Socio-economic characteristics of case study sites (regions and laus) and alternative scenarios for multifunctional land use activities on national and regional scales. Deliverable n° D1.3

Diana Kopeva, K. Brscic, A. Dobruchowski, R. Franic, G. Garrod, B. Hautdidier, M. Konecna, R. Laplana, A. Ostermeyer, M. Peneva, et al.

Prototypical Policy Impacts on Multifunctional Activities in rural municipalities

A collaborative project under the EU Seventh Framework Programme

SOCIO-ECONOMIC CHARACTERISTICS OF CASE STUDY SITES (REGIONS AND LAUS) AND ALTERNATIVE SCENARIOS FOR MULTIFUNCTIONAL LAND USE ACTIVITIES ON NATIONAL AND REGIONAL SCALES

Deliverable no. D1.3

Diana Kopeva, Kristina Brščić, A. Dobruchowski, Ramona Franić, Guy Garrod, Baptiste Hautdidier, Marta Konecna, Ramon Laplana, Arlette Ostermeyer, Maria Peneva, Marian Raley, Amanda Sahrbacher

Partners: UNWE, AFSZ, UZEI, CEMAGREF, IAMO, UNEW

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COOPERATION

PRIMA aims to develop a method for scaling down the analysis of policy impacts on multifunctional land uses and on the economic activities. The scoped policies will include the cohesion policy (ERDF, ESF, CF), the enlargement process (IPA) & the rural development policy (EAFRD) of the European Commission, with a special focus on agriculture, forestry, tourism, and ecosystem services. The approach will: rely on micro-simulation and multi-agents models, designed and validated at municipality level, using input from stakeholders; address the structural evolution of the populations (appearance, disappearance and change of agents) depending on the local conditions for applying the structural policies on a set of municipality case studies. Involving eleven partners, the project is coordinated by *Cemagref*.

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EXECUTIVE SUMMARY

The report gives an overview over the methodological approach used in the PRIMA project for the development of alternative scenarios. Scenarios focus on policy changes and possible results/outputs of EU policy implementation on regional and local (LAU) level. In a first step, a social economic analysis is implemented in each case study and bears on five domains: general characteristics, demographic trends, economic system, transport and environment. In a second step, and after identification of main driving forces, four scenarios are proposed and characterized:

- *Baseline scenario:* The baseline scenario is defined to analyse a base situation without additional intervention and different alternative options for intervention, i.e. the introduction of new measures in agriculture, forestry, tourism, and environment. The baseline scenario is a projection of the status quo or "business as usual", including the existing framework in terms of agricultural and environmental policies, technological and market conditions, and the projection of technological trends and of decided policy changes to be implemented until the target year 2013.

- *'Environment' scenario:* This scenario is built on the assumption that measures for landscape, natural and cultural heritage preservation will be leading. Having in mind importance of environment issue in global aspect, it is assumed that environment policy will be more closely linked to rural development and more specifically to multifunctional land use activities. Thus, changes in the policy priorities on EU level are expected

- *'Rural development' scenario:* Rural Development Policy will have a leading role in the next planning period (2014-2020). Sustainable rural development will be achieved through: increasing competitiveness of agriculture and forestry; improving land management; implementing complex measures for environment protection and preservation, wider rural economy through new agricultural and non-agricultural activities; increasing the role of local initiative groups in regional and local decision making process.

- *'Infrastructure & Competitiveness' scenario*: This scenario assumes widened and enriched policy measures in Cohesion Policy. This scenario is developed on the assumption that Cohesion policy will have leading role on national and regional level. New objectives and measures will be elaborated aiming increasing of competitiveness of SMEs, development of favourable business conditions, improving quality of human resources, increasing capacity of local/regional branch organizations, construction of relevant new infrastructure and restoration of the existing.

Scenarios will be used as a starting point in modeling in PRIMA specific workpackages.

1 SOCIAL ECONOMIC ANALYSIS OF THE NORTH-CENTRAL PLANNING REGION OF BULGARIA

1.1 General characteristics

Diana Kopeva
Maria Peneva

The territory of Bulgaria covers a total area of 111001.9 km². It is situated in the North Eastern part of the Balkan Peninsula sharing borders with Romania to the North, Serbia and the Republic of Macedonia to the West, Greece and Turkey to the South and the Black Sea to the East.

Bulgaria boasts a varied relief: mountainous and semi-mountainous regions cover about one third of the country. The average altitude of Bulgaria is 470 m. 31.5% of the country's territory is plain (up to 200 m above sea level), 41% are lowlands and hilly regions (from 200 to 600 m above sea level), and 27.5% are mountains (from 600 to more than 1,600 m above sea level).

The climate, with well-defined four seasons, is moderate continental in the North and of a Mediterranean type in the South, with the exception of the mountainous regions. The annual average temperature depends on latitude and ranges from 8°C in the North and 11°C in the South, with temperatures of 2.6°C in the mountains and 12°C in the plains. Snowfall for the most part of the country is in the period from December to March and for the mountainous regions from December to June.

The country's moderate climate, together with its physical relief, is decisive to the development of agriculture and tourism. These climatic and geographical features also allow for year-round tourism and agricultural produce of wide variety.

Bulgaria has a population of 7.64* (7.72**) million people with an average density of 68.9* (69.5**) people per km², which is below the EU average (114.3** people per km²).

Bulgaria has been divided into six planning regions which are classified as NUTS II regions which are not administrative territorial units and are used for the purposes of regional statistics, regional policies and planning. There are 28 administrative districts in Bulgaria which correspond to the EU-classification NUTS III level. The country is further divided into 264 administrative centers called municipalities, which correspond to LAU I level.

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* NSI, Statistical Yearbook, 2008

** EUROSTAT, 2005

In Bulgaria the division of settlements is made on a town and village basis.

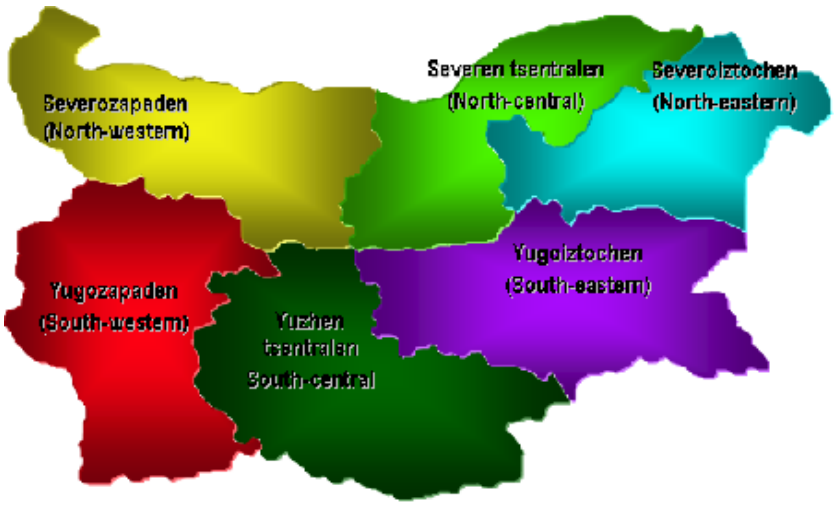


Figure 1 | Map of Bulgaria by region

The area of agricultural designation in 2007 amounts to 5 666 thousands ha and accounts for 51.04% of the territory of the country. The used agricultural area in 2007 is 5 116 thousands ha. Forest land covers 3 715 thousands ha and represents 33.5% of the country's total area.

The population in working age by the end of 2007 accounted of 4 817 thousand people, or 63.05% of the entire population. About 22.47% (1 717 thousand people) of the population is above the working age category. The natural growth of the population is negative and was estimated at (-5.0 %) in 2007, due to a combination of higher death rates and lower birth rates compared to the national average. Over the past years the rate of migration from villages to towns is positive.

There is a clear population-aging trend in the villages. The rural population's education level is much lower that that of the urban. This trend remains the same among the younger generation.

Declining trend for the number of employed in agriculture at the expense of the employed in industry and service sectors was observed in the past years.

Table 1 | Employed by economic sectors (thousands)

Years	Agriculture, forestry and fisheries	Industry	Services	Total
2005	265.4	1020.2	1692.4	2980.0
2006	252.2	1072.1	1785.7	3110.0
2007	245.4	1154.7	1852.5	3252.6

Source: NSI, Employment and Unemployment (annual data), 2007

1.1.1 North Central Region: geographical information

Table 2 | Indicators for the demographic, social and economic development of the planning regions and districts (2007)

	Planning region (NUTS II) and districts (NUTS III)	Territory – sq. km	Population - number	Unemployment rate - %	GDP* per capita - euro	GVA by economic sectors - Thousand Euro		
						Agriculture and forestry	Industry	Services
NUTS 0	Bulgaria	111001.9	7640200	6,90	3772,82	1760898	6377414	12492466
NUTS II	North Central Region	14974,0	931 950	10,7	1834,86	270436	584570	1010008
NUTS III	Veliko Tarnovo	4661,6	278 764	6,5	1868,63	55312	163579	319941
	Gabrovo	2023,0	133 218	1,2	2145,64	19625	149570	146079
	Razgrad	2803,4	136 062	23,5	1766,79	66577	60824	119171
	Ruse	2639,7	253 008	11,4	1808,08	59325	175651	315759
	Silistra	2846,3	130 898	15,2	1570,29	69597	34946	109058

Source: NSI, Regions, Districts and Municipalities in the Republic of Bulgaria 2007, Eurostat, own calculation

* The available data are for 2006.

1.1.2 *Administrative structure of the North Central Region (NCPR)*

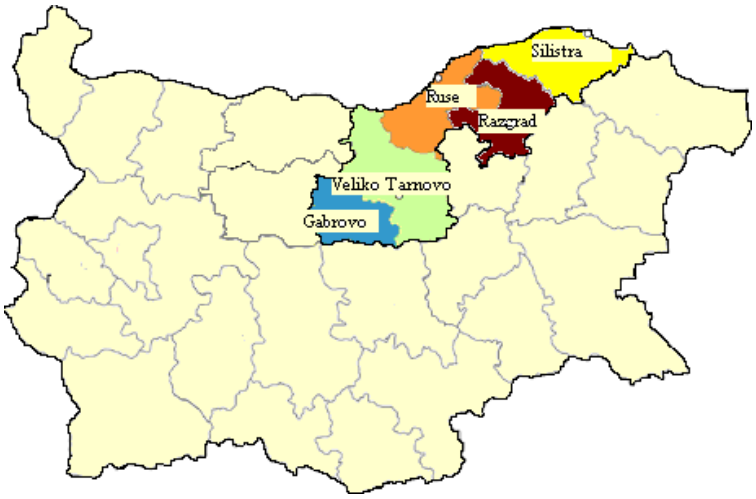


Figure 2 | Map of North Central Planning region by districts

Veliko Tarnovo District(Oblast) is bounded north by the Danube River and south by the Balkan Mountains. It also borders the regions of Pleven, Lovech, Gabrovo, Stara Zagora, Sliven, Targovishte and Ruse, and over the Danube it borders Romania. Veliko Tarnovo region is spread on an area of 4 661.6 sq. km. and has population of 289 229 inhabitants. The region consists of 10 municipal centers with 336 populated areas (14 towns).

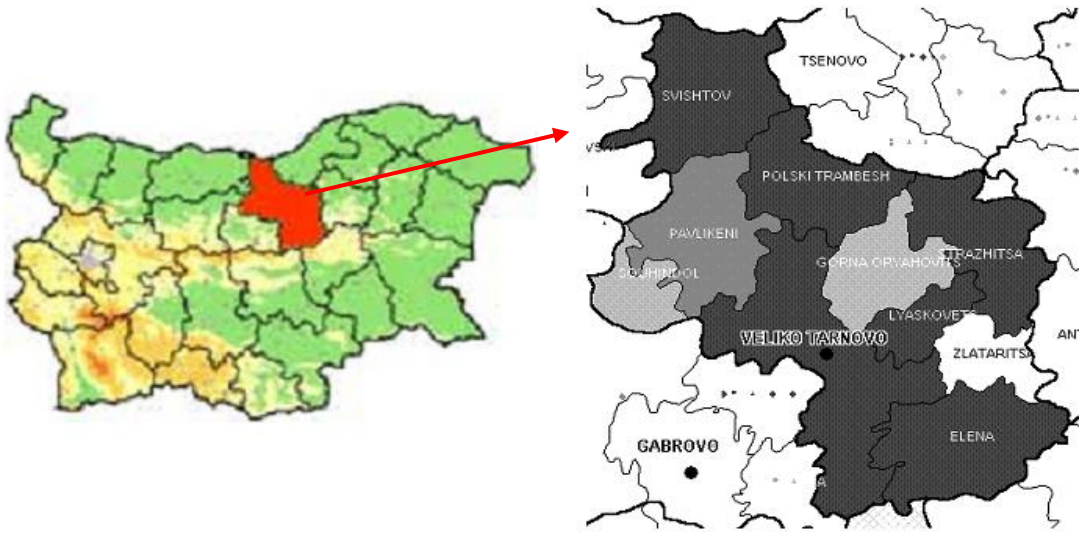


Figure 3 | Map of Veliko Tarnovo District by municipalities

The relief in the region is diverse – there are lowlands, hilly plains, river valleys and heights of the fore-Balkan Mountains, parts of the central Balkans. The Yantra is the largest and high water river in the region. Some other big rivers are Yantra`s tributaries – the Rositza and Dryanovo Rivers. The reserves of Haydushki Chukar ("Haidouk Crags") and Byalata Krava ("White Cow") are located in the Balkan Mountains of Elena. There are 140 cultural monuments of national significance within the area of Veliko Tarnovo Region. Here are some of the most visited cultural and historic sites which make tourism a significant part of the region's economics. The numerous cultural monuments, the rich and diverse fauna and thermal waters near the village of Voneshta Voda ("Stinking Water") provide conditions for cultural and hunting tourism along with medical and balneological tourism. The vine-growing complexes in Lyaskovetz, Suhindol, Karaysen and Svishtov stimulate the wine tourism. The municipalities of Elena, Zlataritza, Strazhitza and Pavlikeni specialize in rural tourism. Well-developed is the stockbreeding sector.

Gabrovo District (Oblast) is situated in Central Northern Bulgaria, bounded by the regions of Veliko Tarnovo, Lovech and Stara Zagora. The area size of the region is 2 023 sq.km. The population of district is 140 991 people. Gabrovo region consists of 4 municipalities (Gabrovo, Dryanovo, Sevlievo and Tryavna) and 356 populated areas of which 5 towns.

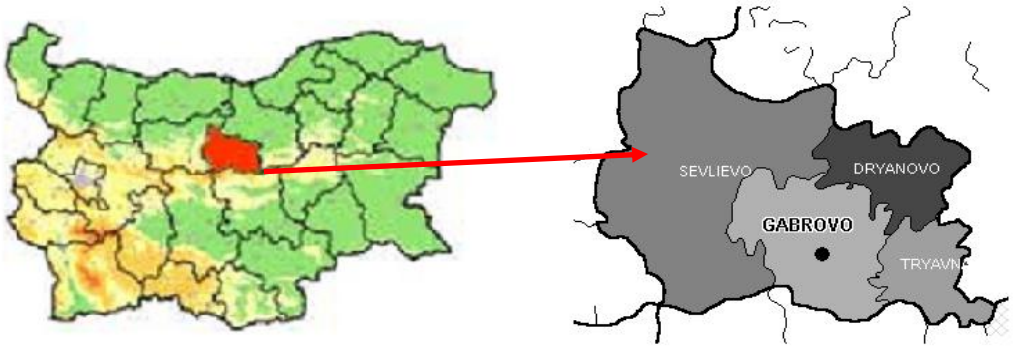


Figure 4| Map of Gabrovo District by municipalities

The Ruse–Podkova railroad runs through the region crossing the Balkan Mountains and connecting Northern Bulgaria with Southern Bulgaria.

The relief of the region is diverse, mostly mountainous. The area of Gabrovo Region covers some middle parts of the Balkan Mountains and the fore-Balkans, the valleys of the Yantra, Rositza, Vidima, Drianovska rivers as well as several kettles and plateaus, and Gabrovo and Sevlievo heights. On the territory of Gabrovo Region there are more than 650 monuments of culture, most of which are related to the National Revival period.

The leading sector in the region is industry while stockbreeding is the most developed one in agriculture.

Ruse District (Oblast) includes a part of the hilly Danubian Plain, the Danubian riverside plain of Pobrezhie and part of Ludogorie lowlands. It is bounded by the regions of Silistra, Razgrad, Targovishte and Veliko Tarnovo, and borders Romania to the north with the Danube River as a boundary. The region territory is 2 803.4 sq.km. The population accounts 264 232 inhabitants. Ruse region consists of 8 municipalities (Rousse, Borovo, Byala, Vetovo, Dve mogili, Ivanovo, Slivo pole and Tsenovo) with 9 towns and 74 villages.

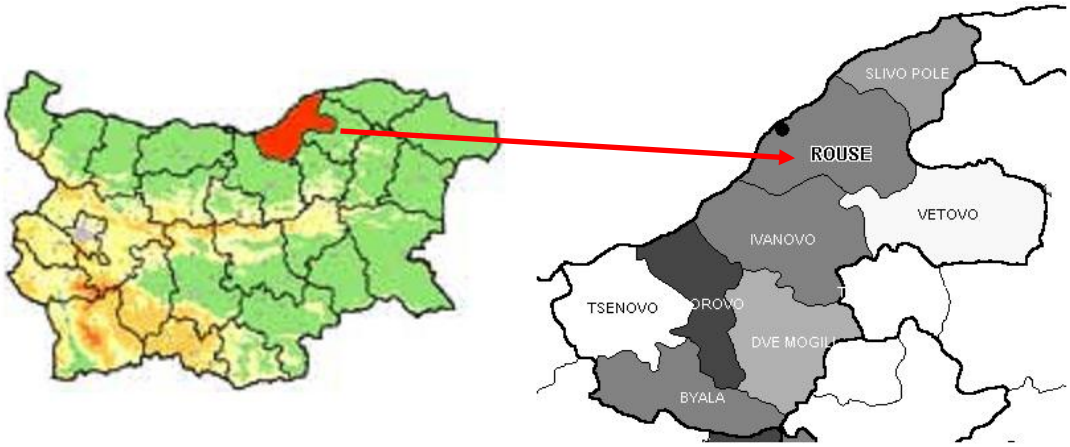


Figure 5 | Map of Ruse District by municipalities

Razgrad District (Oblast) is located in the northeastern section of the Danube plain, on an area of 2 639.7 sq. km. The Region borders with the Ruse, Silistra, Shoumen, and Targovishte regions. Razgrad Region comprises seven municipalities - Razgrad, Isperih, Kubrat, Zavet, Loznitsa, Samuil and Tsar Kaloyan and 102 settlements, of which there are 6 towns and 97 villages.

