuringia is 33.7%.

There are 369 farming businesses of different sizes in the Saale-Orla-District. They farm 38,708 hectares as agricultural crop land and 11,448 hectares as grassland. And they carry on very intensive livestock farming with more than 39,000 cattle, of which 14,000 are dairy cows. Modern agriculture currently in the district employs 1,543 people.

The demographic situation in the region

The Saale-Orla-District lost about 16% of its population between 1990 and 2010 (Thuringia: -14 %). By 2030 the shrinkage will amount to around 24% (Thuringia: -18 %). The average age will rise until 2030 by 6.8 years to 53.4 years (Thuringia: +5.4 / 51.4 years). By 2030 the Saale-Orla- District will lose about 30% of its young population under the age of 20. The development therefore is worse than the Thuringia average (-20 %). The productive-age population in Thuringia will decrease during the next 20 years, whereas the share of elderly people will increase (see Map 19). The current challenge is how to provide sustainable services in a medium-altitude mountain area with steep topography and with a heterogeneous settlement structure. The concept of central spaces or functional regions will be applied.

Table 5: Population structure in Saale-Orla-Kreis

Age groups	0- 6	6-15	15-18	18-25	25-30	30-40	40-50	50-65	65-75	75-85	85 and more
Thüringen	52,529	76,183	21,083	81,965	74,992	134,421	180,890	261,325	130,592	69,949	13,375
Cities	14,331	18,063	4,708	22,994	22,399	36,498	42,731	57,778	31,948	16,702	3,230
Districts	38,198	58,120	16,375	58,971	52,593	97,923	138,159	203,547	98,644	53,247	10,145
Saale-Orla Kreis	1,977	2,982	820	2,970	2,720	5,060	7,078	10,809	4,977	2,875	583

Planned pilot action

The idea of the project is to establish a Demography Coach to improve or at least maintain infrastructure provision in Thüringia and Bavaria, which are affected by demographic change. Therefore several communities in Bavaria and Thuringia will be supported to identify and implement suitable projects. The overall goal is to maintain or enhance intergenerational services of general interest and mobility.

Possible topics are:

- 'Virtual Supermarket', including delivery services for smaller villages
- A service through which to order medicine and have it delivered
- Internet-based carpooling (for shopping, leisure, to the doctor), mobility-neighbourhood support
- 'Mobile primary care' together with retail (City-Hinterland-Project)
- Inter-communal day-care
- Service and goods delivery (to the customer) or
- 'Mini-bus' service for transport to the shops, the doctor, the pharmacy (for services)

5.2 Pilot region: Oberfranken-Ost Region (Bavaria, Germany)

Author: Tanja Simon, BSWIVT

General information about the region

The Oberfranken-Ost Region is located in the north-east of Bavaria. On the one hand the region includes the county-level cities Bayreuth and Hof and the counties Bayreuth, Hof, Kulmbach and Wunsiedel i. Fichtelgebirge, which are located in Oberfranken District. On the other hand the region also includes a small part of Tirschenreuth County, which is part of the neighbouring Oberpfalz District. The region covers an area of 3,615 km² with about 478,000 inhabitants (November 2011). Its population density of 134 inhabitants / km² is less than the average in Bavaria.

The region is characterised by the contrast between the nationally disproportionately high density of industry and its great agricultural capacity. The expansion and construction of an interregional traffic system helps to improve regional 'location factors'. At the same time, the technical development of infrastructure, increasing settlement and industrial construction and agriculture leads to conflicts relating to the protecting the interests of nature, landscape, and water. The Oberfranken-Ost Region is characterised by two geological structural units and contains large physical regional differences. The south-west includes the natural areas 'nördliche Frankenalb', 'obermainisches Hügelland', and 'oberpfälzisches Hügelland' and is part of the Mesozoic mountains. The north-east part of the region, with the natural areas 'Frankenwald', 'Fichtelgebirge', 'Münchberger Hochfläche', 'Wunsiedler Hochfläche', 'Mittelvogtländischen Kuppenland' and 'Oberen Vogtland', belongs to the eastern Bavarian basic mountains. The characteristic landscape and the ecological function of these natural areas are increasingly being affected by its varied utilisation. The agricultural area of this region covers approx. 175,670 ha. About 50% of the total area is used for agricultural purposes. 36 % of the agricultural area is used as fields (acre), 24.2% for grassland and 39.3% for mixed purposes. Often there are mixed agricultural uses because of the structure of the landscape. 39.6% of the 'region-area' is woodland, which is an area about 143,000 ha. The area covered with forest is well above the Bavarian average (34.6%). 4.2% of this woodland area is deciduous forest, 78.4% coniferous forest and 17.4% mixed forest.

Demographic change and planned pilot action

Demographic change represents one of the main fields of action for a 'sustainable space and settlement development'. Local and regional actors in planning have to face difficulties caused by population decrease and ageing in future in order to maintain the services of public interest. These problems and difficulties would be the population increase/decrease and the aging of society. From a regional perspective, decline in the total population number is more pronounced in the north-eastern part of the territory. Population shrinkage is occurring in the majority of urban and rural areas in Oberfranken-Ost (see Map 20). A creative solution needs to be found on the municipal level that can be used across the region. Within the scope of the existing pilot project 'Demographic Coaching' (compare the Thuringia Pilot action) in the cities Arzberg (Wunsiedel i. Fichtelgebirge), Bad Berneck (Bayreuth) and Hof, solutions should be sought for adapting infrastructure costs to the demographic decrease and reducing costs through more effective management. Issues of social infrastructures in particular should be considered:

- *Arzberg City:* Adaption of the living space (need of modernization) to the needs of the people who are living there. The aim should be for people to be able to remain living in a familiar environment for as long as possible.
- *Bad Berneck City:* Installation of vacancy management aiming the preservation and the sustainable use of existing buildings.
- *Hof City:* The city has a very high share of immigrants. For this reason there should be an investigation into the age-related problems of foreign inhabitants aimed at considering their specific socio-cultural needs.

5.3 Pilot region: Jászság Microregion, Jász-Nagykun-Szolnok County (Hungary)

Author: ONEP, ÉARDA

General information about the region

Jász-Nagykun-Szolnok County is located in the middle of the Hungarian Great Plain. Land use and economic opportunities are essentially influenced by the low and flat nature of the area. Although the county is centrally located within the country and the Great Plain, it is on the periphery of the Észak-Alföld Region (Northern Great Plains). The distance between the capital of the county, Szolnok, and the capital of the region, Debrecen, is quite far so they do not have a busy, everyday connection. In wider regional terms, the Tisza River played a more important role in the past. In the last two centuries it gradually lost its importance, because of the underdevelopment of the road structure which ran parallel to the Tisza River. The vicinity around the Budapest metropolitan area is of special importance and Szolnok has the role of eastern gate to the metropolitan area.

For historical reasons the area of the county can be divided into three main parts (Jászság, Nagykunság, and Külső-Szolnok) around three main cities (Szolnok, Jászberény, and Karcag). All three centres are located on the periphery of the county. As a result the central part of the county is one of the most disadvantaged areas in the country in terms of economic and social conditions, which are accompanied by unfavourable environmental factors like flooding, inland inundation, and drought risks. 72% of the county's population live in cities, but 51% of the population live in cities with over 10,000 inhabitants. The settlement structure consists mainly of second- and third-ranked cities. In terms of regional disparities the industrial agglomeration around Jászberény should also be mentioned, which is built on modern electronics industries. At the same time Jászság definitely has a rural character.

The number of inhabitants of the county was 383,000 at the beginning of 2012. Since the turn of the millennium population shrinkage has accelerated, both compared to the previous decade and to the national average. The shrinkage rate of 8% in the last decade was four times the national average. The acceleration of shrinkage was caused mainly by increasing internal migration, which resulted in a mass exodus. In addition, natural demographic processes also contributed to population shrinkage. The population density of the county is 72 people per km2 which is quite low in comparison to the national value (108 people per km2). The educational level of inhabitants has converged with the national average but the increase in the rate of highly educated people lags behind the national average. The relatively low educational level of people could be related to the fact that there are few opportunities for higher education in the county. In the period concerned the largest population loss can be observed in municipalities with fewer than 2,000 inhabitants that are inhabited by people with the lowest educational level but not do not have a large share of Roma inhabitants. These municipalities also experienced the highest unemployment rates and substantial ageing.

The performance of the county in terms of its contribution to Hungary's GDP is quite weak. GDP per capita was 68% of the national average in 2009, which means it ranks in fourteenth place among the counties. The Gross Value Added by sectors is: 7.6% by the agricultural sector, 41% by industry, and 51% by the service sector. The dominant sector in terms of employment is manufacturing, which quite often supply other firms within the county or in the surrounding areas. It is possible to see that agricultural companies count as large employers where employment rates are lower.