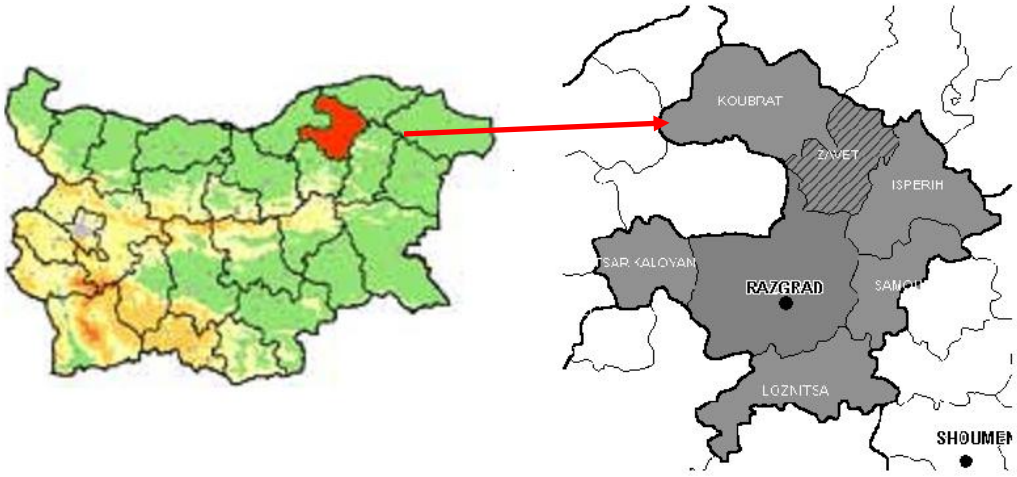


Figure 6 | Map of Razgrad District by municipalities

Silistra District (Oblast) is situated in the northern part of the NCPR, on the bank of the river Danube. The administrative center of the region is Silistra - a town, with population of 38 733 inhabitants. It is bounded by the regions of Russe, Razgrad, Shumen and Dobrich. It also borders on Romania by land and by the Danube River. The region consists of 7 municipal centers (Silistra, Alfatar, Glavinitsa, Dulovo, Kaynardja, Sitovo, Tutrakan) with 118 populated areas (of which 5 towns). It spreads on an area of 2 846.3 sq. km. and has population of 138 994 inhabitants.

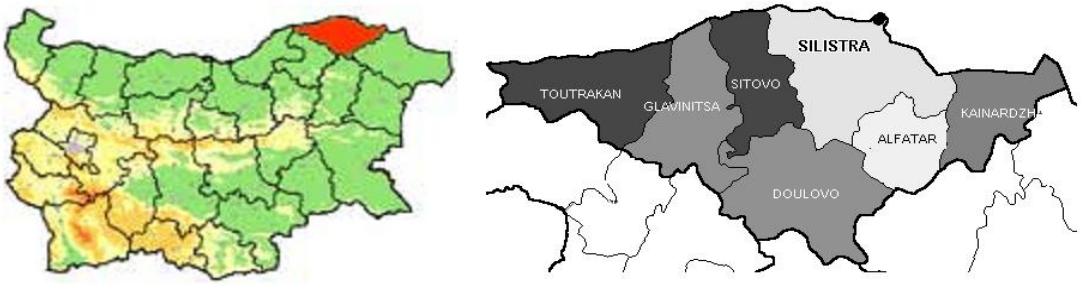


Figure 7 | Map of Silistra District by municipalities

The territory of the region includes parts of the hilly Danubian Plain, Dobrudzha and Ludogorie lowlands. The Danube River is a natural waterway connecting Silistra with Central and Eastern Europe. The relief is predominantly plain. Rivers, which flow through the region, are small and they often run dry in summer. The landscape is agricultural. Grain and technical crops are generally grown. Conditions related to natural climate and soil in the region are extremely conducive to developing modern farming. There are no century-old forests. The scenery is varied by forest shelterbelts.

Natural and historical realities of the region enable the development of cognitive, cultural, ecological, rural and hunting tourism. The most interesting natural site in the region is Lake Srebarna. It is located in the south-western part of the plain and is part of the Srebarna Biosphere Reserve, included in the UNESCO List of World Cultural Heritage. Several islands have been formed in the Danube, some of which are suitable for recreational and tourist purposes. The Karakuz natural game preserve provides opportunities for hunting tourism and the nature reserves of Malak Preslavets (a lake with water-lilies) and Srebarna are convenient places for ecotourism.

- Settlements

The number of settlements in NCPR remains relatively unchanged in the last years – 957 villages and 38/39 towns. In 2007 in district Razgrad is established one settlement as a village more and in district Rouse one of the villages has been changed in town. The average number of inhabitants per settlement decreases over the observed period and for 2007 it is lower the country's average (respectively 936 and 1440 inhabitants per settlement).

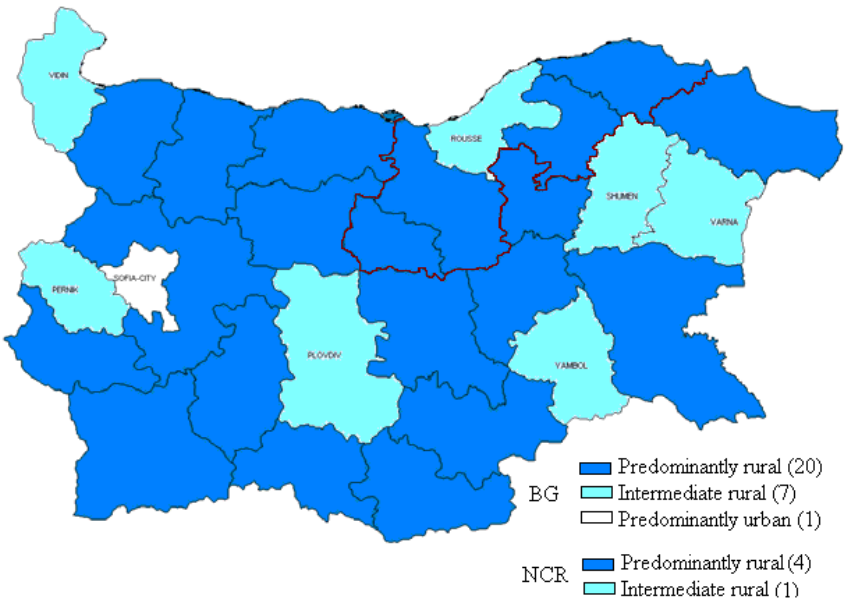
Table 3 | Settlements Characteristics in NCPR

	2007	2006	2005	2004
Number of settlements, including:	996	995	995	995
Town	39	38	38	38
Villages	957	957	957	957
Average inhabitants per settlements	936	946	954	964

Source: NSI, Regions, Districts and Municipalities in the Republic of Bulgaria 2007

1.1.3 Rural areas

According to the OECD definition, in Bulgaria there are 20 predominantly rural NUTS 3 regions, seven intermediate rural regions and only one predominantly urban region - the capital Sofia. Thus, predominantly and intermediate rural regions cover 98.8% of the territory and account for 84.3% of the population of Bulgaria

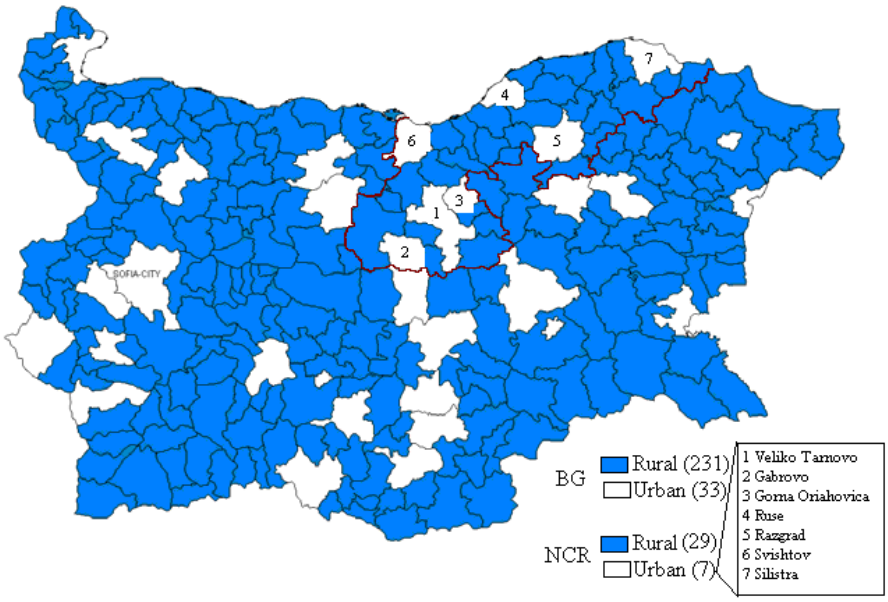


Source: MAF, 2004, "National Strategy Plan for Rural Development (2007 –2013)"

Figure 8 | Designation of Rural Areas at NUTS 2 Level Using the OECD Methodology

Following OECD definition in NCPR there are 4 predominantly rural NUTS 3 regions (Veliko Tarnovo, Gabrovo, Razgrad and Silistra) and 1intermediate rural NUTS 3 region (Ruse).

According to the national definition, rural areas are municipalities (LAU1), in which no one settlement has a population over 30 000 people and population density is under 150 inhabitants per sq.km. According to this definition, 231 municipalities (87 %) in Bulgaria are classified as rural. The rural areas represent 81% of the Bulgarian territory and 42% of its population.



Source: MAF, 2004, "National Strategy Plan for Rural Development (2007 –2013)"

Figure 9 | Designation of Rural Areas at LAU 1 Level Using the National Definition

This definition has been accepted as official one in Bulgaria. It has been applied for elaboration of the National Strategy Plan for Rural Development, the Rural Development Program and for implementation of the EU structural policies. Taking into account one of the project's aim to examine the European structural policies' impact on the multifunctionality in rural areas, we decide to use it. Following the national definition in NCPR there are 7 urban LAU 1 regions (Veliko Tarnovo, Gabrovo, Gorna Oriahovica, Ruse, Razgrad, Svishtov and Silistra) and all the rest 29 are rural.

1.2 Demographic trends

1.2.1 Population

By the end of the year 2007 the population of the NCPR consists of 931 950 residents or 12.2% of the total population of the country. The population density equals to 63 inhabitants/sq.km. and is below the country's average (69 inhabitants/sq.km). Over the last decade the population in the Region follows the same pattern of decrease that can be observed at national level. About 65% of the population lives in towns, which is lower than the country's average (71%). There are fluctuations in the birth and death rates. Nevertheless, the value of the birth rate (8.40‰) is the fifth highest in the country and the death rate (15.70‰) is the fifth lower in the country. The amount of economically inactive population steadily increases over the last five years at the expense of the total workforce, which constantly decreases over the same period – a pattern that can be observed at national level as well. The number of students per 1,000 inhabitants is higher (45) than that of the country (35) as a whole and is relatively non-stable during the last decade. The number of registered doctors for the NCPR repeats the unstable behaviour of the former indicator, but is below – 2.82 per 1,000 inhabitants – the country's average of 3.65 registered doctors per 1,000 inhabitants. The number of dwellings per 1,000 inhabitants in the Region (505) is lower than the average for Bulgaria (517) and is constantly increasing over the last decade – a fact, which is mainly due to the population decrease for the same period. The average size of households in the NCPR fluctuates in the last 10 years, being almost identical with the indicators at national level (2.6 in NCPR and 2.5 in Bulgaria).

Table 4 | General Population and Quality of Life Indicators in NCPR

INDICATORS	2007	2006	2005	2004
Population	931950	941240	949401	958755
Density (inhabitants/sq km)	62,5	62,86	63,40	64,03
People living in towns	604582	609357	607646	612218
People living in villages	327368	331883	341755	346537
Birth Rate	8,40	8.22	8.22	8.20
Death Rate	15,70	15.78	15.90	15.12
Total workforce / thousands	412,3	406.7	393.2	401,3
Students/1000 inhabitants	45	36	38	43
Dwellings/1000 inhabitants	505	487	492	498
Registered Doctors/1000 inhabitants	2,82	2,77	2,86	2,83
Average size of Households	2,6	2,4	2,5	2,5

Source: NSI, Regions, Districts and Municipalities in the Republic of Bulgaria 2007, own calculation

1.2.2 Age structure

The age structure of the population in NCPR and the country as a whole gives very serious grounds for concern. While the percent of population at working age remains relatively constant over the last years, the percent of people at retirement age is constantly growing at the expense of the population below working age. This is a serious demographic problem, which is invariably aggravating in the last years. One of the most unfavorable development of the demographic processes has been noted for the North Central Region.

The NCPR's positions, compared to the country's average, are as follows:

- 13.32% and 11.83% of the male and female population respectively are below working age, compared to the country's 14.21% and 12.63%.
- 71.09% and 67.44% of the male and female population respectively are at working age, compared to the country's 71.14% and 67.55%.
- 15.59% and 20.73% of the male and female population respectively are at retirement age, compared to the country's 14.65% and 19.82%.

Table 5 | Population Distribution in NCPR by Age and Sex – 2006

Sex	% Under Working Age	% Working Age										% Retirement Age
	Below 15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	Over 65
Male	13,32	6,60	7,48	7,27	7,45	7,32	6,79	6,98	7,29	7,34	6,59	15,59
Female	11,83	5,86	6,80	6,44	6,68	6,69	6,32	6,62	7,11	7,60	7,33	20,73

Source: NSI, Population and Demographic Processes 2007

The NCPR's labour supply is predetermined significantly by the population number and age profile. The population in working age by the end of 2007 accounted for 645 thousand people, or 69.21% of the entire population.

The population above working age in 2007 was 170 thousand people.

A lasting downward tendency outlines for the population below working age on country level is valid for NCPR. By the end of 2007 this population category accounted for 117 thousand people.

1.2.3 Education

The education system in NCPR consists of schools in all educational levels. In 2007, there are 379 kindergarten, 305 general schools and 85 secondary schools in the region. In NCPR there are 5 universities and equivalent higher schools with 41,1 thousand students. The same year 10,6 thousand students graduated their higher education.

Table 6 | Kindergartens, schools, universities, teachers and students by districts in NCPR, 2007

Planning region and districts	Kindergartens	Kindergarten teachers	Children enrolled	General schools	Upper secondary education schools	Universities and equivalent higher schools	Teachers in general schools	Teachers in upper secondary education schools	Lecturers in universities and equivalent higher schools	Pupils in general schools	Pupils in upper secondary education	Students in universities and equivalent higher schools
North Central	379	2 308	25 143	305	85	5	6 216	2 559	2 362	16 518	23 772	41 142
Veliko Tarnovo	114	629	7 089	95	25	3	1 868	765	1 338	5 085	7 030	26 058
Gabrovo	33	296	3 230	31	14	1	701	361	303	1 863	3 348	6 856
Razgrad	89	454	4 760	61	13	0	1 084	419	0	2 178	3 860	0
Ruse	68	569	6 367	68	21	1	1 563	718	576	4 713	6 881	7 936
Silistra	75	360	3 697	50	12	0	1 000	441	0	2 679	2 653	0

Source: NSI, Regions, Districts and Municipalities in the Republic of Bulgaria 2007

The educational structure of the population (at 15 years and above), living in NCPR differs from that of the country as a whole – the percentage of people with higher and medium education in the Region (14,00% and 46,00% respectively) is lower than the country's average (17,20% and 46,63%), while the share of population with low education in the Region (40%) is higher that in the country (36,17%). This is a direct consequence from the ethnical structure of the population in the south-eastern part of the NCPR, where the percentage of Turkish minority is relatively high with respect to the rest of the Region. The described educational structure of the population in the NCPR to a certain degree determines the distribution of the employed among the different sectors of the economy.

Table 7 | Education Level* in Bulgaria – 2007

Population with higher education (university) %	14,00
Population with medium education (high school, agricultural school, technical education) %	46,00
Population with low education (rest of the pop.) %	40,00

*Population 7 years of age and older. Source: Eurostat, own calculation

The profile of employed in NCPR by education status displays the largest share of employed with secondary education – 63,33%, followed by employed with higher education – 23,29%. The share of employed with basic, primary and lower than primary education – 13,38% is the lowest. Unemployment rates (especially long-term unemployed people) correlate strongly with the educational levels. In NCPR there is clear evidence that more than 50% of long-term unemployed and 70% of long-term unemployed young people are with primary or lower than primary education.

1.2.4 Migration of the population

In 2007, 151 thousand persons changed their present address within Bulgaria and 20,5 thousand persons changed their present address within NCPR.

The biggest migration increase in territorial aspect in 2007 occurred between cities and other cities. This tendency of region development is the same like on national level. Approximately 38% of emigrants and 34% of immigrants on the region level changed their place of residence from one city to another either in NCPR and other regions. Migration flows from villages to cities and from cities to villages of NCPR (from the same region and other) are respectively 23% and 26%. Migration between villages accounted for the lowest share. In 2007 out of all migrants 15% migrated between villages.

Table 8 | Migration Flows, 2007

DIRECTION	NCPR	Bulgaria
From Rural to Urban1	4836	33185
From Urban to Rural2	4932	43360
From Urban to Urban3	6240	57731
From other regions	6288	51146
To other regions	8492	
Net Migration	-2204	-

**Interregional migration in the country*
[1] The migration flows are presented as: from Villages to Towns
[2] The migration flows are presented as: from Towns to Villages
[3] The migration flows are presented as: from Towns to Towns
Source: NSI, Regions, Districts and Municipalities in the Republic of Bulgaria 2007

The analysis of the two main flows in NCPR (within the region and between NCPR and other regions) - from cities to villages and from villages to cities - shows a reversal of the migration balance in favour of villages. In 2007 the number of migrants from cities to villages was more than that in the opposite direction by about 4%.

1.3 Economic system

1.3.1 Economy[1]

The North Central Region forms about 9,04% of the country's GDP, while the GDP per capita is below the national level (respectively 1835 and 3278 euro).

The share of the service sector in the GVA of the region is growing in the last few years, reaching 54,2% in the year 2006.

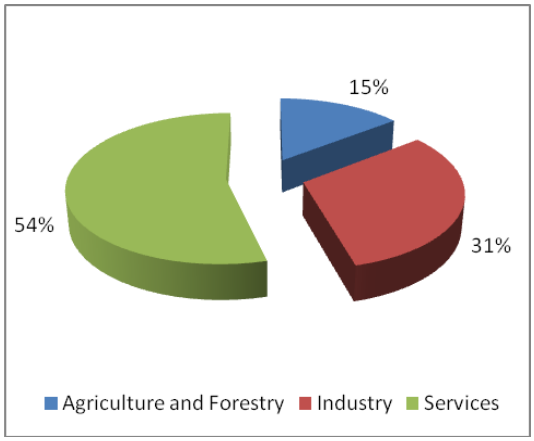


Figure 10 | Gross Value Added by economic sectors, 2006

Source: NSI, Regions, Statistical Yearbook 2008

The sectors of agriculture and industry give 14,5% and 31,3% respectively in the total amount of GVA for the region. The comparison to the corresponding figures at national level (8,5% and 30,9%) clearly shows the importance of the agricultural sector for the economy of the NCPR as compared to the country as a whole.

[*] Due to the change in administrative structure of the country in 2004/2005 the data for the period 2006 and before are not directly comparable with the last years. In all statistical publications till 2007 NCPR cover the following districts: Veliko Tarnovo, Gabrovo, Lovech, Pleven, and Rousse.

Table 9 | Gross Value Added by economic sectors

GVA	2006	2005	2004			
	in euro	in %	in euro	in %	in euro	in %
Agriculture and Forestry	270436	14,5	260987	15,0	271152	16,6
Industry	584570	31,3	504950	29,1	469025	28,8
Services	1010008	54,2	972135	55,9	889014	54,6

Source: NSI, Statistical Yearbook 2008

Major characteristic of the region economy is its diversification and existence of traditional productions. NCPR is developing a mixed type of economy.

The production of food products, beverages and tobacco, basic metals and fabricated metal products and chemicals, products and man-made fibres occupy a considerable share in the economy of the region – respectively 21,96%, 9,48% and 7,06.

Table 10 | Production of the industrial enterprises and establishments by activity groupings, 2007 (in %)

	Manufacture of food products, beverages and tobacco	Manufacture of textiles and textile products	Manufacture of chemicals, products and man-made fibres	Manufacture of basic metals and fabricated metal products, except machinery	Manufacture of machinery and equipment
North Central	**21,96**	**7,75**	**7,06**	**9,48**	**15,69**
Veliko Tarnovo	36,63	4,71	5,08	8,01	13,59
Gabrovo	6,71	8,73	-	9,06	33,86
Razgrad	58,83	2,76	n.a.	1,95	1,91
Ruse	9,69	11,04	13,81	14,02	8,46
Silistra	33,28	5,48	0,97	3,87	13,77

Source: NSI, Regions, Districts and Municipalities in the Republic of Bulgaria 2007

Food and beverages industry is well-developed in 3 districts: Veliko Tarnovo, Razgrad and Silistra. Pharmaceutical industry has a significant part in district Razgrad economy. Significant and structure-determined industrial sectors for the region economy are also the following ones: “Machinery and equipment”, “Textile and textile products”.

1.3.2 Unemployment

The registered unemployment rate in NCPR, with a value of 10,9% (7,9% in 2007), is one of the highest in the Bulgaria - the 3rd place (both in 2006 and 2007). The country's average is 9,0% in 2006 (6,9% in 2007).

In 2007 the profile of unemployed by educational levels in NCPR displays the largest share of persons with secondary education – 63,3%, followed by the share of those with higher education – 23,2%. The share of those with primary and lower education – 13,3% is the owest.

Table 11 | Employed persons by level of education and district in NCPR, 2007

Region and districts	Total		By level of education					
			Higher		Upper Secondary		Primary and Lower Education	
	in number	in %	in number	in %	in number	in %	in number	in %
North Central	368,4	100,0	85,8	23,29	233,3	63,33	49,2	13,36
Veliko Tarnovo	110,2	29,9	31,0	28,13	68,9	62,52	10,3	9,35
Gabrovo	60,2	16,3	13,3	22,09	42,2	70,10	4,8	7,97
Razgrad	43,1	11,7	8,3	19,26	24,2	56,15	10,5	24,36
Ruse	105,4	28,6	23,2	22,01	68,2	64,71	13,9	13,19
Silistra	49,5	13,4	10,0	20,20	29,8	60,20	9,7	19,60

The unemployment rate in the districts follows the patterns, which can be seen at regional level, namely the largest share of unemployed persons with secondary education, followed by the share of those with higher and the lowest share of the unemployed with primary education. Only exception is observed for the Razgrad district where the lowest share of unemployed is of those with higher education.

1.3.3 Agriculture

During the economic 2006/2007 about 477,1 thousand agricultural structures in the country correspond to the definition of agriculture[2], whereas in 2005 their number was 534,6 thousand. In NCPR the total number of farms equals to 71 200, which is 9,3 % less than the number of farms in 2005 (78 500)[3]. During the last two years in the NCPR 7300 farms suspended their activities or have moved beneath the thresholds of agriculture, or had no agricultural activity during the monitored economic year.

[2] The definition of agriculture is classified in the Law on Agricultural farms census in the Republic of Bulgaria in 2003, State Gazette, Issues 17 of 21.02.2003.

[3] Annual Report 2008. Ministry of Agriculture and Food. p.25

Number of registered agricultural producers in the NCPR increased by 25,6 % last two years (2007 and 2008) (Figure 11). The register of agricultural producers in accordance with Ordinance No 3 of 1999 serves for getting information on activity of the agricultural producers aimed at supporting agriculture and the development of the rural areas. After the registration the agricultural producers can make use of the preferences regulated in the Taxation of the Income of Natural Persons Act (TINPA), the Corporate Revenue Tax Act (CRTA) and the Social Insurance Code. According to the Statute for the application of the Agricultural Land Ownership and Use Act, it is only the registered agricultural producers who can participate in tenders or competitions for renting/leasing vacant lands from the State Land Fund. Registration is a precondition for receiving financial support from the "Agriculture State Fund, SAPARD and the Rural development programme.

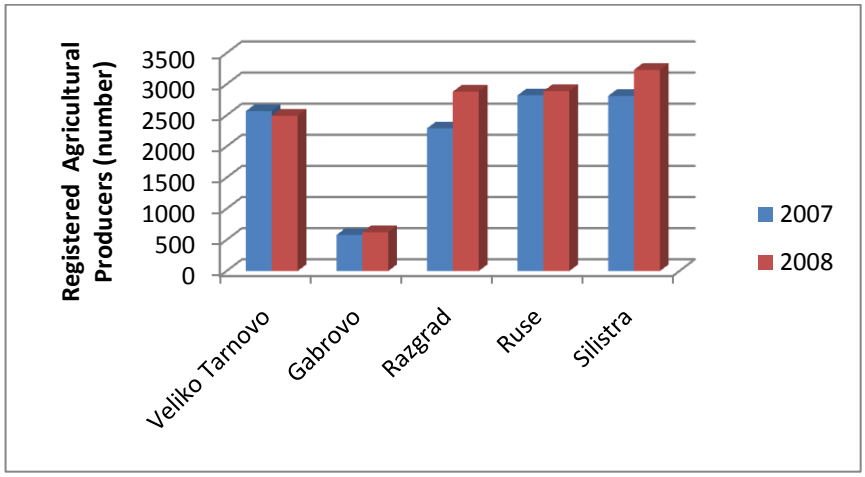
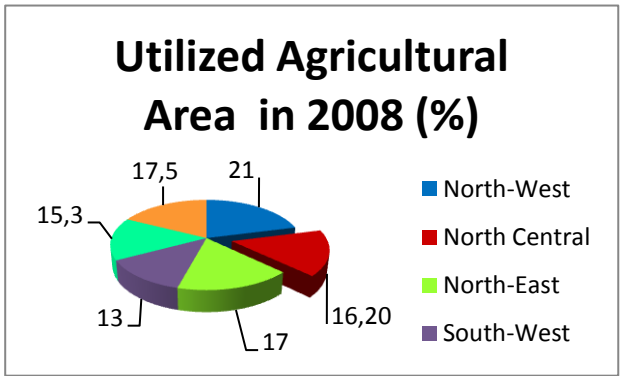


Figure 11 | NCPR: Registered Agricultural Producers

NCPR is on the fourth place among other planning regions by UAA in 2008 and on the third place by arable land. (Figure 12).



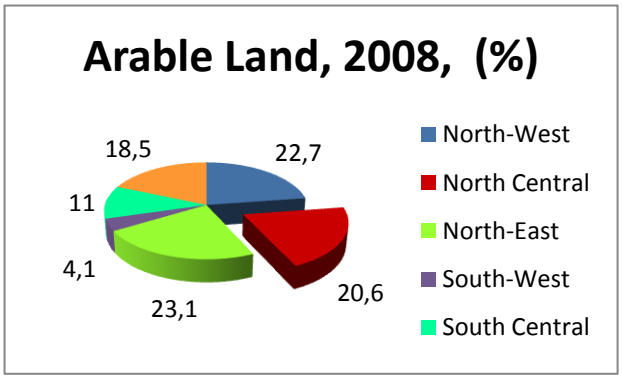


Figure 12 | NCPR: Utilized Agricultural Area and Arable Land in 2008

98 % of farms have at their disposal used agricultural area (UAA) in 2007. The average size of UAA is 10,57 ha, whereas the average size of UAA at country level is 6,33 ha. (Figure 13).

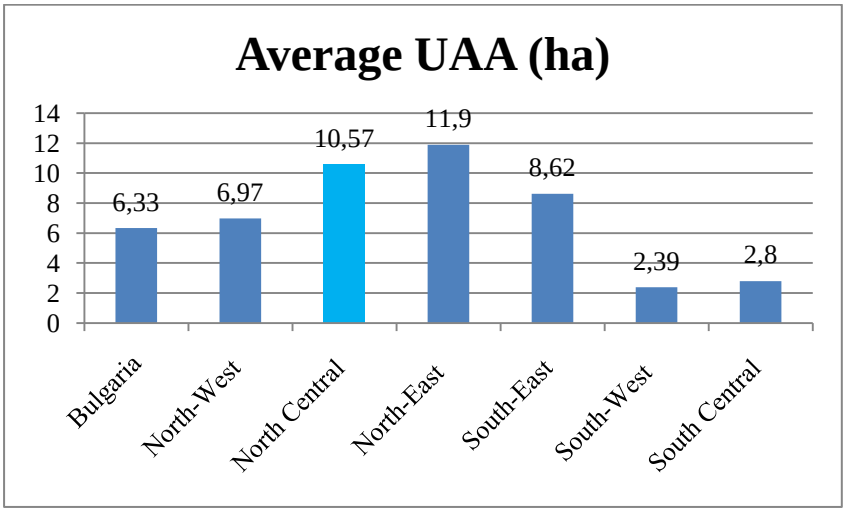


Figure 13 | Average UAA

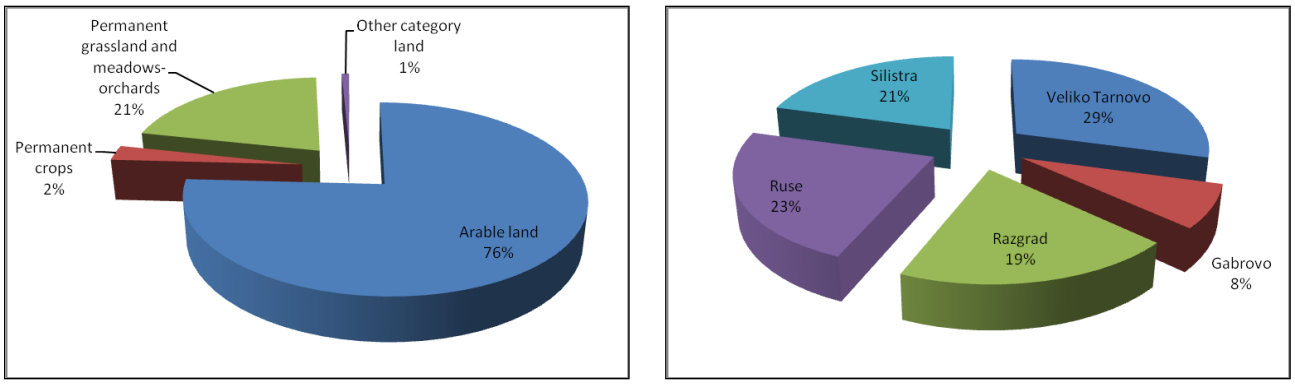
The NCPR is on the fifth place with the total number of holdings but on the second by average UAA. It is as a result of the production structure of the region (see table 12). NCPR is on the first place with 4571 holdings – 26% of all holdings in Bulgaria specialized in cereals, dry pulses and oil crops.

Table 12 | Holdings in Bulgaria by farm type and planning regions, 2007

Regions	Holdings specialized in:								Mixed holdings with dominating:								
	Cereals, dry pulses and oil crops	Other arable crops	Vegetables, flowers and mushrooms	Vineyards	Orchards	Mixed permanent crops	Milk cattle	Meat cattle	Mixed milk cattle	Sheep, goats and other grazing livestock	Pork, poultry, rabbits	Crops	Grazing livestock	Granivores	Arable crops and grazing livestock	Other crops and livestock	Non-classified farms
Bulgaria	17718	56635	15092	18770	10275	3397	42560	1312	1554	5172	60520	46791	29844	44458	37442	46648	14941
North-West	3508	2571	940	2180	1737	255	5080	73	176	460	14737	11720	7910	13816	3116	12451	3601
North Central	4571	3896	1200	737	759	172	4613	42	27	5719	8862	7071	4825	7488	4016	7514	2022
North-East	3525	2792	905	1364	509	197	5703	128	248	433	8656	3197	3845	7193	3379	4261	1958
South-East	2302	3566	3604	3924	2083	913	5916	245	228	528	8855	5423	3692	6541	1994	6812	2321
South-West	628	15038	2388	3590	2565	660	6509	199	127	824	7781	8700	5003	4453	8496	6535	1727
South Central	3184	28772	6055	6975	2622	1200	15739	625	518	280	11629	10680	4569	4967	16441	9075	3312

Source: MAF, Structure of Agricultural Holdings in Bulgaria (crop year 2006/2007), Final Results

The structure of land in NCPR is shown on figure 14A. The region covers about 16,3% of the total utilized agricultural area, as the share of the arable land, permanent crops, and permanent grassland and meadows-orchards is 76%, 3%, and 21% of the total agricultural land in the region respectively. The total agricultural land in the region is spread among the districts as it is shown on the figure 14B.



A B

Figure 14 A and 14B | Utilized agricultural area by type and district in 2007

The road transport network is generally well developed in Bulgaria. The railway and water transport systems are much more limited in terms of coverage.

There are 1 172 settlements in Bulgaria where waste is collectively collected. During the 2007 continuing the tendency of building up of regional landfills for municipal waste and at the same time were closed down of landfills built in the past, which do not respond to the ecological requirements, and new contemporary facilities for municipal waste disposal were constructed. A result of this was a reduction in the total number of landfills within the country from 619 in 2000 to 435 in 2007. The organized waste collection systems were implemented in new settlements led to an increase of the population served by municipal waste collection systems from 78.6% in 2000 to 92.5% in 2007.

As regards the social infrastructure, the system of education is well developed, with nurseries, kindergartens, and schools in almost every rural settlement that has the minimum required number of children. There is also a well-developed health care system that relies on primary and pre-hospital care units as the main form of health care. In addition, there is an array of cultural and public facilities such as community centres, public libraries, clubs, etc.

Rural natural resources and climate are an important pre-condition for the promotion of multiple economic activities in rural areas: agriculture, forestry, industry, tourism, etc. In general, much of the industry in rural areas is of the multi-purpose type. Almost all industries were developed prior to the outset

of the economic reforms (food processing, timber, textiles and knitwear, electronics, machine-building located in small to medium-sized enterprises). The collapse of the command economy and the implementation of economic reforms culminated in the liquidation of many enterprises, which in turn resulted in a dramatic reduction in rural non-agricultural employment. With the completion of land restitution, many of the small private farms, which have emerged, are essentially subsistent in nature.

The North-Central Region (NCPR) is situated in the central part of Northern Bulgaria. It borders the Danube to the north, which marks the Bulgarian border with Romania, the Iskar River to the west, the river of Rusenski Lom to the east and the Balkan Mountains to the south.

The NCPR spreads on a territory of 14 974 sq. km., or 13.5% of the country's territory. It has a varied relief with plains prevailing especially in proximity of Danube River. The Region borders on the North West Region to the west, North East Region to the east and the South-East Region to the south. The north border coincides with the state frontier with Romania – Danube River, on which Ruse and Silistra ports are situated.

The geographical conditions in the NCPR are very favorable for the development of agriculture and tourism – with a percentage of mountainous areas and forests (23.82% of the region territory) below the country's average (33.47% of the territory).

NCPR has a moderate climate. The low amount of precipitation – below 500 mm enforces artificial irrigation of the agricultural territories. The average temperatures in the Region vary between 11°C and 12°C, while they are higher near the Danube River.

NCPR is on sixth place among the six NUTS 2 of Bulgaria with 941 240 residents (12.3% of country population) and on fifth place as territory (13.5% of national territory).

The NCPR includes 5 administrative regions (NUTS 3), 36 municipalities (LAU 1) and 359 settlements (LAU 2). The local authorities (towns', municipalities') are responsible for many activities as education, health care, etc.

The capital city of the Region is Ruse. The city of Rousse is situated in eastern part of North-Central Bulgaria at the mouth of the river Roussenski Lom witch is the easternmost of the right tributaries of the Danube. Rousse is a major crossroad of the east-west water-ways – European transport corridor N 7 and of the north-south motor and railways – European transport corridor N 9 from Helsinki, Finland to Aleksandropulus, Greece. The Rousse port is one of the largest in the lower course of the Danube. There is a ferry line from Rousse to the Ukrainian port Reni and the Romanian port Gurgu. The Rousse bridge is the main way across the Bulgarian part of the Danube. The bridge is 2.8 kilometres long and is suspended 30 metres above the water on two levels – for the trains and for vehicles. With its over 155 000 residents Ruse is the

largest Bulgarian city on the Danube. It is also important political, university and cultural centre.

The main centres of economic activities of the NCPR are the capital towns of the administrative NUTS 3 regions (districts / oblasts)- Veliko Tarnovo, Gabrovo, Ruse, Razgrad and Silistra. One of the problems of the Region is that the economic activities are concentrated in the towns and the rural regions are relatively depopulated and lagging.

Some of the big rivers are the Yantra and the Rusenski Lom. The region is important for the national transport system. The Danube River is linked through the European waterway system with the Mein and the Rhine rivers and connects the North Sea with the Black Sea. Important roads and railways connect the region with the rest of the country and the only bridge over the Danube on Bulgarian territory connects the country with Romania. The middle point of the bridge marks the boundary between the two countries.

Protected areas on the territory of the district include the Rusenski Lom Nature Park, which comprises the picturesque canyon of the river valley, rock formations near the villages of Pisanets and Mechka, and the Orlova Chuka Cave.

A larger part of region is located on the Ludogorie plateau. The southern part is hilly, while in the north, the land is fused with the Dobrudja and Danubian plains. The population of the Razgrad District is 143 129 inhabitants.

The region is poor in water resources. The only large river is the Beli (White) Lom, which divides the region in two – the northern part and the southern part. The international road Ruse-Varna passes across the region as well as the Ruse-Varna railroad the first railway built in Bulgaria.

There are about 1,200 stationary cultural monuments in the region, which, along with the thousands of items and documents, illustrate the rich material and spiritual culture of the tribes and peoples who have been living in the Ludogorie throughout the millennia. The archaeological reserve of Sboryanovo is in this area. The hunting site of Voden offers wonderful conditions for hunting tourism. The populations of red and fallow deer, wild boar, aurochs and moufflon are regarded high as trophies.

The majority of the total UAA (about 78 %) is cultivated by holdings managing more than 50 ha (but only 0,8 % of the holdings). Less than 7 % of the UAA is cultivated in 75 % of the holdings which manage less than 1 ha each.

Production structure is shown in table 13. The largest share of the arable land holds grains, oleaginous and permanents grassland and meadows orchards which means that on the national level they respectively cover 49%, 20% and 21% of the total country utilized agricultural area. In 2007 in the North Central Region were cultivated the second largest areas of cereals and sunflower in the country, respectively 405 thousand ha or 23% of the

cultivated land in the country and 167 thousand ha or 22% of the cultivated land in the country.