Between 1990 and 2001 the number of employees decreased by more than 30% of the national average, while at the same time the number of unemployed and inactive earners doubled. The availability of jobs is different in the two parts of the county divided by the Tisza River. The unemployment rate of the county is equal to the national average but it has increased, particularly since 2008.

The demographic situation in the region

In 2011 the total population of Jász-Nagykun-Szolnok Region amounted to 383,000 people, 3,800 less than the year before. In 2011 3,250 children were born and 5,400 people died. The annual natural decrease was 2,150 people. After the year 2000 the immigration trends in several micro-regions changed to out-migration trends. Only the Jászberényi Micro-region registered positive trends (the rate of immigration still exceeds the rate of out-migration), and this micro-region suffers the least from ageing trends.

During the 1990s population trends in the county were more favourable than at the national level: although the national average decrease was 1.7%, in Jász-Nagykun-Szolnok Region it was only 1.2%. But after the year 2000, the decreases continuously accelerated, both compared to previous trends and to the national average (see Map 21). In the last ten years population loss amounted to 8% (compared to the 2.1% national average). The main causes of these processes are the change in direction and intensity of internal migration and the increasing out-migration of the population. In addition, trends in natural population development have also contributed to the process: the birth rate is lower and the mortality rate is higher than the national average. The estimated life expectancy significantly increased over the past decade (women: 77.79 years, men: 70.05 years) and another favourable development is that differences between women and men are decreasing. None of the cities and towns registered population growth between 2001 and 2011. The most significant population decrease nevertheless took place in settlements with fewer than 2,000 inhabitants.

After the year 2000 population ageing in the region accelerated and exceeded national trends. In 2001 the value of the national ageing index was under 100. In this regard the Jász-Nagykun-Szolnok Region was in an advantageous position, but in the past decade its ageing index has deteriorated, and its index value has increased from 88.1 to 121.5, while on the national level it rose from 91.3 to 116.6. The county-level mean age grew 3 years in the case of women and 2.3 in case of men.

The situation analysis of the current County Development Plan covers several development directions and fields of action: One of the most important priorities is to develop the road and rail infrastructure of the county in order to enhance regional accessibility and connectivity to other poles and centres and to the capital city. Although the county has a central position, it has traditionally had several peripheral parts, both in a national and regional (NUTS 2) context (within the North Great Plain region).

New types of cooperation, municipal and NGO initiatives could reposition the Tisa-area within the country and transnationally, and in this regard the Jász-Nagykun-Szolnok Region plays a vital role. Social inclusion and the fight against poverty articulated in the EU 2020 Strategy are strongly harmonised with the county's principles.

Planned pilot action

The Hungarian pilot action will be implemented in three settlements (Jánoshida, Jászfényszaru, Jászárokszállás) of the Jászság Micro-region in the Észak-Alföld Region (North Great Plain Region - Hungary), which aims to promote the return of women to the labour market by launching integral day-care services for children. The direct goal of the pilot project is to rationalise child day-care services, to increase the capacities of child day-care services, and to launch day-care services that respond to unique necessities.

Within the planned pilot action a feasibility study will be elaborated for the three settlements involved in the pilot project focusing on the above-mentioned goals and the professional management issues of day-care services. The feasibility study is based on broad data collection and situation analysis of primary and secondary data on the presently available and required nursery capacities, on the national legislation in force on child nursery services, on municipality will, and on the local demand for launching day-care services in the micro region. In the pilot settlements the study will map the necessary infrastructural conditions and the appropriate real estate available or purchasable in the municipalities. The study will also map the necessary HR capacities, available re-training programmes and the possibilities for the involvement of public employees in day-care

services. From its data collection the feasibility study will provide a detailed SWOT analysis. Upon the assessment of the present situation the feasibility study will also examine the establishment of an integrated nursery centre and the establishment of day-care nurseries that would operate as a network in the pilot region. The survey of tendering possibilities to cover infrastructural and equipment needs (mapping funding options) is also a main component of the study, including a time plan, risk analysis and marketing-communication strategy for day-care nurseries. the study also aims to map possible avenues of cooperation with churches, civil organisations and SMEs and to map the sources of operation costs, and to determine the appropriate price of day-care nursery services considering the local financial possibilities of target groups. The broad data collection and analyses mean that a realistic budget can be drawn up by which the long-term (institutional and financial) outlook can be surveyed as well. Upon completion of the feasibility study with the above-described content, political recommendations can be delivered for local decision-makers to establish effective public services in shrinking regions.

5.4 Pilot region: Vejprty Region (Czechia)

Author: ISCAS, Ústí Region

General information about the region

The town of Vejprty lies in the western part of Czechia in the Ore Mountains at an altitude of about 760 metres above sea level. The town is part of the Chomutov border region and with the German municipality Bärenstein it optically forms one unit divided only by the border creek Polava. Both municipalities created their own centres in the past, which served their respective municipalities and commuting territory. Vejprty, which is the natural centre of the mountain region Vejprtsko, is the border check-point for pedestrians, cyclists and cars. The town was significantly influenced by the changes that occurred after World War II, mostly by the expulsion of the German population from Czechoslovakia and the subsequent resettlement of the border regions, which together led to a rapid decrease in the population, a change in the social and community structure and also a change in the relationship to the municipality and the mountain region as a whole.

Currently Vejprty occupies almost the same area as in the interwar period, but the density of the population decreased, while the character of the town also changed substantially after the construction of a block of flats in the centre of this small town. A total of 3,074 inhabitants live in the municipality (31.12.2011). The number of inhabitants has been slowly decreasing since the end of World War II. The educational structure of the local population is comparatively lower than in Czechia as a whole. There is a significantly lower share of university educated people; the share of inhabitants with completed secondary school is also below the national average. Consequently, people with only primary education are overrepresented in the town.

The changes after World War II led to a significant decrease in the economic base of the town, in spite of considerable state intervention under the planned economy. The industrial traditions of specialised light engineering and textile production disappeared with the transfer of the German population. The regional economy of Vejprtsko was permanently subsidised during the socialist period. When the system of massive financial redistribution by the state was abolished Vejprtsko became threatened with economic decline. New opportunities came with the liberalisation of the economy, the opening of the borders and the development of tourism. Nowadays, the main sectors of the economy include industrial companies, mostly the manufacturing, food-processing and textile industries. There are also several smaller entrepreneurial subjects in the tertiary sector, mostly in trade, and services such as restaurants, accommodation and other commercial services. About 7.5% of entrepreneurial subjects work in the agriculture, forestry and fishing industries. In the whole region male employment (53.2%) and people in a labour profession (68.7% in 31.12.2004) slightly predominates among the workforce. The highest proportion of employed can be found in the secondary sector (56.7% in spite of some structural changes). The tertiary sector employs 41% of all employees.

The town of Vejprty itself suffers from high unemployment: 14.7% at the end of 2011 (the mean for Czechia was 9.84%, and for Ústí Region 12.94%). Vejprtsko does not differ from the other regions in Czechia as far as

the sex and age structure of the unemployed is concerned. The mean age of job applicants was 36 years in 2004. The most frequent age cohort among job applicants was the cohort of 20-29 year-olds. Almost half of the job-seekers had only primary education, 37% had secondary education without the state exam (vocational) and only 15% were job applicants with complete secondary school with the state exam or job applicants with higher education.

In 2001, 19% of inhabitants commuted to their place of employment, of them 62% did so every day. Many of them (18%) spent more than 60 minutes on their daily commute (one way). People mainly commute to nearby cities, mostly to Klášterec nad Ohří, Kadaň and Chomutov. Commuting is quite difficult and financially demanding owing to the long distances and poor transport connectivity.

The demographic situation in the region

The population in the Vejprty Region is ageing. The number of the inhabitants in the 0-14 year-old cohort is decreasing and the number of people over age 65 is increasing. The rate of the 0-14 year-old cohort fell off by 6 percentage points from 1991 to 2001. In 2001, 36 children were born and 48 inhabitants died. Natural growth was negative - 12. The town of Vejprty itself also declined by migration, and migration growth was negative – 48 (see Map 22). More deaths than births has been typical for the municipality since 1979 (with one exceptional year of natural increase). The number of emigrants has been higher than the number of immigrants in the last three years. Mostly young and educated people are leaving the town towards big cities.

In the town there is an elementary school, an elementary practical school (school for children with special needs and with problems in elementary school) and a primary arts school. There is also ambulant medical care secured by the hospital in the city of Kadaň, which means a general practitioner, plus some other special surgeries and an emergency service. There is no ward. It is sometimes difficult to commute to bigger cities (Chomutov, Kadaň or Jirkov) for medical treatment using public transportation, especially for older people, whose numbers are constantly growing. More serious problems can emerge in the winter season when travelling in the mountain region is complicated by snow.