Table 13 | Agricultural area by group of crops and district in NCPR, 2007 (ha)

Regions and districts	Cereals	Oleaginous	Industrial	Vegetables and flowers	Grassland and annual fodder crops	Permanent grassland and meadows orchards	Permanent crops	Fallow land
Bulgaria	1772350	746 081	72 593	101 105	101 674	1 842 141	188 525	291 751
North Central	404 758	167 169	7 111	18 733	26 993	173 242	21 699	12 646
Veliko Tarnovo	107 313	42 727	904	2 309	6 425	77 492	3 010	3 941
Gabrovo	8 235	3 100	-	485	775	45 246	970	3 779
Razgrad	90 561	34 972	707	5 054	7 479	17 587	3 335	1 920
Ruse	109 759	48 459	2 307	2 206	7 525	16 655	3 010	2 308
Silistra	88 890	37 911	3 193	8 679	4 789	16 262	11 374	698

Source: NSI, Regions, Districts and Municipalities in the Republic of Bulgaria 2007

As it is seen the region is the main cereals and sunflower production region. In 2007 in NCPR are produced 545 tons wheat, 97 tones barley, 40 tones corn and 146 tones sunflower seeds, which forms respectively 23%, 23%, 13% and 26% of the country production.

Table 14 | Area and production of main crops by region in 2007

Regions	**Area under crops - hectares**				**Production - tones**			
	Wheat	**Barley**	**Maize (corn)**	**Sunflower seeds**	**Wheat**	**Barley**	**Maize (corn)**	**Sunflower seeds**
Bulgaria	**1 087 996**	**186 850**	**214 367**	**602 398**	**2 390 610**	**419 762**	**312 860**	**564 447**
North-West	224 247	41 199	64 270	143 052	361 119	72 493	76 026	135 938
North Central	244 938	41 679	36 409	139 632	545 402	96 864	39 923	146 304
North-East	263 224	35 605	87 061	140 415	662 158	90 840	93 939	129 573
South-East	224 630	52 270	5 291	125 039	530 029	124 709	14 112	108 143
South-West	32 731	4 431	9 149	10 495	73 037	7 417	33 820	6 388
South Central	98 226	11 666	12 187	43 765	218 865	27 439	55 040	38 101

Source: NSI, Regions, Districts and Municipalities in the Republic of Bulgaria 2007

Agriculture's major sub sector – planting is widespread within the region. Cultivation of perennial cultures (such as raspberry, black currants, aronia, strawberry), grapes and vegetables and fruit-growing also has good perspectives for development. The region has favorable conditions for the cultivation of herbs, oil cultures and mushrooms as such cultivation is a further challenge in front of the agrarians within the region.

The land restitution process took place at the end of last century. As a result of the reform the average size of farms declined as for the country. Nevertheless, it has to be mentioned, that the average size (according to the average utilized agricultural land) of farms in the Region is larger than the average for the country (10,57 ha and 6,33 ha).

Animal breeding is also developed. The main developed activities are cattle-breeding, pig-breeding and sheep-breeding. In the region 89 thousand cattle and buffaloes (15% of the total cattle and buffaloes in country), 217 thousand sheep (14% of the total sheep in country), 71 thousand goats (14% of the total goats in country), 225 thousand pigs (the largest number among the regions forming 25% of the total pigs breed in the country), 4 million poultry (21% of the country level) are raised. The bee farming is well developed in the region – up to 112 thousand bee colonies – again the main producer among the regions (30% of the all bee colonies in the country are breed in the region). In NCPR and especially in the municipality of Elena is initiated the ecological bee-keeping. The ecological clean honey made in Elena region is well known all over the country.

In NCPR exist good conditions to breed specific stocks such as flocks of animals of Bulgarian genofund – "black-headed Pleven sheep" and "black-motley cattle".

The share of employed in agriculture in NCPR for 2007 is 29.9%, which is the same, compared to the country's average (29.2%).

1.3.4 Industry

The sector of industry forms 31,3% in the total amount of GVA for the region. The basic branches of the industrial sector in NCPR are the chemical industry, and the production of food and textile products. In the past machine building, woodworking, and light industry were well developed branches in the region, but nowadays their share have decreased. Nevertheless, in the region due to the well developed technical infrastructure there are many entrepreneurs looking for investment's and partner's interest to develop the business possibilities in these branches.

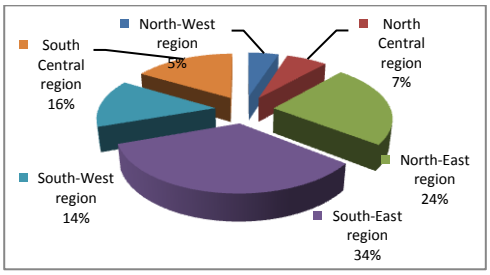
The leading plants in the chemical industry in the region are located in Razgrad. They are "Biovet" Co, producing veterinary medical products, remedies for the agriculture and the human medicine and "Actavis" Co (to be more precise in the pharmaceutical industry), producing substances and ready-for-use medicines – antibiotics for medicine and veterinary practice. (to be more precise in the pharmaceutical industry).

1.3.5 Tourism

The service sector in NCPR is very well developed thanks to the considerable natural and cultural resources. As it was mentioned the share of the service sector in the GVA of the region is growing, reaching 54,2% in the year 2006.

There is a marked tendency towards increease of the employed in this sector over the last decade, which is mainly due to the rapidly developing tourist activity – Gabrovo, Elena, Veliko Tarnovo, Zlataritsa are preferred by many foreign and native tourists as a place for spending their holidays.

In NCPR are set up 324 hotels and accommodation establishments which form 7% of the total tourist establishments in the country. In 2007, 696 thousand people are stead overnight in these establishments and they are spent 1 147 thousand nights (3% of the total nights in the country spent by tourists either Bulgarians and foreigners).



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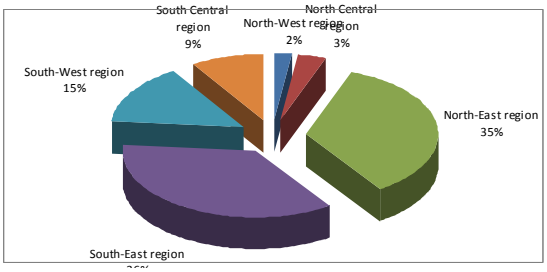


B

Figure 15 A and 15B | Hotels and accommodation establishments and spent nights by region in 2007

In the Region the necessary opportunities for a sustainable development of the tourist branch are given. The potential for the establishment of a specialized tourist product, which will offer alternative forms of tourism like cultural, rural, hunting and ecological tourism, is determined by remarkable nature sights, historical and cultural monuments, unique architecture, museums, mineral springs, hunting shoots, etc. Just in Veliko Tarnovo district there are more than 140 historical monuments of national significance, which is 15 % of the total number for the country.

The well-preserved environment, as well as the ecologically clean agriculture, provides excellent conditions for eco and rural tourism. The National Park “Central Balkan” and Nature Park “Balgarka” are situated on the territory of Gabrovo district and preserve protected areas, flora and fauna representatives. On the territory of Silistra district is situated a biosphere reserve Sreburna, which includes Lake Sreburna and the surrounding territory, covering an area of 600 ha. It is located on the Via Pontica, a bird migration route between Europe and Africa. It serves as breeding ground of almost 100 species of birds, many of which are rare or endangered. Some 80 other bird species migrate and seek refuge here every winter. Around the lake an eco-path is constructed to allow better view for tourists, without having to disturb the natural habitats. There is also a museum, where a collection of stuffed species typical for the reserve is arranged.

The wild forests in the mountainous and hilly areas of the NCPR boast different animal species. The combination of forests and game is a good prerequisite for the development of hunting tourism. On the territory of the

municipality Kubrat there are hunting areas with total area more than 11 000 hectares.

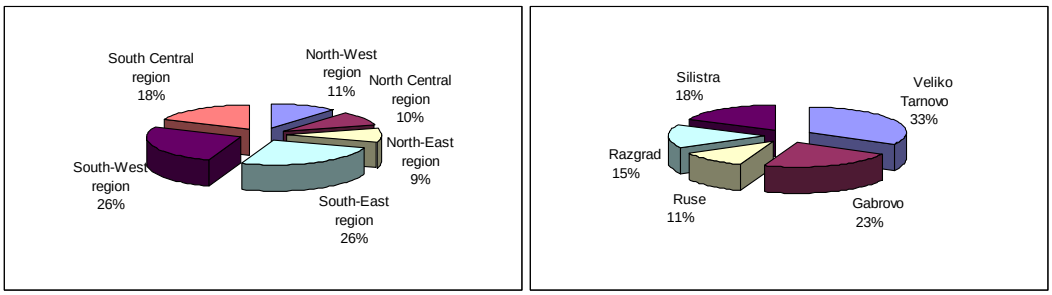
A number of wine centers in NCPR (the one in Lyaskovets, Suhindol and Karaysen) attract the people fond of the so called "Wine Tourism". On the territory of the municipalities Suhindol and Biala there are lot of dams and lakes, which offer a good opportunity for amateur and sport fishing. In the district Ruse four municipalities - Ruse, Ivanovo, Slivo pole and Dve Mogili have the best potential to offer tourist services. The most interesting objects are: The Archeological reserve "Ivanovo rock churches", the Archeological reserve "Cherven", the Natural park "Rusenski Lom", the countryside along the river Rusenski Lom, the Wooden park "Lipnik", the Park zone around the hut "Prista", the island "Lyulyak", the Cave "Orlova chuka", etc.

A part of the reservation Kalimok – Brashlen is on the territory of Slivo pole. It is a place of a great interest in the alternative tourism sphere. Various species of the animal wildlife has been preserved, represented by 230 kinds of birds, which is 58 % of all the birds in Bulgaria, reptiles, amphibians and mammals, rare an endangered species – recorded in Bulgarian Red book.

On the territory of the region there are lots of newly-established eco-paths. For example in Gabrovo municipality there are: Eco path "Gradishte, Eco path "Lilac, Eco path "Roman Road", Eco path "Vitata stena (the winding wall)", Eco path "Bozhentsi – the Dryanovo Monastery", Eco paths on the territory of Uzana, Eco paths on the territory of natural park "Bulgarka"; In Elena: Town Elena – Tarkasheni village – Darlevtsi village – "Boaza" Inn – 4 hours; Town Elena – "Markov stone" – "Raev stone" – town Elena – 4hours and a half; Town Elena – "Hristovski waterfall" – town Elena – 3hours and a half; etc.

1.3.6 Forestry

In the NCPR the forest fund is on area of 356 663 ha in 2007, representing 10% of the total forestry area in the country (NCPR takes forth place among the regions). The managed forest area on the region's territory amounts to 24% of the whole region's territory. Veliko Tarnovo (33%), Gabrovo (23%) and Silistra (18%) are important areas for forestry and wood production.



A **B**

Figure 16A and 16B | Forest area by region and districts in NCPR in 2007

On the territory of the region there are following kind of the forests: coniferous trees, high –stalk broad-leaved forests, to be reconstructed, for seed fund and low-stalked. The widely spread are the following wood species: beech, hornbeam, oak, cerris, lime –tree, etc. They are mixed with cherry-tree, elm, sycamore, ashl-tree, aspen and so on. As a result of the forestation made by the state forestry boards come into leaf some coniferous trees such as white pine, black pine and spruce.

The supply of coniferous and non-coniferous firewood timber in 2007 reached 241 013 m3 overbark from which 88% are sold on the domestic market, 3% are exported and 2% are processed by producers. For the needs of the lumbering are mainly used broad-leaved trees –such as beech and in smaller quantity oak, hornbeam, sycamore, ashl – tree, elm, aspen, wild cherry – tree and maple The artificially made coniferous trees are source of softwood its percentage still being very low. Wood reserves in NCPR are limited. Therefore every year forestation of the territory is accomplished. The trees used for this purpose are mainly broadleaved – local oaks (evergreen oak, cerris) mixed with different kind of lime-tree, beech, acacia, etc. The used coniferous trees are the white and black pine.

The NCPR is one of focal points of breeding stations (Figure 17).

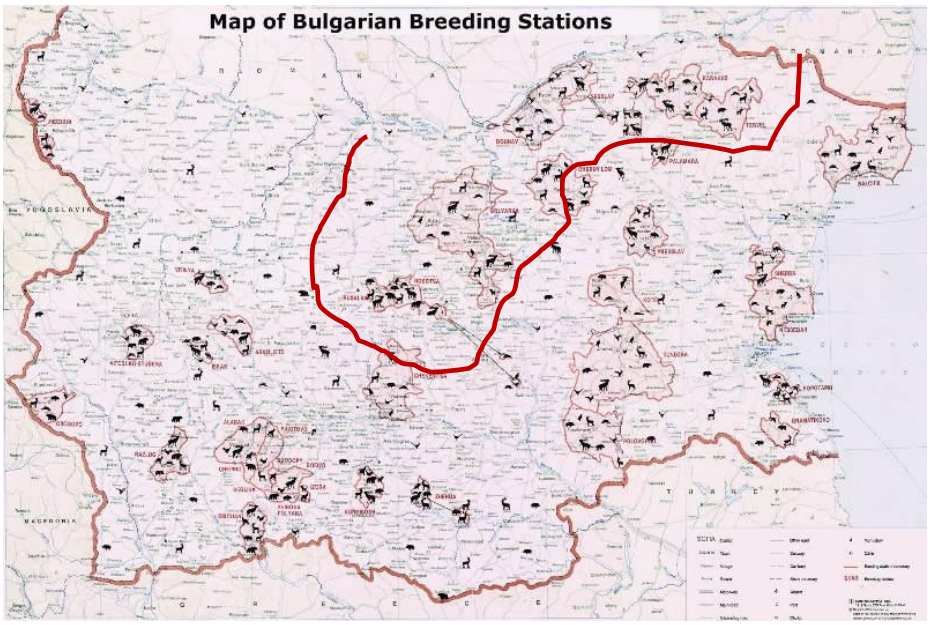


Figure 17 | Map of Bulgarian Breeding Stations

1.4 Transport

Thanks to the favourable geographic situation of the NCPR, some of the main transportation centres in the country are situated there. The intensive use of all kinds of transport in the Region determines the basic role of transport in the service sector, water transport being its important branch. Here is the only bridge equipment over Danube River on the territory of Bulgaria.

The Region is leading in freight cargo tonnage, while the biggest Bulgarian river port goes through the Ruse (NCPR's capital). Ruse Port Complex embraces port Ruse-West; port Ruse-East and the ports of Svishtov, Somovit, Tutrakan and Silistra – the most important river ports in Bulgaria. Through the city of Ruse it is made and the connection between Danube river and Black sea on Bulgarian territory (Ruse-Varna). Here is also the final point of the Ro-Ro line between Ruse and Ukrainian city Reni.

The road transport is also very well developed in the Region. About 15.6% of all roads in the country are situated in the North-Central Region and the density of the road network is 200 km/1,000 sq. km. The length of the total road network is 2960 km (2907 km of them are paved with asphalt) being composed of 462 km roads first category, 636 km second category and 1862 km third category.

By number of vehicles the Region is ranked fifth in the country with 280 thousand means of transport. The main roads are: Ruse-Varna, Ruse-Veliko Tarnovo-Sofia, and Silistra-Shumen-Yambol.

On the region territory, two of the European transport corridors (№7 and №9) are crossed and they ensure the connection between Baltic and North Sea regions on one hand and Mediterranean and Black sea on the other. One of the most important road links passes through NCPR and it crosses Bulgaria from north to south. It is a part of trans-European transport corridor № 9 (Helsinki - St. Petersburg - Kiev - Bucharest - *Ruse* - *Veliko Tarnovo* - *Gabrovo* - Stara Zagora - Dimitrovgrad with diversions to Greece and Turkey).

The first railway from Ruse to Varna was built in 1866. Other important railway is Ruse-Gorna Oriahovica-Dabovo. The density of the railway network is 45.1* km. per 1,000 sq.km above the national average of 39 km. per 1,000 sq.km.

* In 2004 NCPR covers the following districts: Veliko Tarnovo, Gabrovo, Lovech, Pleven, and Rousse.

1.5 Environment

One of the main problems, facing NCPR is the environmental pollution. The concentration of chemical plants in the Region leads to high emissions of sulfuric, nitrogen and carbon oxides.

The emissions into the air are a direct result from the economic activity within the region. The air pollution problem results from the combined influence of industry and transportation. The industry within the region is concentrated in and around cities with a high population density. In this way, industrial regions are characterized both by a relatively higher level of emissions compared to the rest of the region, and at the same time by air pollution of few kinds of harmful substances. In 2007 the most significant with regard to the air pollution, continues to be the contribution from the region of Ruse. About 2537 tons sulphur oxides, 3719 tones nitrogen oxides and 1 047 082 tons carbon dioxide were emitted from this region. Also high were the volumes of the harmful substances emitted in the region of Svishtov - sulphur oxides (5647 tones), nitrogen oxides (2773 tones) and carbon dioxide (685 657 tons).

The average annual volume of abstracted fresh water in 2007 amounts to about 224 million cubic metres. The basic part of the water resources – 146 million cubic metres – extracted for use in 2007 are obtained from surface water sources, as follows: dams (63%), the Danube (30%) and inland rivers (7%). The ground water constitutes in average 12.5% of the fresh water abstracted within the region. The total volume of the water used in the region in 2007 is 122348 million cubic metres. The highest was the relative share of water used in the industry – 66%, followed by domestic sector with 31% and agriculture, hunting and forestry with 3%. On the NCPR territory there are 8 Urban Waste Water Treatment Plants and 24,7% of the region's population is connected to public sewage system – compared to the country's average (42%) it is very low.

The total number of landfills within the region in 2007 is 122 and the total collected municipal waste is above 343 tons, which means 426 kg/per year/per capita. The biggest quantities of per capita municipal waste were collected in the districts of Silistra (528 kg/year per capita), Veliko Tarnovo (524 kg/year per capita) and the smallest quantities were estimated for district of Ruse (305 kg/year per capita), Gabrovo (351 kg/year per capita). The municipal waste collection systems serve 86% of the NCPR's population in the same year. In 2007, 13 million euros have been spent on collection and transportation of region waste.

In 2007 36 thousand euros have been spent on protection and restoration of the environment. The total expenditure on protection and restoration of the environment for 2007 has been allocated in the following way: the biggest is the share of expenditure on waste disposal and recovery – 44%, followed by preserving air purity – 21%, expenditures on water resources - 20% and protection of soil and underground water – 7%.

There is a concentration of protected areas and areas in NATURA 2000 in the North Central Region. Sixty protected territories are located in the region (Figure 18). Protected areas in the region are 5 % of all protected areas in the country and 2.83 % of the NCPR territory.

Territory in NATURA 2000 is 33.8% of all area in NATURA 2000 and 21,25% of the NCPR territory. Distribution of protected areas and areas in NATURA 2000 are illustrated on Figure 19 & 20. Lands included in NATURA 2000 are above the country average, but are not equally allocated.