Planned pilot action

The municipalities in the pilot region have to solve various problems in relation to population shrinking. The most important current problem is growing vacancies in the public and also private buildings. Former hospital, nursery school, shopping centre, and factories are now empty or used only partly and are falling to ruin. Planned pilot action will mainly solve the problems of objects that are owned by the municipality. The first goal is to identify buildings whose maintenance represents the most serious financial burden for the municipality. The other goal is to develop ideas on how to lower costs and find new uses for these buildings. One of the tasks of the pilot action is to create energy audits and studies of the proper use of the buildings according to the needs of the municipality and its inhabitants.

5.5 Pilot region: Po Valley (Italy)

Author: UNCEM PIEMONTE – PP 09

General information about the region

The Po Valley is a valley in the province of Cuneo, Piedmonte, Northern Italy, along the Po River before it enters Pianura Padana, or the Plain of the Po. It is32 km long, and it is contains 10 municipalities within the Mountain Community of Monviso (Upper Po Valley, including Crissolo, Ostana and Oncino; Lower Po Valley, including Paesana, Sanfront, Rifreddo, Revello, Envie, Gambasca and Martiniana Po). The importance and the renown of the valley is related to the fact that it hosts one of the most famous peaks in the Alps, the Monviso (3841 m), and it is the source of the longest river in Italy, the Po.

Table 6: Demographic characteristics of Po Valley

Municipality	Altitude (m)	Area (km2)	Population (2010)	Males	Females	Population density (inh./km²)
Crissolo	1,318	49.04	174	99	75	3
Ostana	1,282	16.98	73	43	30	4
Oncino	1,220	49.00	81	50	31	1
Paesana	614	58.91	2937	1,429	1,508	49
Sanfront	490	39.67	2598	1,273	1,325	67
Rifreddo	433	6.78	1077	542	535	181
Revello	350	53.47	4226	2,095	2,131	80
Envie	327	25.07	2074	1,051	1,023	82
Gambasca	479	5.77	403	214	189	68
Martiniana Po	460	13.80	767	396	371	59
Valle Po (tot)		318	14,450	7,192	7,258	45
Cuneo Province		6,902	592,303	291,172	301,131	86
Piedmonte Region		25,398	4,457,335	2,158,445	2,298,890	175

Source: Istat, 2010

At the end of 2010 the entire population of the Po Valley amounted to 14,450 inhabitants: only 328 of these inhabitants lived in the three aforementioned municipalities in the upper valley, namely Crissolo, Ostana and Oncino. The average population density, which is 59.4 inhabitants per km2, is consistent with the average density of the Piedmonte mountains; even though there are substantial internal differences (see Map 23). In particular, in contrast to the three less-populated municipalities in the upper valley (around 4 inhabitants per km2), there are the lower valley villages, where the population is higher than 1,000 inhabitants and the density is much higher than the average.

According to the Report on the Marginality of the Mountain Communities in Piedmonte Region, the municipalities of Ostana and Oncino exhibit the most unfavourable conditions in the valley in terms of socio-economical parameters, service availability and job market, while the degree of marginality of the Mountain Community is classified as intermediary.

Since the end of the nineteenth century, the Po Valley had experienced strong depopulation, even in the villages at the bottom of the valley. Nevertheless, in recent decades there has been a demographic recovery in this area,

due in particular to the openness and support for the settlement of young families from local authorities. This positive population trend can also be observed in the lower Po Valley, and it is characterised by the expansion of the main towns towards the lowland. Nevertheless, the reference centre for services and jobs has moved out of the valley, namely to Saluzzo.

According to the Census of the Population (2001), the employed population in the Mountain Community was 11,866. The unemployment rate was consistent with the provincial average (3.9%). In the industrial sector 42.9% of the population (that is 5,095 persons) was employed. Here the manufacturing industry is especially significant, accounting for 31.2% of the employed population or 3,075 persons. This holds especially true for the municipalities of Sanfront, Gambasca, Martiniana Po, Rifreddo e Paesana. The service sector was the dominant sector as it employed more than 50% of all employees in the municipalities of the upper Po Valley, Crissolo and Ostana. The agricultural sector employed 18.8% of the working population, which is more than in the other municipalities of Cuneo province, but is much lower than what it was in preceding decades: in 1971 it was 27%

The demographic situation in the region

Table 7: Population trend in Po Valley (1991-2010)

	Population					Variat. (%)
MUNICIPALITY	**1991**	**2001**	**2006**	**2008**	**2010**	**1991-2010**
Crissolo	212	210	194	182	174	- 17.9
Ostana	82	79	72	73	73	- 11.0
Oncino	106	102	100	90	81	- 23.5
Paesana	3,058	3,072	2,960	2,933	2,937	- 4.0
Sanfront	2,615	2,611	2,667	2,648	2,598	- 0.7
Rifreddo	1,037	1,032	1,061	1,077	1,077	+ 3.9
Revello	4,208	4,192	4,233	4,254	4,226	+ 0.5
Envie	1,884	1,890	2,006	2,065	2,074	+ 10.0
Gambasca	329	346	387	382	403	+ 22.5
Martiniana Po	709	667	746	765	767	+ 8.1
Valle Po	14,240	14,201	14,426	14,469	14,410	+ 1.19
Cuneo Province	547,234	556,330	573,613	586,020	592,303	+ 8.2
Piedmonte Region	4,299,912	4,213,294	4,352,828	4,432,571	4,457,335	

Source: Istat and BDDE Database Piedmonte Region

In the last two decades (since 1991) the overall population of the Po Valley registered an increase of 1.19%, with +170 persons at the end of 2010. In the area there are basically two different scenarios: the municipalities of the upper valley are characterised by a strong population decline: Crissolo -17.9%, Ostana -11%, Oncino -23.5%. Also, Paesana, a village on the internal mountain that used to be highly populated (at the beginning of the twentieth century it had more than 8,000 inhabitants) lost 121 inhabitants between 1991 and 2012. Sanfront registered only a decrease of -0.65%, while in the other municipalities of the valley there was an increase in the population, with various scenarios ranging from very small growth in Revello (+0.5%) to more consistent growth in Gambasca (+22.5%).

Between 1/1/2010 and 1/1/2011, the overall population of the Po Valley remained stable (+5 units) due to a positive net migration balance (+72) and a negative natural balance (-67), resulting mainly from its high mortality rate (ranging between 10.65 in Revello and 19.55 in Paesana) which is in general higher than the birth rate (Revello 6.63; Paesana 8.51). In the Po Valley the mortality rate is generally higher than in the Cuneo

Province (11.26) and the regional average (10.94), while the birth rate is consistent with the provincial (9.2) and regional (8.61) average. The exceptions are Crissolo, Oncino and Ostana, where there were no recorded births at all in 2010.

In the last decade (2001-2010) there were no fundamental changes in the age-group structure. Compared to 2001, there was only a small decrease in the 15-24 age group (1,427 inhabitants in 2001, 1,412 in 2010, percentage variation -1%) and in the 25-44 age group (4,016 in 2001, 3,821 in 2010, percentage variation -4.8%), while the other three age groups registered an increase (0-14: +3.4%, 45-64: +8.8%; over 65: +1.7%). Consequently, the dependency ratio increased, going from 55.5 in 2001 to 56.1 in 2010, and surpassing the regional average (55.6). The old to young age dependency ratio is lower than the regional average (172.4 while the regional average is 177.7), but it is still very high in the municipalities of the upper valley: Ostana 775; Oncino 480; Crissolo 357).

Planned pilot action – a multi-services centre

In the past, many little shops satisfied the needs of all the people living in Ostana and in the nearby municipalities. Depopulation in the past led to the disappearance of all these shops. Nowadays people living here need to travel 12 km to reach a shop; a similar situation can be observed in other municipalities of the upper Po Valley.
In the summer time nearly 500 people spend their summer vacation in these villages: since many summer visitors have a house on their property, they together with the other inhabitants are really interested in a way of overcoming the distance to the shops. In the last summer a collective organisation was established for purchasing food and other essential goods, but it has not been easy to coordinate the idea.
For this reason the municipality established contacts with some retailers that might be interested in opening a small shop in Ostana. This small shop could be organised as a multi-service centre that would also offer other basic services and would also function as a communication and meeting point for people from different generations. The pilot action has the objective of supporting the organisation of such a centre; among other things, the project team plans to coordinate the involvement of the relevant stakeholders and to create a feasibility study including the evaluation of the following services:

a) The presentation and sale of the main hotspots in local agri-food production and the general promotion of the valley;
b) The sale of over-the-counter medications, which as of 2006 can be sold in shops in Italy under simpler regulation than in pharmacies, the so-called Para-Pharmacies;
c) The presence of an ATM;
d) The coordination of a 'widespread hotel', connecting the main bed & breakfasts in the area;
e) The coordination of a car-sharing service in collaboration with the other upper Po municipalities and environmental associations in order to promote sustainable accessibility to the mountain area;
f) Enabling the family doctor to receive patients once a week in the centre (nowadays the service is provided in temporary accommodation, not suitable for providing complete and correct assistance);
g) The area is lacking cultural facilities and a library is felt to be an indispensable necessity for the growing young population;
h) Local associations are nowadays sparsely distributed over the territory, with high costs for facilities maintenance: the centre could provide a common base for all of them;
i) To reduce maintenance costs, the postal office could be transferred to the centre;
j) In agreement with the indications of the Piedmonte Region, the establishment of small kindergartens is preferred over the organization of bus services: a small room could be used to provide this service, which is currently unavailable

5.6 Pilot region: North-western Małopolska - Poviats: Miechowski, Chrzanowski, Olkuski, Proszowicki (Poland)

Author: Małopolska Region – PP-11

General information about the region

The north-western part of Małopolska was chosen as the implementation area for the pilot project 'Telemedical services for senior citizens as a tool for optimising healthcare costs'. The area consists of four 'poviats' (LAU -1): Miechowski, Chrzanowski, Olkuski and Proszowicki. They are all located at the border of Małopolska and other Polish regions. The area of the pilot action was selected on the basis of several demographic criteria. Most of the selected area is lowland, only a part of Olkuski poviat is upland. The area is more rural, there are also small towns, all with fewer than 40,000 inhabitants (see Map 24). Population density on the selected area is diversified. It is very low (below the national average) in poviats Miechowski (74 people/km2) and Proszowicki (105 people/km2). In poviat Olkuski it is 184 people per square km, which is slightly below the regional average. However, in Chrzanowski the population density is high (343 people/km2), which is much above the regional average. The total population size of the selected pilot area is 335,000.
The unemployment rate in 2010 in poviat Chrzanowski was 13.9% and in Miechowski 14.2%, which is very high and visibly above the regional and national average. At the same time the unemployment rate in poviat Proszowicki was 11.9%, which was slightly below the national average, but above the regional average. Surprisingly, the unemployment rate in poviat Miechowski (9.7%) was even below the regional average (10.4%). The reason for that is the more agricultural character of both poviats, which results in so-called 'hidden' unemployment. The industrial character of poviat Chrzanowski and poviat Olkuski means that unemployed inhabitants are more often registered in local employment offices. However, the situation in the labour market in all four poviats is very difficult.

The demographic situation in the region

Due to the migration of a young workforce to Krakow and other economic centres and to the low birth rates contributing to the changing demographic structure, the selected pilot area is affected by dynamic processes of population ageing and decline (see map 24). A population decrease was observed between 2000 and 2010 in all four poviats (-6.56 % in poviat Miechowski, -3.87% in Chrzanowski, -1.43% in Oluski, 0.53% in Proszowicki). The data from 2011 show negative population growth across the selected area; however, the situation is the worst in poviat Miechowski (natural growth per 1000 inhabitants was -4.28). The migration balance in 2011 was negative in three of the four poviats and was positive only in poviat Proszowicki.
The population structure of the selected area shows that ageing processes are much more advanced there than in the other parts of Małopolska. The median age is relatively high. In 2010 it was: 39.99 in poviat Chrzanowski, 39.84 in Miechowski, 39.36 in Olkuski, and 37.78 in Proszowicki. In comparison, the median age for the whole Małopolska region in 2010 was 37.0 and the median age in the 'youngest' poviat of Małopolska was 32.73. The demographic burden per 100 persons of working age in 2011 was as follows: 33.6 persons in poviat Miechowski, 28.6 persons in Proszowicki, 28.5 persons in poviat Chrzanowski, and 28.0 persons in poviat Olkuski. The demographic forecasts for the selected area are not optimistic.

The originally agricultural and to some extent industrial profile of the local economy has been affected by transformation processes. As a result, the area has been facing difficult economic situation with high unemployment rates and low incomes. Geographical location in the middle between Krakow and Katowice does not contribute to access to the labour market. The need to commute to work 40 km one way in the situation where there are limited or no train connections frightens potential employees. The cost of commuting is also relatively high in comparison to incomes. Well developed and accessible public transport could increase the mobility of employees in this area.

Planned pilot action

The pilot action carried out in north-western Małopolska (Miechowski, Chrzanowski, Olkuski and Proszowicki poviats) is targeted at a group of senior beneficiaries who were selected on the basis of their health condition and place of residence (targeting an area affected with demographic changes). The aim of the action is to provide tele-medical services (tele-ECG) to monitor the beneficiaries' health condition, improve their quality of life, and prevent further deterioration of health. The patients will receive tele-medical equipment to monitor their bodily functions (ECG) at home, and will be provided with medical assistance, consultation and diagnosis both through communication technology and in person. The pilot action is meant to induce savings and improve health-care quality in the face of demographic changes.

Specific objectives include:

1. Adapting health services to demographic changes by providing high quality medical services to elderly patients;
2. Reaching patients at risk of exclusion, especially in depopulating areas;
3. Decreasing the costs of high quality health care by early diagnosis and disease prevention.

The pilot action is expected to bring about positive results in the area of patients' health and life quality as well as solid economic benefits. Among others the expected results include:

1. Providing recommendations for public policies in the EU regions concerning health care in the face of demographic changes;
2. Establishing a transferable good practice in the area of tele-medical services for senior citizens;
3. Reliable data regarding potential savings in health care by providing the service in this way.

5.7 Pilot region: Podravje Region and Maribor (Slovenia)

Author: IURS, Slovenia – PP13

General information about the region

The Podravje region lies in north-east Slovenia on the border with Austria and Croatia. It is the second largest Slovenian region in terms of population with 16.1% of the national population. The region is divided into 41 municipalities with 678 settlements. The largest cities in the region are economic and social centres: Maribor (35.20% of the population in the region), Ptuj (7.48% of the population in the region), Slovenska Bistrica (9.38% of the population in the region), and Ormoz (5.51% of the population in the region). The city of Maribor is the regional centre and the second most important cultural and educational centre in Slovenia. It is also the largest industrial town in the region, and its surrounding areas offer many opportunities for tourism. The city is also an important traffic centre. An international airport is located just a few kilometres from the city centre.

Table 8: Facts and Figures – Podravje Region

Area:	2,170 km2
Population	320,961
Population density (per km2)	147.9
Number of enterprises	22,381
Persons in employment	121,006
Average monthly gross earnings	1,377 EUR
Unemployment rate	16.1%

Source: Statistical Yearbook 2011, Statistical Office of the Republic of Slovenia

The region is surrounded by hills in the north-east, subalpine wooded mountains (Pohorje and Kozjak) to the west and Dravsko-Ptujsko polje along the Drava River. The Drava river is used for the production of electricity and the fertile soil enables agricultural production. The region has the highest share of utilised agricultural area in Slovenia (82,000 hectares) and is the leading region in terms of the number of agricultural holdings (Source: Statistical Office of the Republic of Slovenia). In the Podravska region, agricultural surfaces cover 45% of the total area, while in whole Slovenia they cover 27.8% of the surface. Statistical data from 2009 reveal negative natural increase (-97) and low population density (149.9) (see Map 25).

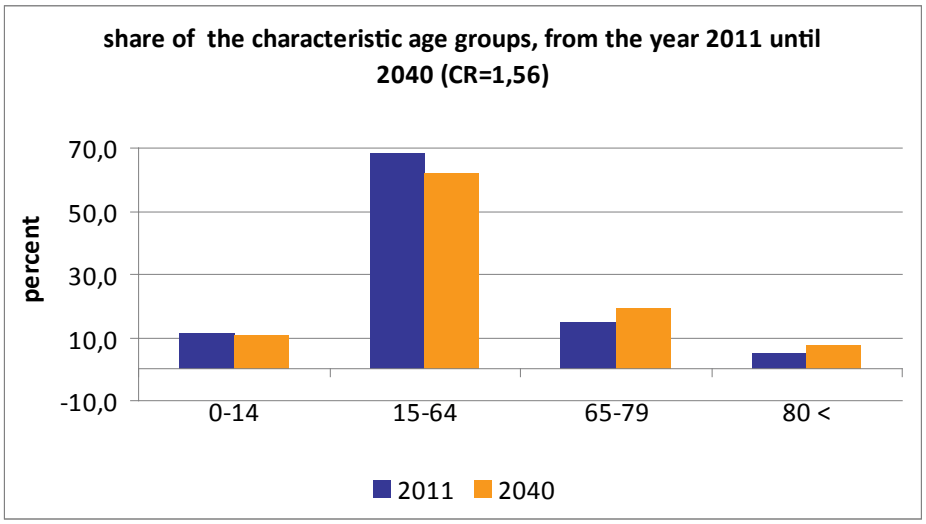
People of the Podravska region have in the average very similar school education in comparison with Slovenian average. In the field of short-term vocational and vocational upper secondary level as well as technical and general upper secondary education the share is higher than in Slovenian average. The statistical data also show that in the four year period from 2008 to 2012 only in 18 municipalities of the Podravska region population size increased while in 23 municipalities it decreased. From the comparison of the ageing index with the population projection results is also evident a relatively strong correlation among the age structure and population growth capacity. This comparison is possible because the same total fertility rates for all the municipalities was utilised.