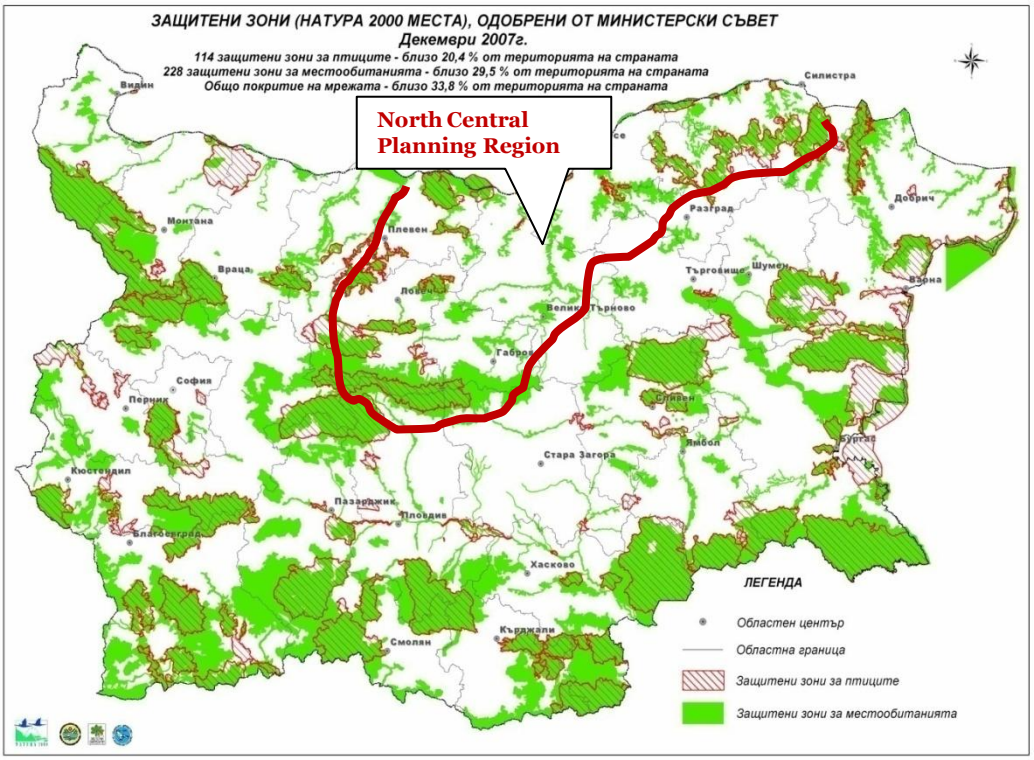


Figure 18 | Protected Areas (NATURA 2000), approved by the Council of Ministers, December 2007

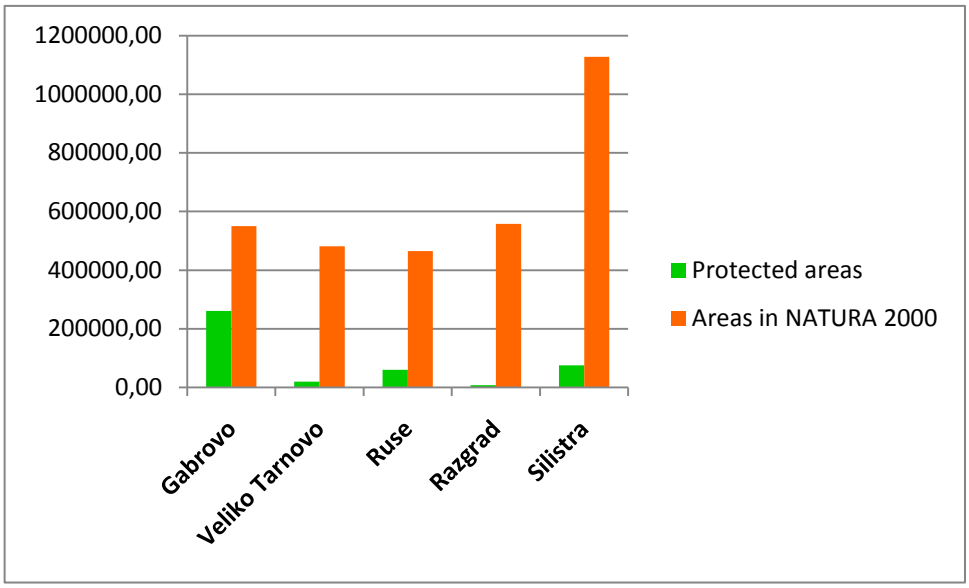


Figure 19 | NCPR: Protected areas and areas in NATURA 2000 by districts, 2007

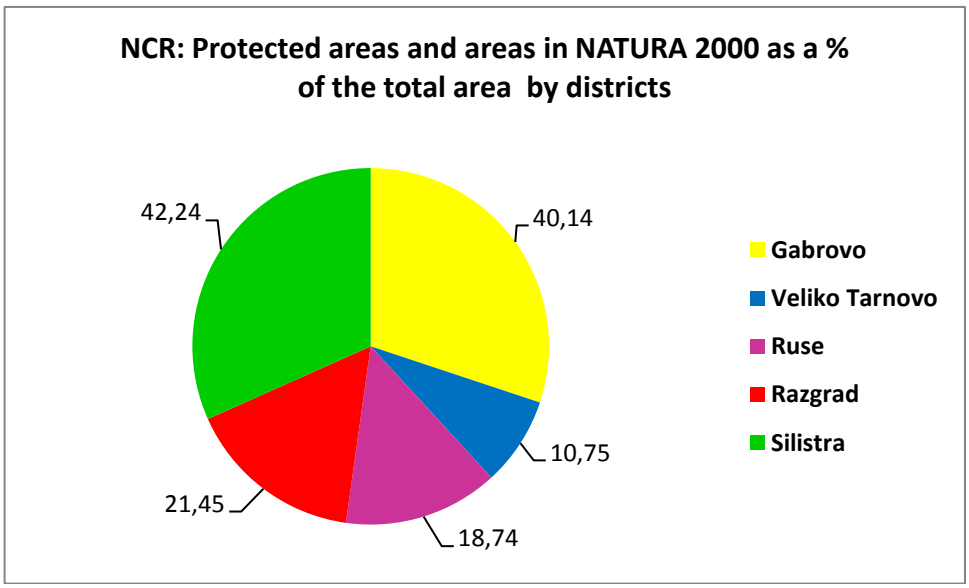


Figure 20 | Protected areas and areas in NATURA2000 as a share of the total area by districts

1.6 References

1. Annual Report 2007. Ministry of Agriculture and Food (MAF).
2. Annual Report 2008. Ministry of Agriculture and Food (MAF).
3. Annual Yearbook (various years). NSI
4. District Development Strategies of Gabrovo , Veliko Tarnovo, Ruse, Razgrad and Silistra. 2006.
5. Municipality Development Plans. 2005. (all municipalitiesfromNCPR).
6. National Strategy Plan for Rural Development (2007 –2013). MAF, 2004.
7. Regional Development Plan of the North Central Planning Region. 2006.
8. Regions, Districts and Municipalities in the Republic of Bulgaria. NSI. 2007
9. Structure of Agricultural Holdings in Bulgaria (crop year 2006/2007), Final Results. Ministry of Agriculture and Food. 2008
10. Tourism. NSI. 2007 and 2008.

2 SOCIAL ECONOMIC ANALYSIS OF THE COUNTY OF ISTRIA

2.1 General characteristics

Kristina Brščić,
Ramona Franić

The Istrian Region includes a large part of Istria—the largest Adriatic peninsula. The most extreme west point of the Republic of Croatia is in the Istrian Region (Bašanija, promontory Lako) at the 45° of the northern latitude and 14th Meridian. At a distance in a radius of 500 km from Istria are Slovenia, Italy, Switzerland, Germany, Austria, Czech Republic, Slovakia, Hungary, Serbia, Bosnia and Herzegovina and Montenegro, at a distance of radius of 1000 km there are Spain, France, Belgium, Netherlands, Poland, Romania, Bulgaria, Greece and Albania, and at a distance in a radius of 1500 km there are other countries in Europe and North Africa.

The Istrian peninsula covers the surface of 3.476 square kilometres. The area is shared by three countries: Croatia, Slovenia, and Italy. A very small part of Istria, merely the northern part of the Miljski peninsula, belongs to the Republic of Italy. Slovenian coastline with the Kopar Bay and a part of the Piran Bay up to the mouth of the Dragonja River is a part of the Republic of Slovenia. The largest part, or 3.130 square kilometres (90% of the surface), belongs to the Republic of Croatia. Most of the Croatian part of the peninsula is situated in the Istrian Region – 2.822 square kilometres, which is 4,98 per cent of the entire surface of the Republic of Croatia. The remaining part belongs to the Primorsko-Goranska Region based on the administrative and territorial subdivision.

County of Istria is divided in 10 towns: Buje-Buie, Buzet, Labin, Novigrad-Cittanova, Pazin, Poreč-Parenzo, Pula-Pola, Rovinj-Rovigno, Umag-Umago, and Vodnjan-Dignano, and 31 municipalities: Bale-Valle, Barban, Brtonigla-Verteneglio, Cerovlje, Fažana-Fasana, Funtana, Gračišće, Grožnjan-Grisignana, Kanfanar, Karojba, Kaštelir-Labinci- Castellier-Santa Domenica, Kršan, Lanišće, Ližnjan-Lisignano, Lupoglav, Marčana, Medulin, Motovun-Montona, Oprtalj-Portole, Pićan, Raša, Sveti Lovreč, Sveta Nedelja, Sveti Petar u Šumi, Svetvinčenat, Tar-Vabriga, Tinjan, Višnjan-Visignano, Vižinada-Visinada, Vrsar-Orsera and Žminj were according to Census from 2001 live 206.344 residents.

2.1.1 Geographical Information

Area of Istria County have natural qualities that make it a very attractive place to live and develop a number of sectors from agriculture, livestock, fisheries, aquaculture, manufacturing, mining, shipbuilding over to the tourism and hospitality industry.

Istria County has Mediterranean climate along the coast, which is the interior changes in the sub-Mediterranean and due to vicinity of the Alps in continental and continental-mountainous climate. However, most of the county area is characterized by favourable climate: hot and dry summers, mild and pleasant winters, a large number of sunny days (up to 2800 hours per year), and relatively small annual temperature variations in the air. The lowest temperature of the sea in March is around 10°C and the highest in August and is about 25°C. The temperature of the soil not falls below 0°C.

The quantity of rainfall increases from the west coast towards the interior. Characteristic winds are *bura*, *jugo* and *maestral*. *Bura* blows northwards-southwards and it brings dry and clear skies. The warm wind *jugo* brings rain, while the mild *maestral* blows in the summer, from the sea to the continent.

According to the geological and geomorphic structure, the Istrian peninsula can be divided in three completely different areas. The hilly northern and north-eastern part of the peninsula, due to its scarce vegetation and nude Karst surfaces is also known as White Istria. South-west from White Istria stretches area with lower flisch mountainous tracts consisting of impermeable marl, clay, and sandstone, called Grey Istria. Limestone terrace along the coastline, covered with red earth is called Red Istria.

The length of the Istrian coast, along with islands and islets is 539 kilometres. The west coast of Istria is more indented, and, together with islands, it is 327 kilometres long. East coast, together with islets, is 212 kilometres long.

The most significant surface water-flows in the area of the Istrian Region are the Mirna, the Raša, the Boljunčica, the Dragonja Rivers, and the underground Pazinčica. The Mirna River is the longest and the richest Istrian river. Its length is 53 km, it springs near Buzet, and it empties into the Adriatic Sea near Novigrad. In the water supply sense, there is a significant function of the surface accumulations Butoniga and Boljunčica.

2.1.2 Administrative structure of the Region

Administratively, the Istrian County is divided in 41 territorial units of local self-government - 10 towns and 31 municipalities.

The towns are: Buje-Buie, Buzet, Labin, Novigrad-Cittanova, Pazin, Poreč, Pula, Rovinj-Rovigno, Umag-Umago, and Vodnjan

The municipalities are: Bale, Barban, Brtonigla-Verteneglio, Cerovlje, Fažana, Funtana, Gračišće, Grožnjan-Grisignana, Kanfanar, Karojba, Kaštelir - Labinci, Kršan, Lanišće, Ližnjan, Lupoglav, Marčana, Medulin, Motovun, Oprtalj-Portole, Pićan, Raša, Sveti Lovreč, Sveta Nedelja, Sveti Petar u šumi, Svetvinčenat, Tar-Vabriga, Tinjan, Višnjan, Vižinada, Vrsar, and Žminj

The Istrian County and the Assembly of the Istrian County are based in Pazin. The Government of the Istrian County is based in Pula.

Solemn meetings of the Assembly, as a rule, are held at the Istrian Parliament - Dieta istriana in Poreč.

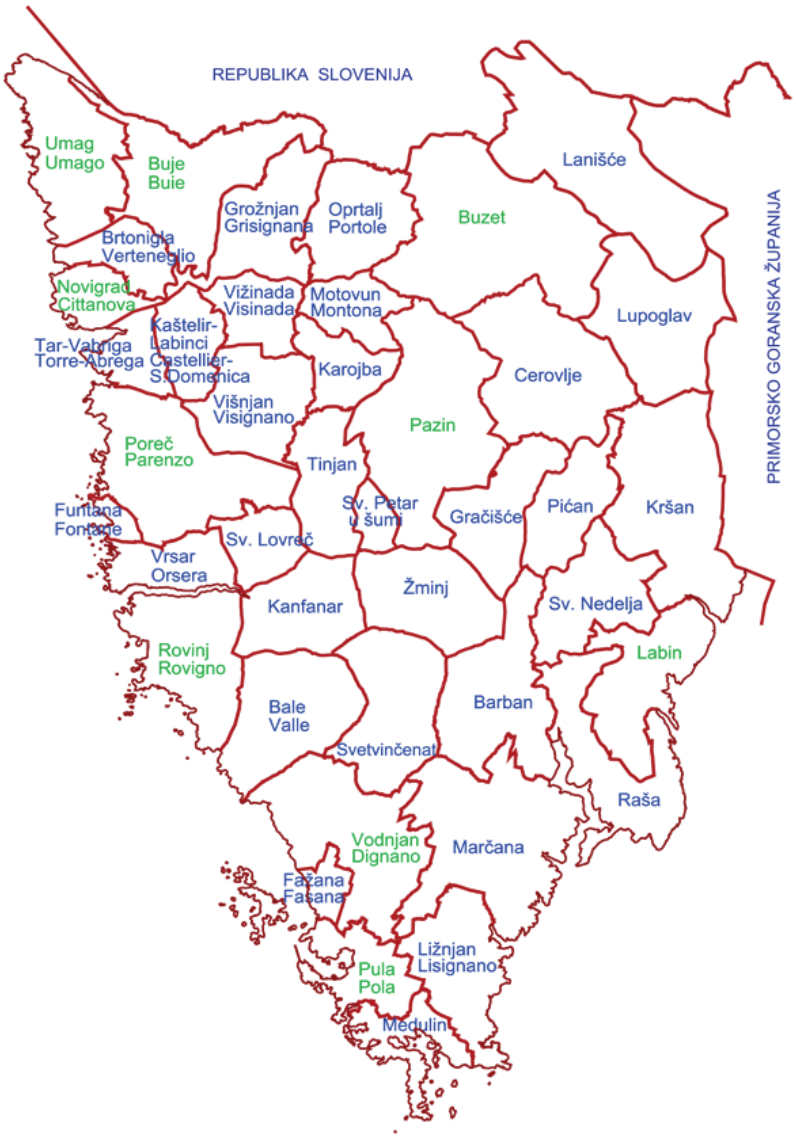


Figure 21 | Towns and municipalities of Istrian County

Source: http://www.istra-istria.hr

The Istrian County was established by the Law on the Territory of Counties, Towns, and Municipalities in the Republic of Croatia as one of 20 Croatian counties. The representative body of the Region is the Regional Assembly. The Regional Assembly comprises 41 councillors elected on the direct elections.

The constitutive meeting of the County Assembly of the Istrian County was held on 16 April 1993 in Pazin.

The Regional Assembly performs the following activities: adopts the Statute of the Region, adopts general acts in the Region's jurisdiction, nominates and absolves the President of the Region and members of the Regional Government, establishes institutions and trade societies founded by the Region, nominates members of administrative bodies of the above institutions and trade societies, makes agreements on the nomination of the directors of the institutions founded by the region, adopts the budget of the Region, performs other works defined by the Regional Statute.

The Regional Government performs executive works of the Region, namely: performing general acts adopted by the Regional Assembly, adopting general acts for which its is authorized by positive regulations and acts of the Assembly, proposing the adoption of general acts to the assembly which are in its domain, and performing other works determined by the Region's Statute.

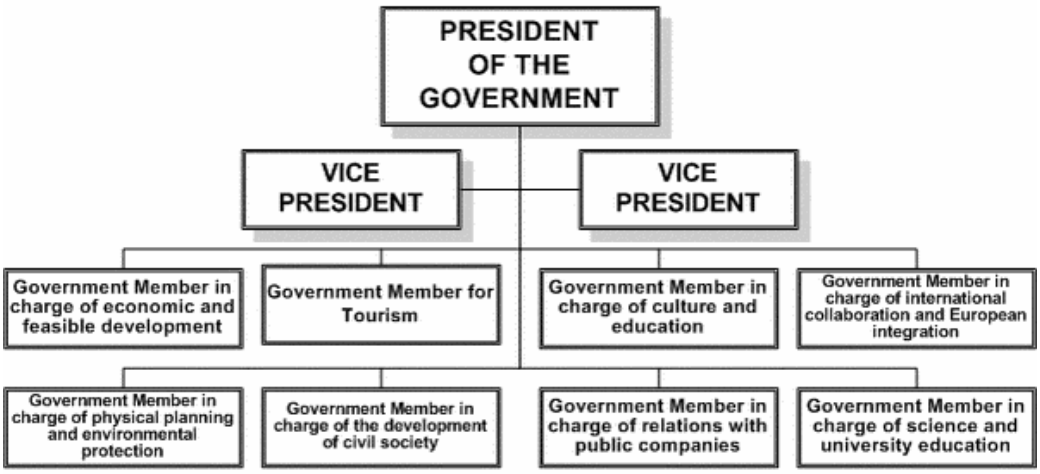


Figure 22 | Government of Istria County

Source: http://www.istra-istria.hr

2.1.3 Rural areas

By definition in Croatia differences between rural and urban areas are based on territorial division where the smaller administrative units, municipalities are considered as rural, while the cities are considered as urban areas. According to this definition about 66% of total 2.822 km² of Istria County, are under municipalities and 34% of ares are in towns and 29% of 206.344 residents lives in municipalities and 71% in towns. According to OECD criteria Istria County is predominantly rural (figure 23).