The Podravje region boosts a long industrial tradition and has all the potentials required for production of sophisticated products. The five main sectors of economic activity are manufacturing, construction, transport and storage, market, maintenance and repair of motor and other business activities. Podravska region is ranked second in Slovenia as regards the contribution to the national GDP. The region is predominantly export-oriented. The highest share of gross value added was created by the service industry. The employment population ratio (57.2%) was in 2009 among the lowest in Slovenia, while the employment ratio of older persons (aged 55-64) was above the average in Slovenia. Data on commuting shows the intensity of daily commuting flows to and from a typical industrial city with increasing tertiary and quaternary functions.

Demographic situation in region

The number of people aged 65 or above and their share among the total population of the Podravje region has been constantly increasing during recent years. Consequently the average age and the ageing index have also been rising. All these indicators for the Podravje region are above the Slovenian national average. The rate of the elderly people in the Podravje region is above the Slovenian national average. In July 2010 the share of people aged 50 or above was 38.0 % and had increased from 34.3 % in 2003 while the Slovenian national average was 37.2 % in 2007 and 33.1 % in 2003. In 2007 in the Podravje Region, 16.5% of the population belonged to the age group 65+, the average age was 41.8 years and the ageing index was 127.7 (Statistical Office of the Republic of Slovenia).

Figure 3: The population structure in Podravje region 2011, 2040



As the second largest city in Slovenia Maribor, in spite of its economic and cultural importance, has a bad population age structure. Its ageing index (the number of people aged 65 and over, divided by the number of children aged 0-14 and multiplied by 100) is the highest (175) among all the 41 municipalities of the Podravska Region. If the existing demographic trends persist in the next decades it will be as high as 255 by the year 2040. The total population size of Maribor will diminish by almost 27,500 in three decades. Population projections show that the population size of all the age groups except the oldest ones (65 and over and 80 and over) will decrease. There will be some growth before the year 2025 in the younger age groups. To calculate the population projections we used data from the Statistical Office of the Republic of Slovenia: the input population by one-year age groups is as of 31 December 2011. The total fertility rate for the Podravska statistical region was 1.39 in 2011 and is somewhat lower than the total fertility rate for Slovenia which was 1.57. The projections for 41 municipalities in the Podravska statistical region indicate that the population decline in the Maribor municipality will be the highest in the region. This is understandable because its population has the highest ageing index.

The statistical data show that almost half (47.7%) of the 6,122 Slovenian settlements were facing a diminishing population size in the four-year period from 2008 to 2012. The Podravska statistical region is among those in which population decrease exceeds the Slovenian average and it has 56.64% of the settlements whose populations are diminishing. The population is growing in 44% of the municipalities in the Podravska statistical region. But this does not mean that all settlements within those municipalities are growing. In 55% of those municipalities more than 15% of the settlements are facing population decline. From 2008 to 2012 the process of rural depopulation in the Podravska statistical region was 'hidden' or 'relative', and it is very intensive in many parts of Slovenia but especially in north-eastern Slovenia near the Austrian, Hungarian and Croatian borders.

In the decade from 2000 to 2010, the number of agricultural holdings decreased by 16.8%, but the full working force units (PDM) decreased by much more (-31.2 %). It is interesting that the number of agricultural holdings with ecologic farming increased by 195%. From the table it is also evident that the number of holdings in the process of transforming into ecologic farming has decreased by 78.7% compared to the year 2000. This would mean that the transformation process is more or less complete.

The population projection for the Podravska Region using the total fertility rates of 2.1 (2012-2014) and 2.5 (2015-2100) shows a gradual improvement in the population size and the age structure if total fertility rates (TFR) increase to replacement level. The age pyramids for the Maribor municipality in the year 2100 if total fertility rates (TFR) will be 1.39 from 2012 until the year 2100 (Figure 4) or 2.1 from 2012 to 2014, and 2.5 from 2015 to 2100 (Figure 5).

Figure 4: Population scenario for Maribor municipality - I

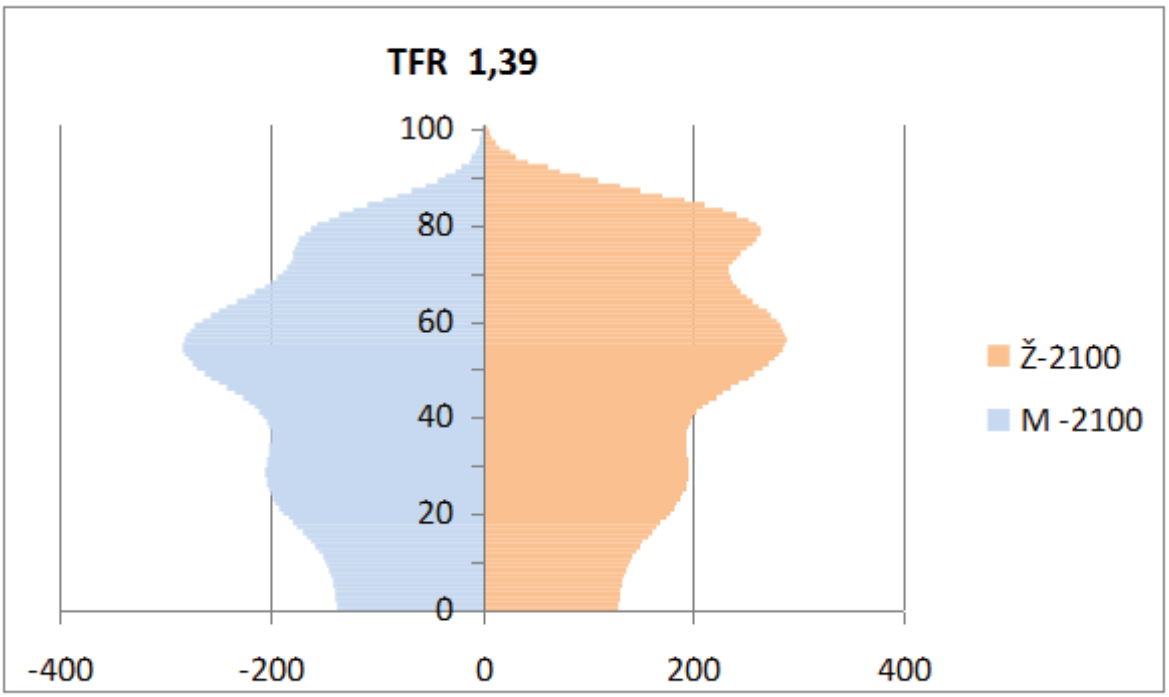
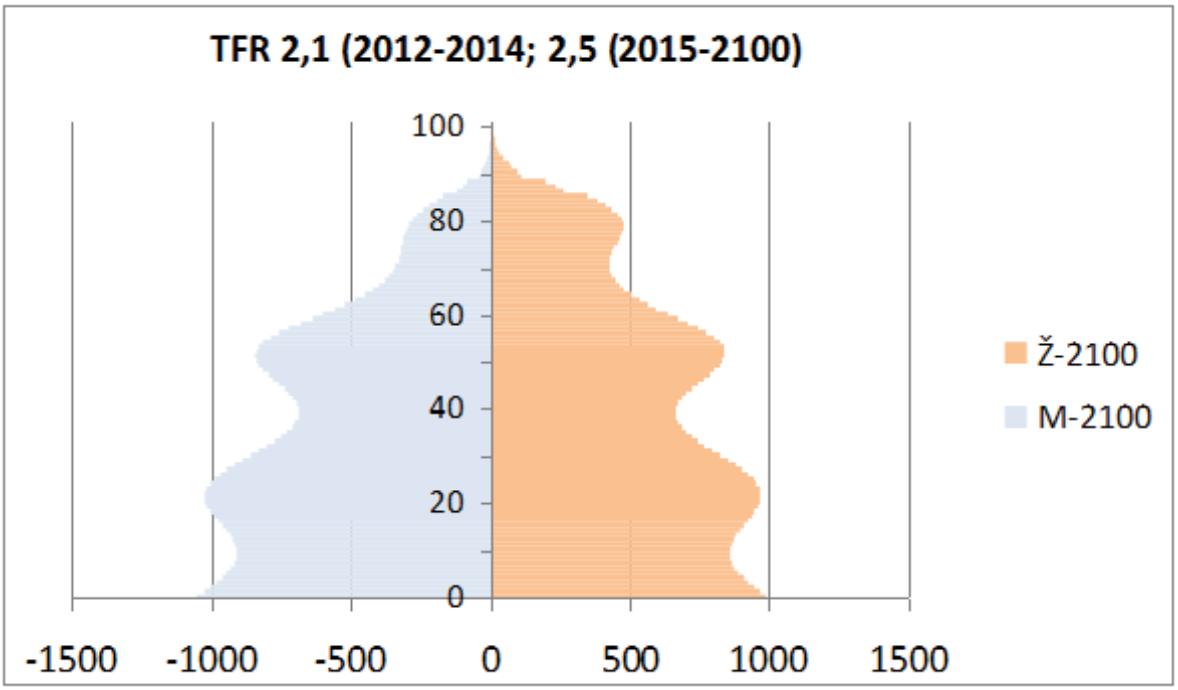


Figure 5: Population scenario for Maribor municipality - II



The current ageing index (135) could fall to 95 in the year 2050. Although these results are based on a purely theoretical hypothesis they could be used as a means to estimate the need to improve facilities with various kinds of social infrastructure: kindergartens, schools, medical care, homes for seniors, etc., and new jobs. Only if such goals are achieved can an improvement in the demographic situation in the area be expected.

Planned pilot action

Maribor would like to combat the shrinking trend in the city. Maribor was European Capital of Culture in 2012 (ECoC2012) and for this big event it together with other cities in eastern Slovenia upgraded old infrastructure and services. To combat negative demographic trends, Maribor needs to evaluate how to make public infrastructure sustainable after the ECoC2012. According to the consolidated draft of its development strategy, Maribor is to reverse the shrinking trend by implementing solutions to create new jobs and the conditions for small economy.

Cultural industries as an engine for innovation and financial benefits from cultural services are already recognised. The pilot study Potentials of Culture for Development aims to identify the positive impacts of culture on social life and the economy. Knowledge and awareness regarding the potential of culture to tackle demographic changes and reverse their negative trends will be gathered.

5.8 Summary of the pilot region experiences (ISCAS)

The brief overview of the local dimension of population shrinkage provided in the chapters on the ADAPT2DC pilot regions presents a variety of shrinkage processes and strategies for tackling demographic change. Population decline is present across the territory of the Saale-Orla-Kreis Region (Germany) and Jász-Nagykun-Szolnok (Hungary), whereas in the other regions population decline is currently present only in a certain part of the territory. It should also be noted that perceptions of what is considered to be population shrinkage or what is considered to be population ageing differ significantly between regional studies. To put it simply there are differences between population shrinkage or population ageing in regions on the one hand and the perception of these demographical changes by regional stakeholders.

Saale-Orla is a region experiencing rapid ageing and depopulation and where a key challenge is to find out how to provide the local population with crucial services in a sustainable way. Similarly, Jász-Nagykun-Szolnok Region is experiencing marked population shrinkage due to natural change and out-migration. Because of the bad economic situation in the region the pilot action is focused on increasing the participation of women in the labour force through better childcare services. In Ústí Region only a peripheral part of region is depopulating, but is doing so in a long-term perspective. Depopulation is caused mainly by being situated in a peripheral location and by selective out-migration. Pilot action in the Ústí Region is focused on saving energy costs in public buildings. In Małopolska Region a pilot region is located in the municipalities in the north-western periphery where the negative effect of population ageing and shrinking are combined. The pilot action is focused on telemedical services for optimising health-care costs. In Po Valley a multi-service centre is being developed as a meeting and service point to maintain the delivery of several services in low-populated mountain areas with an older population. In Podravje Region and its centre Maribor, population shrinkage and ageing is present in the urban and peripheral areas of the region. The pilot action is focused on innovation in the management of public infrastructure with the overall target of making it more sustainable.

6 Conclusion (ISCAS)

A comparative socio-economic background analysis of shrinking regions and cities in Central Europe is one of main results from the WP 3 focused on a targeted analysis of shrinking regions and cities in Central Europe. In strategic terms, the main objective of the whole WP 3 is to improve the understanding of shrinkage processes and its consequences and relations for infrastructure and service costs. This report is focused in particular on understanding shrinkage processes as part of a broader demographic change. The analysis is provided at the NUTS 3 level instead of the NUTS 2 level, which allows us to see processes of demographic change in a more detailed spatial perspective. Current population shrinkage in these regions and its advancement to other regions is expected to be a major demographic issue in the Central European area together with population ageing.

The main conclusions drawn from this analysis can be summarised as follows. The effects of demographic change such as population ageing and population shrinking become more relevant empirical phenomena in the next ten years and it is necessary to have adequate strategies and policy tools prepared on how TO ADAPT to demographic change. It is expected that there will be fewer regions with a growing population and also fewer regions with a growing population due to natural change. Conversely, there will be more regions affected by population ageing and more regions affected by simultaneous population ageing and population shrinking.

Population ageing is widespread in almost all the regions in the Central European area. Although there are different levels of ageing at the country level, with, for instance, an older population in Germany or Italy and a younger population in Poland or Slovakia, a convergence in terms of the level of ageing is to be expected. This also means that regions which currently have a younger population will be experiencing faster population ageing in the next few decades. Inherited population structures as reflected in fertility and mortality rates and growing life expectancy in the regions will contribute to further population ageing. This development will pose several challenges concerning the participation of women and the elderly in the labour force, intergenerational solidarity, reform of the pension system, and the accessibility of the school/health-care systems, etc.

Population shrinking is more spatially selective than population ageing. At the Central European level there is a concentrated macro-regional space of population growth from northern Italy, to western Austria, to southern Germany]. National metropolises and several second-rate metropolitan areas also show population growth. The remaining non-metropolitan areas not mentioned in the previous two categories have a stable population or are experiencing population shrinkage. This interpretation of population development is considered to be a broad generalisation to which there are several exceptions. Firstly, the cores of some metropolitan regions are experiencing population shrinkage (Milano, Budapest, Lodz) because there is a trend towards metropolisation and population de-concentration from urban cores to wider metropolitan areas. This trend is not uniform in all the countries in Central Europe. In eastern Germany, cities like Leipzig and Dresden are growing, whereas their hinterlands are shrinking. Secondly, as employment centres metropolitan regions compete for labour force not only with other regions in the country but also with other metropolitan regions. Therefore, smaller metropolitan regions or less economically successful metropolitan regions may also experience population decline. Prime examples of this development are former industrial and mining cities located in Poland and Czechia. Thirdly, not all rural regions show similar population development. The fate of rural areas is different fortunes because of their inherited infrastructure and their demographic structure (e.g. see the population growth in east Slovakia). Contemporary population developments are shaped, among other things, by the changing economy, the environmental qualities of regions and accessibility to metropolitan areas. But, in principle, sparsely populated rural areas are more vulnerable to population shrinking because of their lower population density than urban and metropolitan regions.

The future of population development in the regions in Central Europe will be shaped by changes in demographic behaviour and by changes in population distribution. Total fertility rates are low in all the regions in Central Europe and it is unlikely that in the short term they will approach replacement level (2.1 children per woman). This development indicates the future course of population shrinkage due to natural change.

Population change in the regions is significantly shaped by the regional redistribution of the population,

which usually favours metropolitan areas or macro-regional spaces of concentration. Although migration flows are difficult to predict at the national and as regional level we can look at migration patterns within countries and estimate the main trends of its development or we can evaluate the past development of migration and its impact on population numbers in the regions. From scientific literature we know that the majority of migration movements are motivated by economic factors. Map 12 shows the regional differences in the unemployment level compared to the national average and thus indicate future migration patterns based on the presumption that the economically motivated migration trend out of regions with higher unemployment into regions with labour demand continues. It is important to point out that in ageing and shrinking societies there is a growing share of people outside the labour force who migrate for other than economic reasons. An analysis of the components of population change (Map 11) shows that there are more shrinking regions due to both natural change and migration than growing regions due to both natural change and migration. There are also about 40 regions that have population growth despite negative natural change, but there are no shrinking regions that have positive values of natural change.

Demographic development in the regions in Central Europe as reflected in changes in the age structure will shape the availability, accessibility, and costs of services, especially services targeting certain age groups like schools or day-care services. The analysis of the current old age dependency ratio and its development reveals big differences between countries on the one hand and the widespread nature of population ageing in Central Europe and the increased economic burden on working-age populations on the other. The analysis of the current young age dependency ratio and its development reveals the continuing decline in the number of young people in most regions in Central Europe with the exception of northern Italy and some metropolitan regions.