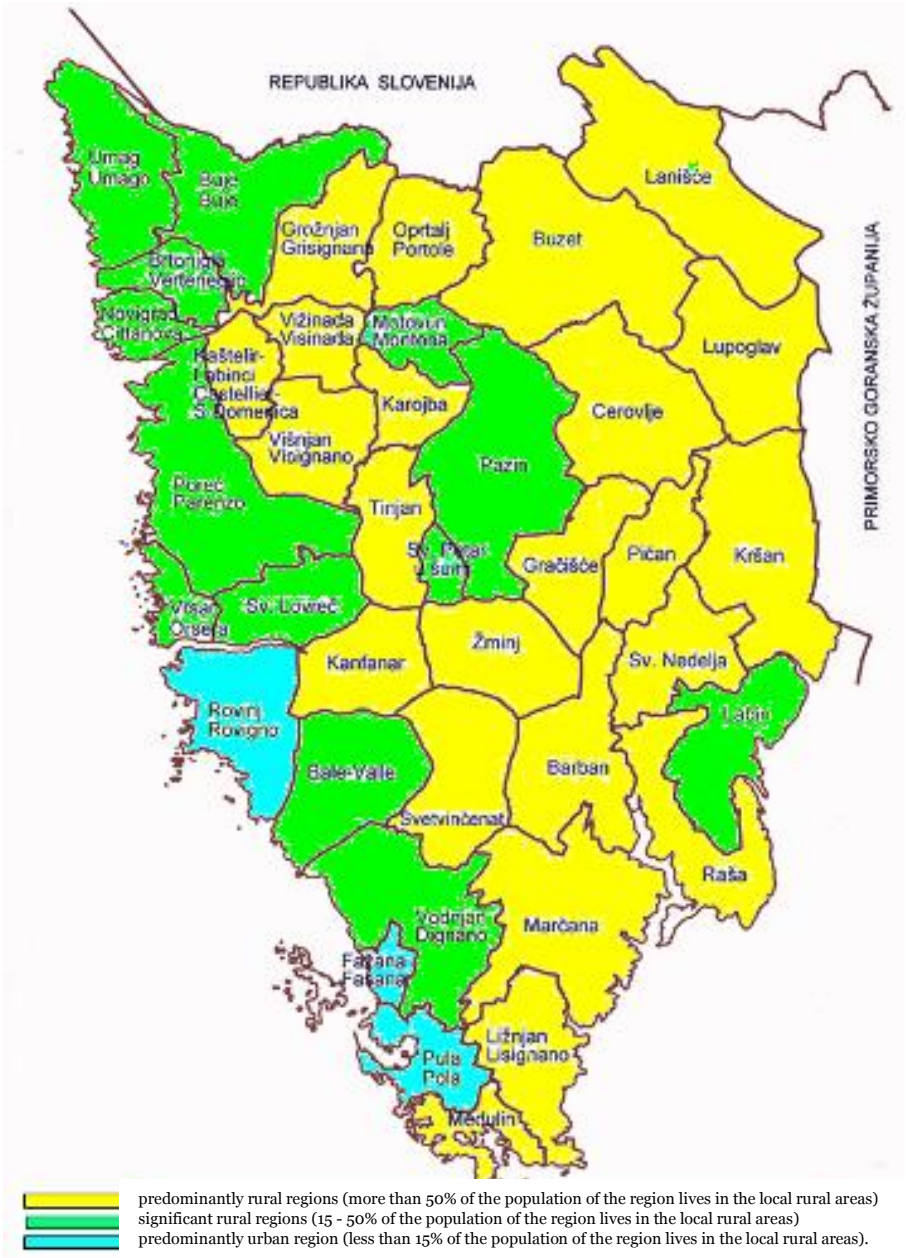


Figure 23 | Rural and urban areas according to OECD criteria

Source: Strateški program ruralnog razvoja Istarske županije (2008-2013), www.istra-istria

Table 15 | Rural and urban areas according to OECD and EU criteria

		Rural areas	Urban areas	Total
OECD areas	km²	2.493,4	328,6	2.822
	%	88,4	11,6	100,0
OECD population	number of residents	99.135	107.209	206.344
	%	48,1	51,9	100,0
EU areas	km²	2.301,7	520,3	2.822
	%	81,6	18,4	100,0
EU population	number of residents	74.970	131.374	206.344
	%	36,6	63,7	100,0

Source: Strateški program ruralnog razvoja Istarske županije (2008-2013), www.istra-istria.hr

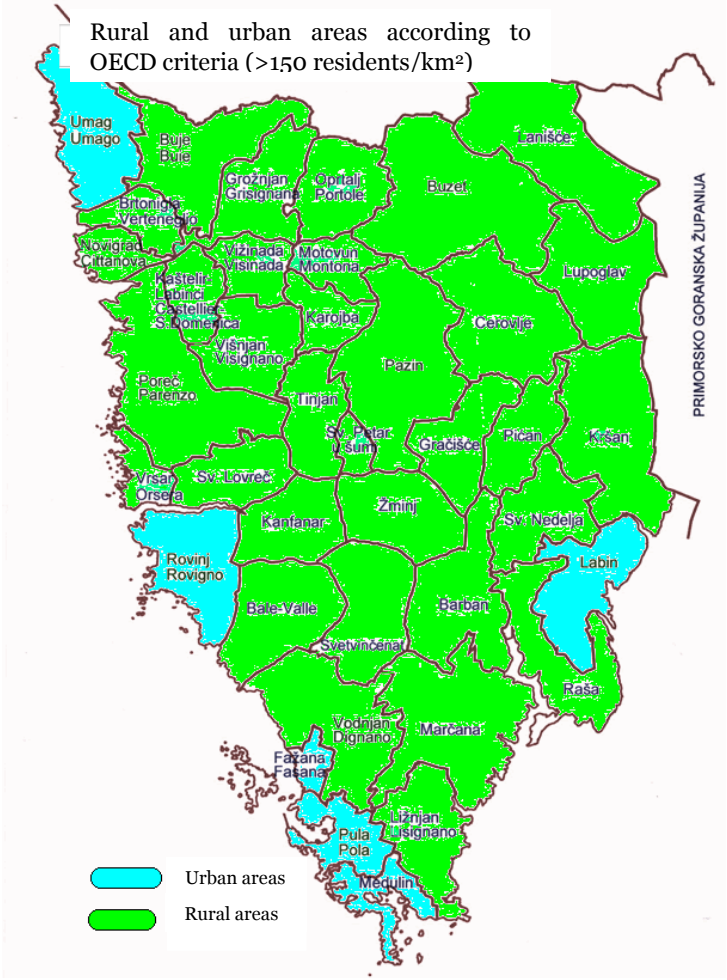
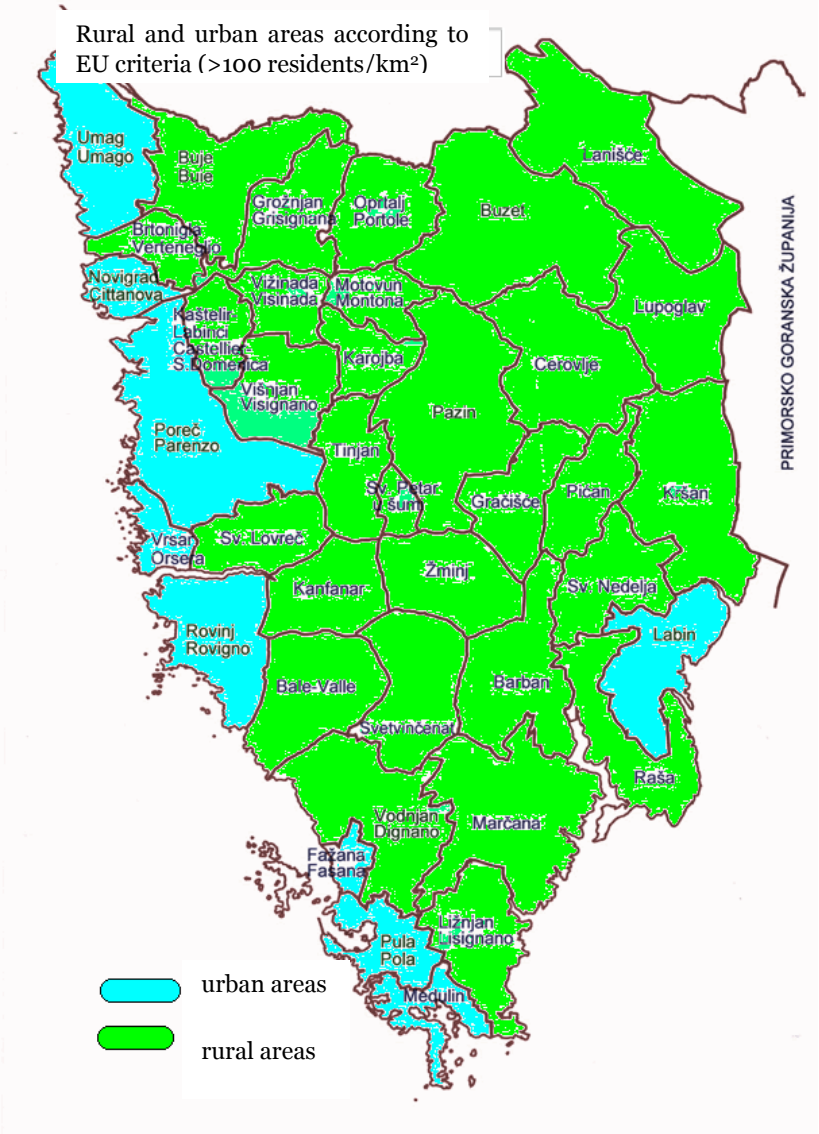


Figure 24 | Rural and urban areas according to OECD criteria (>150 residents/km2)

Source: Strateški program ruralnog razvoja Istarske županije (2008-2013), www.istra-istria.hr

Figure 25 | Rural and urban areas according to EU criteria (>100 residents/km2)



Source: Strateški program ruralnog razvoja Istarske županije (2008-2013), www.istra-istria.hr

2.2 Demographic trends

2.2.1 Population and age structure

According to Census from 2001 Istrian County have 206.344 residents or 4,65% of the population of the Republic of Croatia. In the table 16. it can be seen number of population form 1961 to the last census in 2001.

Table 16 | Number of inhabitants in Republic of Croatia and County of Istria form 1961 to 2001

Number of inhabitants in Republic of Croatia and County of Istria					
	1961.	1971.	1981.	1991.	2001.
Republic of Croatia	4 159 696	4 426 221	4 601 469	4 784 265	4 437 460
County of Istria	176 838	175 199	188 332	204 346	206 344

Source: Census 2001

Number of men in 2001 were (Census 2001) 99.969 or 48,45% of the population of Istrian County and women 106.375 or 51,55%. Average age were 40,2 years. Average population densities were 73 inhabitants per square kilometre. Population in towns were 145.894 or 70,7% and in municipalities 60.450 or 29,3% of the population.

Population divide to different age groups can be seen in the table 17.

Table 17 | Age groups of the population of Istrian County

Age	Total number	Share in the total number of inhabitants in %
0-19	44.971	21,8
20-39	56.781	27,5
40-59	59.029	28,6
60-79	39.662	19,2
above 80	5.901	2,9

Source: Census 2001

2.2.2 Education

In Istria County operating 53 elementary schools, out of which 24 schools were founded Istria County, 28 of them founders were cities, and one is private school (Private School of Pula).

In the county operating 26 high schools from which the 22 schools and 1 pupil's home in Pula founder was Istria County, for 1 high school in Pazin

(Pazinski course) founder were of the Catholic Diocese of Poreč and Pula, there were also private school for management Višnjan (Manero) and one high school in Pula (Private gymnasium Juraja Dobrile). (ROP, 2006).

Within higher education in the Istrian County operates the University of Pula which currently consists of 5 departments:

- Department of Economics and Tourism "Dr. Mijo Mirkovic "
- Department of Humanities
- Department of Music
- Department of Studies in Italian
- Department of Education teachers and educators

Other facilities are: High Technical College - Polytechnic Studies in Business in Pula and Business (Pula) and Agriculture (in Porec) departments of the Polytechnic of Rijeka. Higher education institutions of university-level covered only the social sciences and humanities, while the study of technical and natural sciences are only on Polytechnic level.

Of scientific institutions in Istria County currently operating two public institutes with twenty scientists:

1. Institute of Agriculture and Tourism in Porec;
2. Center for Marine Research in Rovinj (a subsidiary of the Institute "Ruder Boskovic Institute in Zagreb) as independent or partly independent legal entities.

Also there are small branch offices or centres of the Institute from Zagreb and Rijeka, with several employees, as well as structural units without legal personality, including 1) Department of Social and Historical Sciences Academy in Rijeka, Branch in Pula; 2) Institute "Ivo Pilar" in Zagreb, Pula Office; 3) University of Zagreb, International Research Centre for Late Antiquity and Middle Ages in Motovun 4) University of Zagreb, the International Research Center for Archeology Brijuni – Medulin (ROP, 2006)

2.2.3 Housing and settlement

Of the total 647 villages in the county, 52 of them belong to the urban community, and 595 in the rural community. Given that the number of residents in local rural areas was 99.135 which is 48.1% of total population of the County, the area of the county can be cold predominantly rural areas. (Strateški program ruralnog razvoja Istarske županije (2008-2013), www.istra-istria.hr)

2.3 Economic system

2.3.1 Economy

Istrian economy is very diverse. Istria is traditionally the most visited tourist region, but it has a well-developed processing industry, construction industry, trade, sea fishing and fish growing, agriculture, and transportation. According to the number of economic subjects and according to financial indicators, the leading activities are processing industry, tourism, and trade.

In the field of industry, the most developed branches are shipbuilding, production of construction material (lime, cement, brick, stone), tobacco products, furniture, electric machines and appliances, parts for the automobile industry, glass, processing metals, plastic, wood, textile, and the production of food.

At the end of February 2006 the Central Bureau of Statistics first published data on gross domestic product by region for the period since 2001 to 2003 year, in February 2009 the data are published for 2006. In the reporting period Istria County exceed for 27 to 38% of the average GDP per capita of Croatian and achieved 6.0 to 6.5% of Croatian GDP. In 2006 average GDP per capita in Istria was € 9.768 or U.S. $ 12.249, or 7% higher than in 2005 (table 18).

The economic structure of the Istrian County, according to data on the total income for 2005 key place belongs to the manufacturing industry with around 33% and trade with about 29%, followed by hotels and restaurants with 10%, construction with 8.3% and real estate and business services with 6.4% (ROP, 2006).

Table 18 | Gross domestic product per capita in the Republic of Croatia and County of Istria in the period 2001 - 2006

Year	The Republic of Croatia			County of Istria		
	€	USD	Index	€	USD	Index
2001	4.995	4.474	100	6.718	6.017	135
2002	5.510	5.190	100	7.471	7.037	136
2003	5.909	6.669	100	8.122	9.167	138
2004	6.461	8.024	100	8.843	10.982	137
2005	7.038	8.756	100	9.126	11.354	130
2006	7.705	9.663	100	9.768	12.249	127

Source: DZS – Priopćenja, www.istra-istria.hr

According to data from the Central Bureau of Statistics in December 2008 in the County of Istria were registered 20,481 legal entities, with the following structures:

- companies – 11.695 of which 9.756 active
- enterprises and cooperatives – 5.734 of which 324 active
- institutions, organizations and bodies Association – 3.052

In order to complete review of the total number of entrepreneurs, this data should be added and recorded in 8.468 subjects' trades and free professions.

Most employees in Istria were in sectors:
• Manufacturing - 19.70%
• Trade and Services - 17.80%
• hotels and restaurants - 11.50%

Number of employees in 2008 is higher for 8.818 people or 11% of total employment in 2005 (79.202). This record is not complete for the county level because it not includes independent farmers and even some forms of employment.

According to data from FINA, in September 2008 the average net salary in the Istrian County was 4.805 kuna.

Istrian economy is achieved in the period from January to December 2008 the 1.34 billion USD of exports, which makes 9.52% of total exports of Croatian and imported 1.58 billion USD, or 5.14% of Croatian imports. Coverage of imports by exports for the Republic of Croatia in 2008 amounted 46% and 85% of the County of Istria. (www.istra-istria.hr)

2.3.2 Unemployment

At the end of August 2009, the Croatian Employment Service registered 251,005 unemployed persons, what makes 2,419 persons more than in the previous month and 31,671 persons more than in August 2008. Therefore, in August 2009, unemployment increased both, as compared to the previous month by 1.0 per cent and by 14.4 per cent, as compared to the same month of 2008. As compared to the same period last year, the registered unemployment increased in all counties. The greatest increase was reported in the following counties was County of Istria (30.8 per cent) (Monthly Statistics Bulletin, Croatian Employment Service, YEAR XXII/2009). Average number of unemployed persons in the last three years is presented in table 19.

Table 19 | Average number of unemployed persons

	2006	2007	2008
The Republic of Croatia	291.616	264.448	236.741
County of Istria	6.317	5.819	5.325

Source: Croatian Employment Service, Statistical Information, 2009

Table 20 | Persons in employment and unemployment rate, situation as on 31 March

	Persons in employment			Unemployment rate		
	2006	2007	2008	2006	2007	2008
The Republic of Croatia	1.446.403	1.495.039	1.536.166	17,7	16,3	14,3
County of Istria	83.867	86.843	89.241	8,4	8,0	6,7

Source: Statistical Information, 2009

2.3.3 Agriculture

Natural conditions and developed tourist activity in the region opens up the possibility of production of various agricultural products. In the County of Istria especially important agricultural industries are viticulture, wine production and olive growing. Number of households and family farms in Croatia and Istrian County can be seen in tables 21 and 22.

Table 21 | Number of households, business entities and utilized agricultural land in the Republic of Croatia and County of Istria

	Number of households	Number of business entities	Utilised agricultural land, ha		
			Total	Agricultural households	Business entities
Republic of Croatia	448.532	1.364	1.077.403,17	860.195,17	217.208,00
County of Istria	13.534	72	24.643,16	22.040,16	2.603,00

Source: DSZ, Agricultural Census 2003

Table 22 | Number of agricultural family farms according to organizational form

	Family farm	Crafts	Other	Trade society	Cooperatives	total
Republic of Croatia	172 096	2 612	132	1 718	445	177 003
County of Istria	5 098	275	2	136	2	5 513

Source: MPRRR, Upisnik poljoprivrednih gospodarstava, 2008, Strategija ruralnog razvoja RH 2008-2013, www.mps.hr

In Croatia, according to average size of farms by possession of land, the largest households are located in the eastern counties of the Croatia. Croatian average is 5.9 ha, and only 4% of farms have possession of land greater than 20 ha. At the same time, this category of farms holding 50% of total agricultural land of Croatia.

Table 23 | The structure of farms and land in possession in 2009, in the County of Istria and Republic of Croatia

		Classes (ha)					
		<3	>=3 i < 20	>=20 i >100	>=100 i <1.500	>=1.500	Total
Republic of Croatia	Number of agricultural households	120.230	63.707	6.060	653	22	190.627
	Ha	103.680	424.719	238.654	149.047	91.860	1.007.959
County of Istria	Number of agricultural households	4.707	1.405	100	7	0	6.219
	Ha	4.069	8.951	3.631	1.831	0	18.483

Source: Upisnik poljoprivrednih gospodarstava, MPRRR, stanje: maj 2009, Brošura hrvatske poljoprivrede, www.mps.hr

- Viticulture

Based on the orthophoto shots from 2004 in the County of Istria were 4.278 hectares of vineyards, while in the Register of grape, wines and fruit wines were 2.790 ha and 2.610 producers. From total the Istrian Malvasia prevail with 61% then there were 13% Merlot, 8% Teran, Cabernet Sauvignon 3%, Chardonnay 2% and other varieties of 10% (2.790 ha). In Istria 54% of the vineyards are over 35 years old and 22% between 25 and 35. Approximately 83% of the grape and wine producers have less than 1 ha of vineyards. Controlled protections of geographical origin in Istria have 79 producers of wine and 248 wines on 1.595 ha. Annually in Istria were produce 13.031 tonnes of grapes and wine trade were 56.723 hl (60% of wine with controlled origin, 40% table wine, 164 producers). (Strateški program ruralnog razvoja Istarske županije (2008-2013), www.istra-istria.hr)

- Olive growing

Istria is the northern border area for the cultivation of olives and has a predisposition to get oils with excellent quality. Istria has autochthonous varieties and clean, unpolluted soil suitable for organic production. In Istria there were 411.146 bearing olive trees or 608.120 total olive trees in 2006 (Central Bureau of Statistics, Agricultural department), but regional plantation program has increased this number with 106.186 in 2007 and 111.694 new olive trees in 2008. Istrian region plantation plan anticipate to have 12.026 ha under fruit orchards, mainly olives, till 2020 (Antolović M., Miholić Z., Sinčić Pulić, 2009).