A short outlook of expected population development in Central Europe in the next 20 years was also presented. The regional dimension of population change shows a prevalence of shrinking over growing regions in Central Europe (compare with Map 18 - Definition of shrinkage region at NUTS 3 level 2001-2011). The best future demographic outlooks are in the metropolitan hinterlands around the metropolitan cores (e.g. Budapest, München, Prague, Poznan, etc.). Macro-regional patterns of population change are relatively stable due to the iterative development of generations. Rural regions with currently younger population structures will have positive demographical development also in a medium-term outlook (e.g. eastern Slovakia, western Austria, and north-western Poland).

One of key outputs of this study is the definition of shrinking regions. The project partners agree that in principle population shrinkage occurs in a situation where death rates are higher than birth rates and when migration cannot balance this gap between birth and death rates in a region. Population shrinkage is thus measured as the relative decline of the total population size in a region in a ten-year period; regions with total population decline should therefore be considered shrinking regions. The project partners agree that this definition is suitable because it is easy to understand and uncomplicated to calculate for practical purposes. Such a definition is also in accordance with the study `Shrinking Regions: a Paradigm Shift in Demography and Territorial Development'.

Other outputs from this study are the implications from and recommendations developed as part of the policy analysis. These should be considered preliminary and they must be further explored in the subsequent WP of the project (WP 4 and WP 5). In general, policies for demographic ageing are more common and more developed than policies on population shrinkage. Most of the policies are not related to demographic shrinkage per se, but are a part of other, broader policy documents. In sum, more policies focused on demographic change should be developed or at least incorporated into other relevant policies. One example is the use of population development scenarios for calculating the development of the costs of certain infrastructures at current price levels in a short-term perspective.

In the chapter on pilot regions the different pace and extent of population shrinkage was discussed and linked with the pilot action initiatives. It showed that different scale of population shrinkage and the local context must be taken into account in planning and implementing pilot action initiatives. 'Planning for shrinkage' is a very new issue in the regions and it is not easy to accept for local and regional stakeholders.

Demographic change is a long term process with profound consequences for local communities. Therefore monitoring demographic changes and population development scenarios is an important tool for policy makers at various levels of administration. Good knowledge about on-going population changes is a resource for evidence-based policies. A lesson learned from population development scenarios and also from regions with more advanced population shrinking and ageing allows policy makers to see or anticipate the challenges of demographic change which will be an important issue in their region or municipality. For example, a regional government aware of rapid population ageing can shape the focus of vocational schools in their region in order to educate the future labour force in accordance with needs they are able to foresee using knowledge of population development in the next few decades. Advanced knowledge of the growing numbers of elderly should lead to related advanced knowledge of the growing demands on day-care in terms of the labour force or facilities needed. In general the impact of demographic changes on infrastructure can be calculated for the supply of services, demand for services, and costs per unit. Different infrastructures are also related to specific budgets in various parts of multi-scalar governance. Different types of infrastructure are thus influenced differently by demographic ageing and population shrinkage.

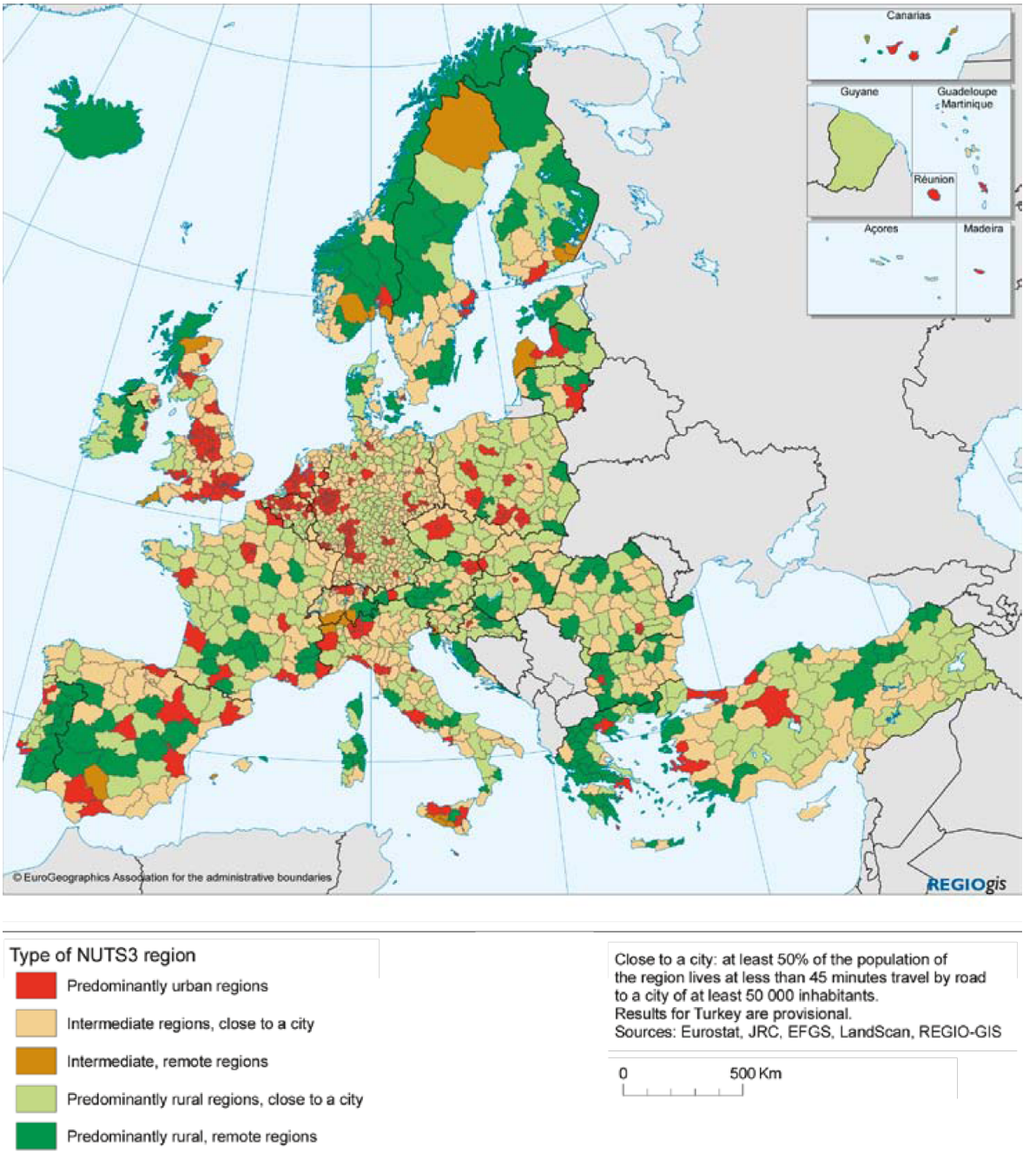
References

- Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) im Bundesamt für Bauwesen und Raumordnung (2009) (Hrsg.): Raumordnungsprognose 2025/2050, Bonn, p. 14;
- DEMIFER - Demographic and Migratory Flows Affecting European Regions and Cities, ESPON 2013 project, more information available at: *http://www.espon.eu/main/Menu_Projects/Menu_AppliedResearch/demifer.html*
- Demographic statistics: Definitions and methods of collection in 31 European Countries. EC report (3/2003/E/no25).
  Available at: *http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-CC-03-005-EN.pdf*
- Demography report 2010: Older, more numerous and diverse Europeans. Eurostat 2011/3, ISSN 1831-9440. Available at: *http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KE-ET-10-001/EN/KE-ET-10-001-EN.PDF*
- Dijkstra, L., Poelman, H.: Regional typologies: a compilation, Regional Focus n° 01/2011, Pp. 3.
  Available at: *http://ec.europa.eu/regional_policy/sources/docgener/focus/2011_01_typologies.pdf*
- Gans, Paul; Leibert, Tim (2007): Grundzüge der demographischen Entwicklung in Europa, in: Michael Horn, Bernhard Köppken (Hrsg.): Demographischer Wandel in Deutschland - die lokale und regionale Perspektive, Berlin: Logos Verlag, p. 15-16.
- Green Paper "Confronting demographical change: a new solidarity between generations", Commission Green Paper, March 2005,
  available at: *http://europa.eu/legislation_summaries/employment_and_social_policy/situation_in_europe/c10128_en.htm*
- Shrinking Regions: a Paradigm Shift in Demography and Territorial Development, IP/B/REGI/IC/2007-044, version 11. 7. 2008,
  available at: *http://www.europarl.europa.eu/meetdocs/2004_2009/documents/dv/pe408928_ex_/pe408928_ex_en.pdf*
- Šimon, M., et al.: D1.1 – Methodology guidelines for WP 3.1, ADAPT2DC project, 2012.
- Spatial data for NUTS 3 regions, version 2006, available at:
  http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco_Geographical_information_maps/popups/references/administrative_units_statistical_units_1