- Fruit production

Fruit production in Istria is represented with a large number of fruit species. Usually takes place in the mixed plantation and not the specialized

production production, and tends to decline. Istria has the conditions for growing peaches, cherries, pears, apples, plums, strawberries and other fruit species. In the County of Istria today, a total of about 300 ha crops and fruit species: about 100 ha of peach, plum about 65 ha, about 35 ha of apple, pear about 35 ha, cherry about 25 ha, about 15 ha of walnut and other fruit about 25 ha .

- Vegetable growing

In recent times vegetable production is becoming more interesting and it's a widespread and increase in absolute volume offers of vegetables, especially by small and medium-sized farms that are subject to rapid restructuring. Usually vegetable culture in Istria were potatoes, cabbage, kale, onions, garlic, cucumbers, tomatoes, cauliflower and peppers.

- Crop production

Crop production on family farms in Istria are characterized by traditional farming cultures: wheat, barley, maize and lucerne. They were produced on 2/3 of the total arable area. This culture, in spite of lower production and financial effects on the same acres inevitably appear in the crop rotation every two to three years. The majority of farms were not specialized, but they have mixed vegetable-livestock production. Crop productions were usually used for household consumption needs of livestock production. (Strateški program ruralnog razvoja Istarske županije (2008-2013), www.istra-istria.hr)

- Livestock production

Livestock production has a tendency of continuous decline mostly due to unfavourable economic conditions. This condition affects a relatively small proportion of livestock with a total value of production in agriculture which limits the development and production of forage crops and pasture usage.

2.3.4 Tourism

Istria County is one of the most developed tourist region in Croatia and traditionally the most visited tourist region. In the period from January to December 2008 Istria County visited 2,729,618 tourists, which makes 24.24% of total visits to Croatia, and achieved the 17,965,984 or 31.46% of all tourist nights in Croatian (table 24).

Table 24 | Tourist arrivals and nights in Republic of Croatia and County of Istria

		2006	2007	2008
Republic of Croatia	Arrivals	10.384.921	11.162.406	11.260.807
	Nights	53.006.946	56.005.492	57.103.494
County of Istria	Arrivals	2.575.090	2.719.949	2.729.618
	Nights	16.968.695	17.613.132	17.965.984

Source: Statistical Information, 2009

Table 25 | Tourist nights in County of Istria and Republic of Croatia (in the period I-XII. 2008)

	Nights (in thousands)						Structure (in %)					
	I-IV	V-VI	VII-VIII	IX	X-XII	Total	I-IV	V-VI	VII-VIII	IX	X-XII	Share in total turnover I-XII
Republic of Croatia	2.775	10.552	35.394	6.009	2.374	57.103	4,9	18,5	62,0	10,5	4,2	100,0
County of Istria	730	3.736	11.016	2.002	482	17.966	4,1	20,8	61,3	11,1	2,7	31,5

Source: BIST – Sustav poslovne inteligencije u turizmu; www.iztzg.hr, Izvorni podaci DZS; Hrvatski turizam u brojkama, vol.2 number 4/2008, www.iztzg.hr

The average usage of hotel capacity in 2008 was 52% and the best usage of hotel capacity was in County of Istria for 5% better than the Croatian average (table 26).

Table 26 | Usage of hotel capacity of Republic of Croatia and County of Istria (in the period I-XII 2008) in %

	I-IV	V-VI	VII-VIII	IX	X-XII	Total
Republic of Croatia	26,3	61,1	88,8	70,0	26,3	52,3
County of Istria	26,8	66,8	102,7	78,5	22,0	57,0

Source: BIST – Sustav poslovne inteligencije u turizmu; www.iztzg.hr, Izvorni podaci DZS; Hrvatski turizam u brojkama, vol.2, 4/2008, www.iztzg.hr

The goals for the future development of tourism in Istria are aimed at rational and gradual use of available resources for tourism development with special emphasis on the conservation of area and to improve the quality of tourist services and products to a higher level.

2.3.5 Forestry

Forests in the Republic of Croatia cover about 48% of territory and hold an important position in the state's economy. About 22% of forest in the Republic of Croatia are in the private property (approx. 600,000 ha).

In Istria County is a different situation comparing to national level because the major part of forests are in the private property. The situation in Istria County can be seen in the table 27.

Table 27 | Situation of forest management in Istria County

	Covered area	Wood stock		Annual growth		Annual cutting			
						Regulation	Cutting (average of 5 years)	% of year growth	% of wood stocks
	ha	m3	m3/ha	m3	m3/ha	m3	m3		
Croatian Forests d.o.o. / Forest Administration Buzet	66.349	4.271.695	64	121.193	1,8	29.531	29.618	24	0,7
Private forests (estimate)	79.672	3.983.600	50	119.500	1,5	-	40.000	33	1,0
Total	146.021	8.255.295	56	240.693	1,6	-	69.618	30	0,8

Sourse: Istarska Enciklopedija, Leksikografski zavod Miroslav Krleža, 2005

State Forests in Istria manage company Croatian Forests d.o.o. - Forest Administration Buzet (including Opatija, Matulji, Lovran, Mošćenička Draga, Cres and Lošinj), except the National Park Brijuni. Within the company are Forestry offices Buje, Buzet, Cres-Lošinj, Labin, Opatija, Pazin, Porec, Pula and Rovinj. Forest Administration Buzet manages the surface of 72.419ha, of which is covered area 66.349ha, as bare production was 5.467ha, bare no-production 197ha, and 406ha was infertile. In the category forests for economic purpose were purpose 65.542ha of forest, special-purpose forests were 5.654ha and 1.223ha were of protective forests. In the category of special purpose forests are included forests for recreation, park-forests, special forest reserves, forest known for research, part of a regime of strict protection in the Park of Nature Učka and protected landscape Lisina and seed stands.

Managements of private forests are under the Forest Extension Service. Forest Extension Service is a specialized public institution for conducting matters in part of public authorities, improving management of forests and woodlands in private forests. It was founded on 2 June 2006 by regulation of the Government of the Republic of Croatia. It started to work at the beginning of the 2007.

Along the coast and on the islands prevail pine woods and macchia, decorated by trees of holm oak and strawberry-tree. A special feature of the Istrian vegetation is pedunculate oak next to the Mirna River, characteristically growing in the continental lowlands of Croatia.

2.4 Transport

Transport in Istria County can be divided on road traffic, maritime traffic, railroad traffic and air traffic.

The total length of roads in the Istrian Region is 1.812,950 km:

- State roads - 380,200 km
- Regional roads - 698,950 km
- Local roads - 733,800 km

Table 28 | Density of roads on national level and Istrian County level

	Residents / km road	Density of road network in km/km2
Republic of Croatia	155,8	0,5
County of Istria	110,8	0,7

Source: DZS:Državni zavod za statistiku 2001.

According to the Decree on the Grouping of Ports Open for Public Traffic, the Istrian Region includes 7 ports with regional significance: Pula, Brijuni, Rovinj, Poreč, Novigrad, Umag, and Plomin.

Public traffic ports with regional and local significance (the total of 26) are administered by 5 regional port administrations founded by the Istrian Region (Port Administrations Pula, Rovinj, Poreč, Umag-Novigrad, and Rabac). The port of Bršica situated in the area of the Istrian Region is administered by the Port Administration Rijeka founded by the Republic of Croatia. The Istrian Region has a regular ferry connection with the island of Cres through the ferry port going from Brestova to Porozina. Regarding other passenger connections on the sea, there is the connection from Pula to Mali Lošinj functioning during the season, and several boat tourist connections during the season to Venice and Trieste with ports in tourist centres (Poreč, Rovinj, Umag, and Pula).(www.istra-istria.hr)

The beginning of the 1990s witnessed significant changes in the role of the Istrian railroads, when they were taken over by the Croatian Railways in the Croatian part of Istria. With the total length of 152,5 km, including the 2,7 km of industrial gauges, were practically “cut off” from Croatian railroads (except for the indirect connection through Slovenian railroads) and they became railroads with local significance. Passenger traffic and cargo traffic are minor in relation to the existing capacities and possibilities, and thus unprofitable. (www.istra-istria.hr)

The capacity of the airport is 1.000.000 passengers annually and port facilities were based on maximally expected traffic of 10 airplanes and 5.000 passengers at the same time. The airport can accept larger airplanes. Because of its suitable meteorological, technical, and technological conditions, it is the alternative airport for Croatia and for the airports of the neighbouring countries. In the area of the Istrian Region there is also a smaller airport Vrsar used for tourist traffic of small airplanes, sports and excursion flights and similar, and there are also some sports air-fields - landing fields: the

most suitable in terms of space is the one in Medulin (Campanož). Locations in Karigador and Buzet are used for the needs of sport flying or paragliding.

2.5 Environment

Monitoring of the environment condition for the entire Istrian County, according to the content of pollutants and other pressures on the environment, are mainly carried out at a satisfactory level for all components of the environment - water, sea, ground, air and biodiversity.

Areas under different regime of protection of natural heritage is spread on the surface of a total of 56,070 ha, which amounts to 19.6% of which are under state protection regime of natural reservations-national park Brijuni, nature park Učka and several areas of natural heritage significance, including several areas of the county's natural heritage importance, including the special reserves, protected landscapes, forest park, nature monuments like protected landscape Lim Bay, the Motovun Wood, park wood Zlatni Rt and ornithological reservation Palud near Rovinj, park wood Šijana near Pula and the protected landscape Kamenjak in the extreme south of Istria.

2.6 References

Agricultural Census 2003, www.dzs.hr

Antolović M., Miholić Z., Sinčić Pulić, B. Voćarstvo na području Istarske županije-jučer, danas, sutra. 4. znanstveno stručno savjetovanje hrvatskih voćara s međunarodnim sudjelovanjem, Rovinj 4-6th March 2009.

Brošura hrvatske poljloprivrede,www.mps.hr

Census 2001, www.dzs.hr

Hrvatski turizam u brojkama, vol.2 number 4/2008, www.iztzg.hr

Monthly Statistics Bulletin, Croatian Employment Service, YEAR XXII/2009, www.istra-istria.hr

Statistical Information, 2009, www.dzs.hr

Strategija ruralnog razvoja RH 2008-2013, www.mps.hr

Strateški program ruralnog razvoja Istarske županije (2008-2013), www.istra-istria.hr

Istarska enciklopedija, Leksikografski zavod Miroslav Krleža, 2005

ROP Istarske županije, Pula, 2006

www.azrri.hr

www.dzs.hr

www.istra-istria.hr

www.hrsume.hr

www.unipu.hr/

http://suma-ss.hr/

www.ida.hr

Apendix 2.1 | Agricultural households by total available land, surface area of total available land, utilised agricultural land, other land and number of parcels of utilised agricultural land (1st june 2003)*

Groups of agricultural households by total available land	Number of households	Total available land surface area, ha (3+7)	Utilised agricultural land, ha				Other land, ha	No. of parcels of utilised agricultural land
			Total utilised (4+5-6)	In ownership	Rented in	Rented out		
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
County of Istria	13.534	52.823,39	22.040,16	18.816,34	3.734,83	511,01	30.783,23	57.904
Bale	129	679,90	306,17	211,56	96,52	1,91	373,73	662
Barban	658	2.160,79	876,97	885,55	7,93	16,51	1.283,82	3.642
Brtonigla	218	982,11	761,31	540,72	224,69	4,10	220,80	1.008
Buje	320	960,40	462,66	395,28	69,28	1,90	497,74	1.154
Buzet	751	4.046,28	1.391,23	1.260,41	169,83	39,01	2.655,05	4.736
Cerovlje	342	3.395,28	956,90	896,12	122,45	61,67	2.438,38	2.959
Fažana	72	83,39	43,50	35,23	8,27	-	39,89	236
Gračišće	270	1.558,21	544,50	521,89	55,41	32,80	1.013,71	1.227
Grožnjan	155	523,06	358,86	308,67	50,19	-	164,20	783
Kanfanar	244	1.171,78	315,88	283,44	38,74	6,30	855,90	1.170
Karojba	239	938,89	262,42	250,15	16,07	3,80	676,47	1.438
Kaštelir - Labinci	187	742,25	472,48	359,13	119,73	6,38	269,77	745
Kršan	346	1.054,47	502,01	375,27	143,74	17,00	552,46	795
Labin	326	495,78	175,44	152,12	23,32	-	320,34	494
Lanišće	80	533,05	173,79	156,62	17,68	0,51	359,26	734
Ližnjan	250	551,20	349,69	307,99	46,90	5,20	201,51	715
Lupoglav	154	1.699,65	950,58	787,28	164,31	1,01	749,07	945
Marčana	623	2.286,21	811,96	777,11	44,45	9,60	1.474,25	2.293
Medulin	170	176,33	120,68	121,93	5,45	6,70	55,65	430
Motovun	122	581,01	235,92	162,82	74,50	1,40	345,09	670
Novigrad	123	538,70	469,77	226,90	245,03	2,16	68,93	390
Oprtalj	184	554,30	199,28	175,31	24,12	0,15	355,02	925
Pazin	968	5.463,14	1.641,97	1.545,32	157,14	60,49	3.821,17	4.757
Pićan	420	1.681,18	662,03	602,41	106,79	47,17	1.019,15	1.796
Poreč	911	2.668,56	1.199,19	1.033,43	183,80	18,04	1.469,37	2.959
Pula	678	937,96	391,14	338,90	64,76	12,52	546,82	1.346
Raša	129	180,56	35,59	33,65	1,94	-	144,97	326
Rovinj	494	1.270,60	700,89	569,16	150,93	19,20	569,71	1.526
Sveta Nedelja	482	1.121,88	486,64	368,44	118,84	0,64	635,24	1.191
Sveti Lovreč	260	1.802,35	498,01	453,58	56,62	12,19	1.304,34	1.125
Sveti Petar u Šumi	133	381,02	127,12	125,89	4,83	3,60	253,90	600
Svetvinčenat	496	1.363,54	436,04	435,44	0,60	-	927,50	2.630
Tinjan	332	2.019,90	728,42	667,74	67,34	6,66	1.291,48	1.968
Umag	586	1.705,81	1.232,47	638,70	626,64	32,87	473,34	1.869
Višnjan	380	1.802,78	870,05	746,13	127,41	3,49	932,73	1.504
Vižinada	230	882,16	562,02	496,50	75,89	10,37	320,14	1.111
Vodnjan	395	1.341,63	669,32	537,56	144,81	13,05	672,31	2.052
Vrsar	127	193,73	116,56	110,99	10,56	4,99	77,17	263
Žminj	550	2.293,55	940,70	921,00	67,32	47,62	1.352,85	2.730

Source: Agricultural Census 2003.*In the list are missing two municipalities (Funtana and Tar-Vabriga) which were constituted in 2006.

3 SOCIAL ECONOMIC ANALYSIS OF THE SOUTH MORAVIAN REGION

Marta Konecna

3.1 General characteristics

The Czech Republic consists of:
8 Cohesion Regions (Regiony Soudržnosti) on level NUTS 2,
14 Regions (Kraje) on level NUTS 3,
77 Districts (Okresy) on level LAU 1 and
6248 Municipalities (Obce) on level LAU 2

The South Moravian Region with the Vysocina Region creates the NUTS 2 South-East.

Figure 26 | Administrative regions of the Czech Republic

Figure 27 | South Moravia, situation map

Resource: South Moravian Region

South Moravian Region
Size: 7,196.5 km²
Population: cca 1,140,000
Density of population: cca 158 inhabitants/km²
Number of districts: 7
Number of towns and cities: 48
Statutory cities: Brno (population cca 370,000)
Municipalities with extended competence: 21
Municipalities with local authorities: 34
Number of municipalities: 673
The Highest point: Cupec (819 m)
The Lowest point: the confluence of the Morava and the Dyje Rivers near Lanzhot (150 m)

3.1.1 Geographical information

The South Moravian Region (SMR) is in the southeast of the Czech Republic (CR) near the borders with Austria and Slovakia. The area 719 555 ha (c. 9.1% of CR) and the population 1 140 534 places the SMR to be the 4th largest region in the Czech Republic, but from the point of density, which is 158.4 inh./km^2, is in the 3rd place.

The natural centre of South Moravia is the metropolis of Brno, situated on the confluence of the rivers Svratky and Svitavy. It's the main city of the region and also the Czech Republic's second largest city. Brno is an important judiciary city, a university town and a Central European trade fair centre. The statutory City of Brno, especially its northern surroundings, is a natural

centre of industry. The southern area of the region along the Austrian border is typical of a warmer climate and therefore rather agriculture-oriented.

From the point of landscape diversity, the region could be divided into 4 main groups:

- The large-scale cave complex of the Moravian Karst in the north of region.
- A mainly flat area of fields, meadows and vineyards with water surface areas of national park Podyjí in the south of the region.
- The landscape gradually rising to the White Carpathian Mountains in the east of region.
- The Brno agglomeration.

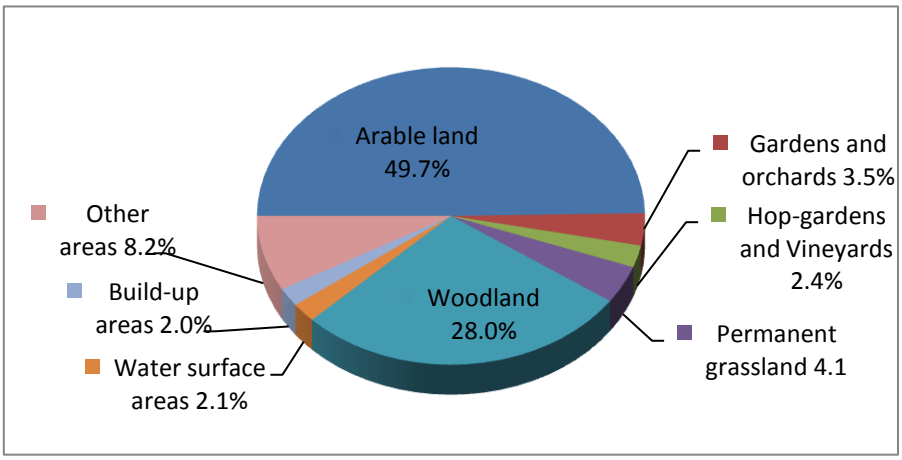


Figure 28 | Land Use structure in the South Moravian Region. Resource: Czech Statistical Office

South Moravia is a region with extensive cultural and historical roots and a great many important architectural monuments in all architectural styles. Two of them, Villa Tugendhat in Brno and Lednice–Valtice, have been placed on the UNESCO World Cultural Heritage List. UNESCO also protects two biosphere reservations in the region – Dolní Morava and the White Carpathian Mountains.