Note: The documents reviewed as a part of policy reviews in Central Europe countries are listed at the end of individual chapters (see chapter 5.1 - 5.7)

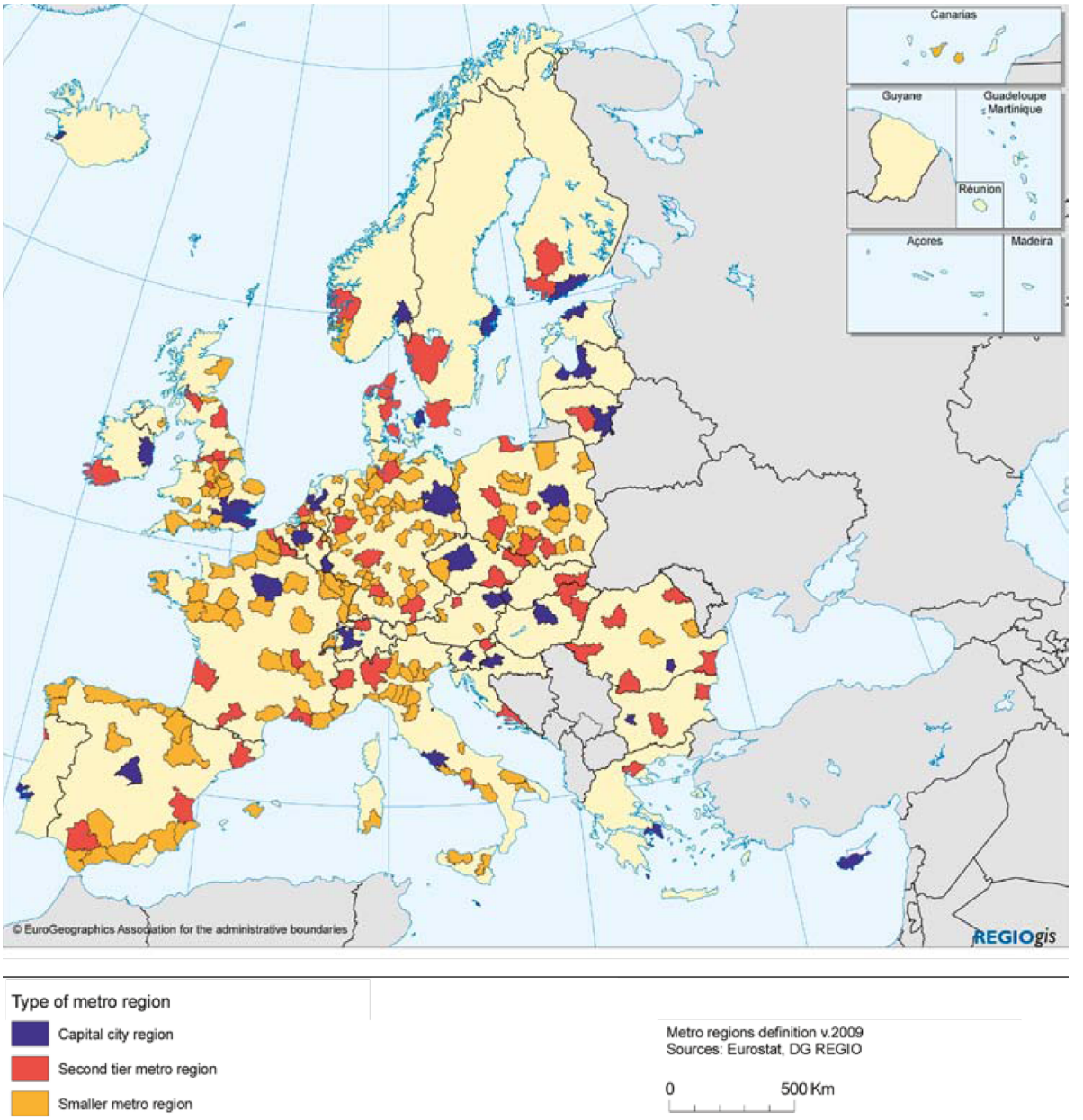
Appendix

Map 26: Map Urban-rural typology of NUTS 3 regions including remoteness



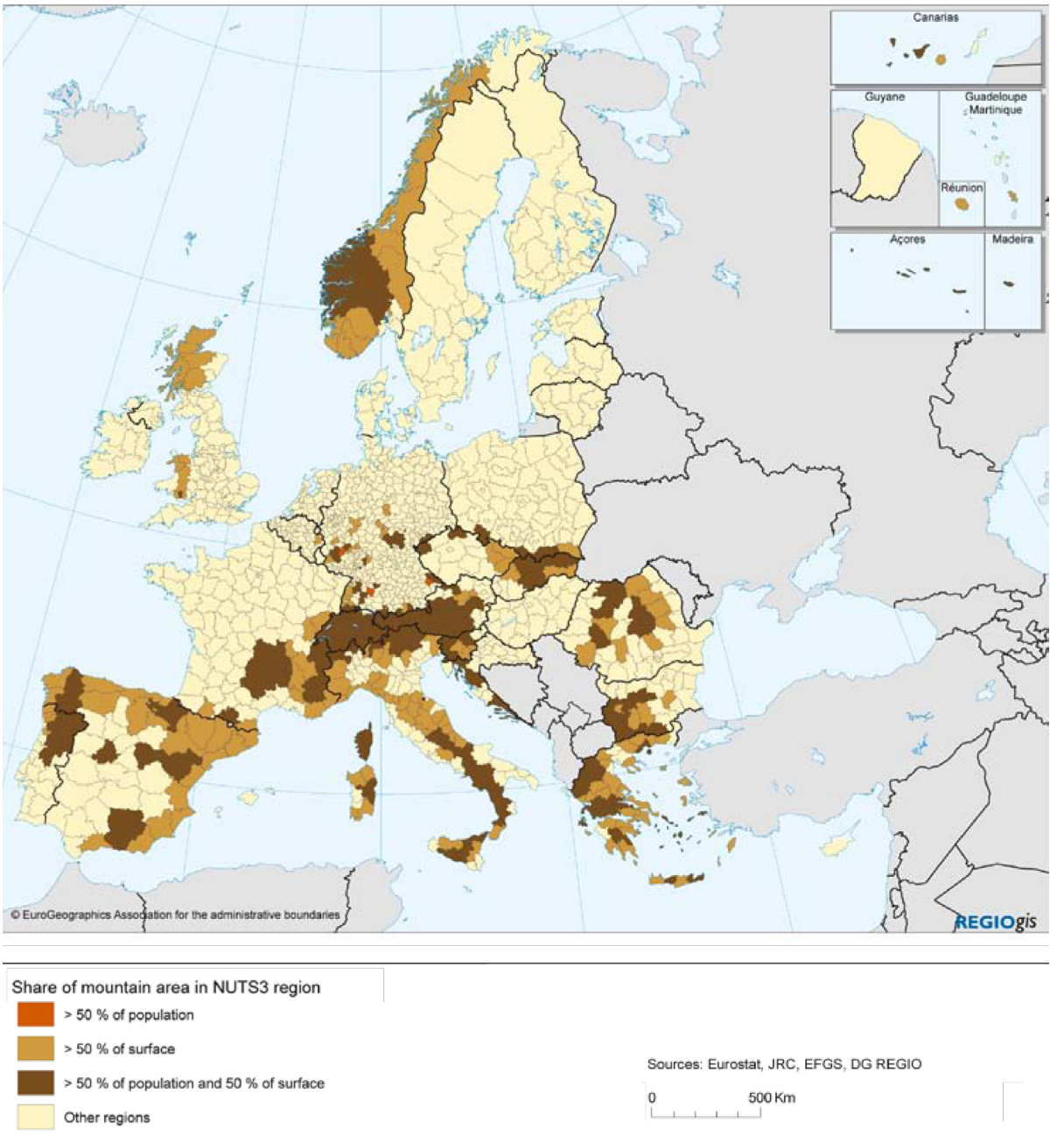
Source: Dijkstra, L., Poelman, H.: Regional typologies: a compilation, Regional Focus n° 01/2011, Pp. 3.

Map 27: Typology of metro regions at NUTS 3 level



Source: Dijkstra, L., Poelman, H.: Regional typologies: a compilation, Regional Focus n° 01/2011, Pp. 5.

Map 28: Typology of mountain regions at NUTS 3 level



Source: Dijkstra, L., Poelman, H.: Regional typologies: a compilation, Regional Focus n° 01/2011, Pp. 9.