The protected landscape area of the Moravian Karst with an extensive system of stalactite caves, the Macocha Gorge and the Dyje Basin and one of the Czech Republic's national parks, are also found here.

The region enjoys excellent transport links and a strategic position on the intersection of trans-European long-distance road and rail routes – important arteries connecting the west of Europe with the east, and the north with the south. The air connection is ensured by the second largest airport in the Czech Republic, the Airport Tuřany.

3.1.2 *Administrative structure of the Region*

The region consists of 7 districts: Blansko, Brno-mesto, Brno-venkov, Breclav, Hodonin, Vyskov and Znojmo.

Further, from the point of view of the decentralization of a state administration of the CR, the SMR has 3 types of municipalities:

- "Municipalities with extended competence" (21) – execute part of the state's administration within the transferred competence.[4] They are also called municipalities of level III or "small districts".
- "Municipalities with extended competence of the local authority" (34) - including those municipalities to which the state has also transferred part of its administrative activities, but to a smaller extent than in the case of level III municipalities.
- "Municipalities" (673) – each of municipalities belongs to a district administrated by a municipality with an extended local authority competence and to a district of a municipality with extended competence.

3.1.3 *Rural area*

The rural area does not have specific definition. For the comparison, approaches of the Czech Statistical Office and delimitation of OECD were chosen in this paper.

➢ Delimitation according to the Czech approach

Delimitation of the rural area according to the definition used in Czech, i.e. municipalities with a population lower than 2000 inhabitants, covers 593 municipalities and 5054 km² of the South Moravian Region. The share of the rural area (70.2%) is slightly lower then the country average (73.5%). In rural area live 30% of inhabitants.

Table 29 | Delimitation of rural area according to Czech approach

	Rural Area		Density		Agricultural area			
	km²	Share of total area (%)	in rural area inh/km²	in total area inh/km²	km²	Share of total agr. area (%)	Numbers of municipalities in rural area	Numbers of inhab. in rural area
CR	57958	73.48	46.84	130.44	31940	75.07	5601	2714804
SMR	5054	70.22	67	157.38	3103	72.03	593	338768

Resource: data CSO 2007 - Small Lexicon of Municipalities 2007, own calculation

[4] *Transferred competence* means that some of the state responsibilities has been devolved to the local authorities

➢ Delimitation according to OECD

According to the definition of OECD, on LAU2 level, representing the municipalities with density of inhabitants lower than 150 inh./km² (Table 30), the rural area is extended on 5615 km² (78.03%) in the SMR, i.e. 8% more than according to the Czech approach. Also the inhabitants who live in the rural area cover one third of inhabitants in the region (3% more than in Czech approach).

Table 30 | Delimitation according to the OECD on level LAU 2

	Area		Density		Agricultural area		Numbers of municip. in rural area	Numbers of inhab. in rural area
	km²	Share of total area (%)	in rural area inh/km²	in total area inh/km²	km²	Share of total agr. area (%)		
CR	65033	82.46	47.31	130.44	35067	82.43	5464	3077039
SMR	5615	78.03	66.75	157.38	3408	79.10	565	374847

Resource: data – CSO 2007, own calculation

At the regional level the criterion of OECD delimitation is the share of inhabitants live in rural municipalities:

- Predominantly rural – more than 50% of inhabitants live in rural municipalities,
- Significantly rural – 15% - 50% of inhabitants live in rural municipalities,
- Predominantly urban – less than 15% of inhabitants live in rural municipalities.

Table 31 | Delimitation according to OECD on level LAU1

	Area			Density			Agricultural area		
	Predom. Urban	Signif. Rural	Predom. Rural	Predom. Urban	Signif. Rural	Predo. Rural	Predom. Urban	Signif. Rural	Predom. Rural
CR	3482	47086	28298	777	124	62	1466	25785	15293
SMR	230	4336	2629	1593	124	86	80	2439	1790

Resource: data – CSO 2007, own calculation

According to this approach in the SMR, only the district Brno-mesto (BM) is considered as predominantly urban (230 km²). The rest of the region is considered as rural areas (6966 km²), of which 2 districts are classified as predominantly rural, with more than 60% of rurality, and 4 districts just as significantly rural (Table31). Agricultural area covers almost 60% of the rural area of the region.

Table 32 | Delimitation according to the OECD on level LAU1 -Districts in the South Moravian Region

	Threshold 150 inh./km2		Threshold 100 inh./km2	
Districts	Rurality	Category	Rurality	Category
Blansko (BK)	47.48%	Significantly rural	25.25%	Significantly rural
Brno-mesto (BM)	0.00%	Predominantly urban	0.00%	Predominantly urban
Brno-venkov (BI)	38.80%	Significantly rural	21.84%	Significantly rural
Breclav (BV)	61.15%	Predominately rural	39.86%	Significantly rural
Hodonin (HO)	44.12%	Significantly rural	15.32%	Significantly rural
Vyskov (VY)	44.73%	Significantly rural	26.30%	Significantly rural
Znojmo (ZN)	65.24%	Predominately rural	49.32%	Significantly rural

Resource: data – CSO 2007, own calculation

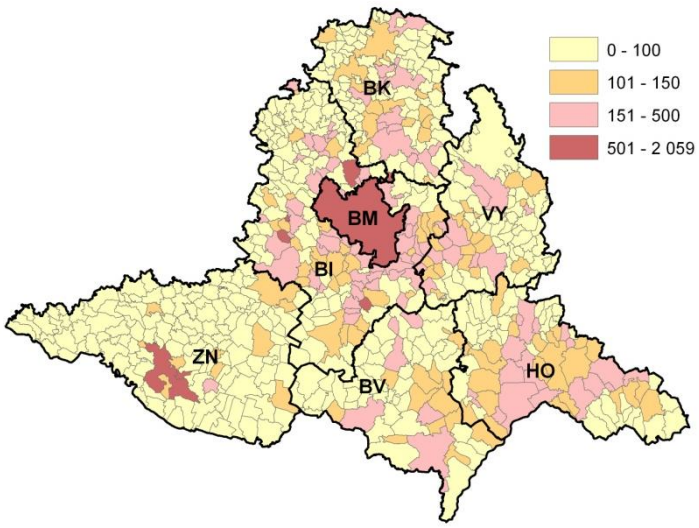


Figure 29 | Inhabitants per square kilometre in the South Moravian Region in 2007. Resource: CSO-Small Lexicon of Municipalities 2007, own calculation

The Figure29 illustrates differences in density in the region and so the differences in the area according to the chosen approach (OECD definition with thresholds 100 inh./km² or 150 inh./km²).

On the regional level LAU1 the rural area covers 97% of the region with over 67% of inhabitants, even if the threshold was lowered on 100 inh./km² (see Table 32). But there are marked differences among the districts, so there is good reason to divide the rural area to categories according to the integrity level into:[5]

[5] T. Ratinger (2003), p.12

- integrated rural areas, with an employment basis in the secondary and tertiary sectors, but with farming still being a key use of land. Facing potential threats to their environmental, social and cultural heritage, some of these areas, relatively close to big cities, risk becoming dwelling areas only and not working areas ("rurbanization"); others are developing in their own right;
- remote rural areas, with the lowest population densities, often the lowest incomes, and an older population which depends heavily on agricultural employment.
- intermediate rural areas, being between integrated and remote areas.

This approach is very data-intensive, so we decided to use a simplified criterion for the categorization – the share of employment in the agriculture. The relevance of this indicator comes from the definition of integrated rural area and also from the fact that in the integrated area the people are less willing to accept lower wages from agriculture activities.

In the SMR, according to this delimitation districts Brno-venkov (BI) and Vyskov (VY) are integrated, the three border regions are remote and only district Blansko (BK) is intermediate (Figure below).6 Brno stays urban area. In the CR, according to this distribution, 36 districts are considered as integrated, 19 districts are intermediate and 14 are remote (see appendix 1.1). Integrated area covers almost half of the country rural area and the intermediate and remote region cover approximately one quarter of the rural area. In the SMR the proportion of categories is different (see Table 33). The remote area covers over the half of regional area and one fifth of all the country remote area. The integrated area takes one third of the regional area but only 6% of the total country integrated area. So in this context the South Moravian Region could be considered as rather remote. The agricultural area in the south-moravian remote rural area covers 67% of the regional area (on the country level it comprises only 60%). From a density point of view the density in the country integrated rural area (128 ihn./km2) is almost the same as the country average density, but in rest of the rural area it is significantly lower (country integrated r.a. 78 ihn./km2 and remote r.a. 73 ihn./km2). On the other hand, the density in all categories of the rural area of the SMR is under the regional average (158 ihn./km2): integrated r.a. 117 ihn./km2, intermediate r.a. 121 ihn./km2 and remote r.a. 102 ihn./km2.

Table 33 | Delimitation of the categories of integration on level LAU 1

	Area			Inhabitants			Agricultural area		
	Integrat.	Interm.	Remote	Integrat.	Interm.	Remote	Integrat.	Interm.	Remote
CR	35599.13	20882.63	18902.87	4558610	1637776	1383047	18316.38	11422.06	11339.27
SMR	2375.08	862.67	3728.34	277937	105116	382830	1333.67	407.13	2487.82

Resource: data CSO 2007 - Small Lexicon of Municipalities 2007, own calculation

[6] The breakeven points for the integration classes have been set at 1/3 and 2/3 percentiles.

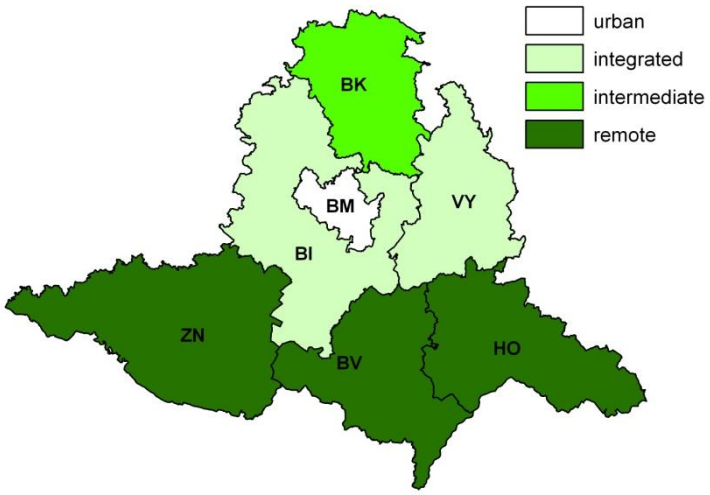


Figure 30 | Categories of integrity - according to share on employment of SMR. Resource: data CSO 2007, own calculation

3.2 Demographic trends

3.2.1 Population

The population of 140 thousand inhabitants (c. 11%of the CR) means the SMR is the 4th most popular region in the Czech Republic. In recent time the population has grown up slightly, especially thanks to foreign immigration. Further elevation came in 2007, for the first time since 1993, thanks to positive natural increase, as shown in table 34. The highest increase of inhabitants was noticed in the district Brno-venkov and the lowest in the district Hodonin. The number of foreign migrants (c. 10.7 thou.) means the SMR is the 3rd place in the CR. The most frequent nationality is Ukraine, Slovakian, Vietnam and Mongolian.[7]

Table 34 | Long-term development of the population in the South Moravian Region

POPULATION	Unit	1993	1995	2000	2003	2005	2007
Population	Persons	1 141 313	1 141 172	1 135 586	1 122 570	1 130 358	1 140 534
Females		593 228	589 044	585 110	578 145	581 559	585 196
Foreigners (except persons with asylum)		.	.	16 813	22 668	24 234	32 606
Natural increase	‰	0.3	-2.1	-2.2	-1.8	-0.8	0.5
Net migration	‰	0.5	1.5	0.7	2.5	0.9	6.5

Resource: Czech Statistical Office; long term development 1993-2007

For the mapping (Figure 31) of inhabitants classes of municipalities in the South Moravian Region, we used the Natural Breaks classification. (The

[7] Czech statistical Organisation (2009)

classification based on the "clumping" of data value within the full set, revealing significant information regarding the distribution of values within field.)[8] The largest group is created by municipalities up to 1576 inhabitants (574) of which only 132 municipalities have the density over 100 inh./km^2.

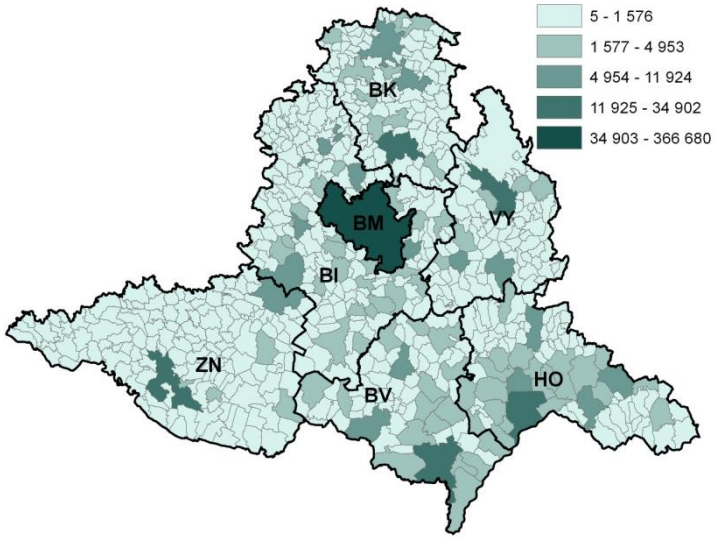


Figure 31 | Number of inhabitants in the municipalities of the South Moravian Region in 2007. Resource: CSO-Small Lexicon of Municipalities 2007, own calculation

Table 35 | Regional structure of municipalities of the South Moravian Region

	Number total	Up to 199	200-499	500-999	1000-1999	2000-4999	5000-9999	10000-49999	Over 50000
CR	6248	1590	2019	1307	685	375	140	111	21
SMR	673	119	199	179	96	58	13	8	1
Blansko	116	34	40	23	11	5	1	2	0
Brno-mesto	1	0	0	0	0	0	0	0	1
Brno-venkov	187	36	41	59	28	18	5	0	0
Breclav	63	0	12	18	19	11	2	1	0
Hodonin	82	4	17	25	13	18	2	3	0
Vyskov	80	6	31	29	8	3	2	1	0
Znojmo	144	39	58	25	17	3	1	1	0

Resource: data CSO 2007 - Small Lexicon of Municipalities 2007, own calculation

[8] S. Hutchinson, p.97

In the CR as well as in the SMR the most frequent municipalities count from 200 to 499 inhabitants, which create almost one third of all municipalities on both regional and country level. The second frequent range in the SMR is the category of 500-999 inhabitants (179, i.e. one quarter of all regional municipalities), on the contrary, the category for the CR is up to 199 (1590, i.e. one quarter of all country municipalities) See Table35.

The highest number of municipalities is in the district Brno – venkov (187), even though it does not belong to the largest districts. From the view point of number of municipalities related to the area: the highest number has the district Blansko with average area of municipalities 7.4 km² and lowest number has district Breclav, with an average area of municipalities 16.5 km².

3.2.2 Age structure

The ageing of the population and the decreasing proportion of children can be seen in the last few years of population development. In the South Moravian Region the share of children was 13.9% (in the CR 14.3%), the share of inhabitants in productive age was 70.4% (in the CR 71.2%) and the number of inhabitants older than 65 year was 15.1% (in the CR 14.5%) of all inhabitants. In comparison with 1993 the share of children was 19.5%, of inhabitants of a productive age was 66.8% and of post-productive age was 13.6% of inhabitants (see table 36). The average age was 40.6 years in 2007, one of the highest in the CR (40.3 years).

The index of economic dependency in the SMR shows that 41.1 (in the CR 40) children and old people (economic inactive inhabitants) exist for every 100 of the economic active inhabitants.

In comparing the districts in 2007 (see table 9) the highest share of children was in the Brno- venkov district (15.0%) and the lowest was in Brno-city (12.77%). The highest share of people (15-64 years old) was in the Břeclav district (72.1) and the lowest in Blansko (70.4). The highest share of people older than 65 years was in Brno-city (16.7) and the lowest in Znojmo (13.7). For more detail see appendix 3.2.

Table 36 | Long term development of age structure in the South Moravian Region

	1993	1995	2000	2001	2003	2005	2007	*CR 2007 (tou.)*
0 – 14	222 930	209 734	181 603	176 141	168 203	163 135	159 102	*1 476*
15 - 64	762 926	773 025	791 151	786 620	791 724	800 187	808 105	*7 351*
65+	155 457	158 413	162 832	161 732	162 643	167 036	173 327	*1 496*
Average age	37.0	37.5	39.0	39.2	39.8	40.3	40.6	*40.3*

Resources: Czech Statistical Office

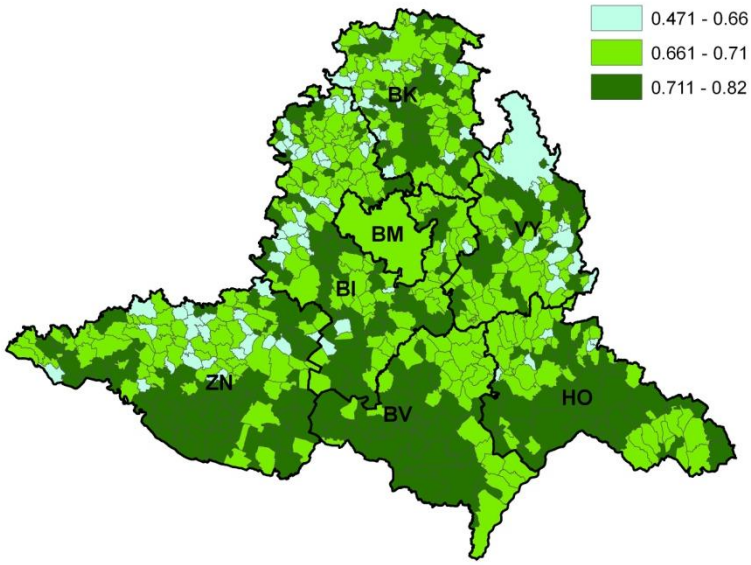


Figure 32 | Share of inhabitants in age 15-64 in the South Moravian Region in 2007. Resource: CSO-Small Lexicon of Municipalities 2007, own calculation

As shows Figure 32, the low share of inhabitants in active age is in the peripheral municipalities along the border with Vysocina Region, which is the most rural region on level NUTS 3 in the CR, and the periphery of district Vyskov (VY) (especially due to special military area on the north of district – Vojenský újezd Březina). On the other hand the highest share can be seen along the borders with Austria.

3.2.3 Education

The education level of the population belongs among the positive features of the Southern Moravia Region (see table 37). At the 12 universities and colleges in the Southern Moravia Region there are more than 62 thousand students. As regards the proportion of the number of university students per one inhabitant, Brno is in the first place in the Czech Republic. All of these universities play an important role in the development of science, research and innovation. Therefore the Southern Moravia Region, City of Brno in

particular, is a residence of a wide range of research institutes including several branches of the Academy of Science (e.g. Biophysical Institute, Institute of Zoological Physiology and Genetics, and Institute of Landscape Ecology).

Table 37 | Population (LFSS) by educational attainment in the SMR (in thou.)

	2005	2006	2007
Population aged 15+	961.8	969.4	975.9
Education			
Basic and without education	195.0	184.2	188.7
Secondary without GCE	340.5	344.5	329.8
Secondary with GCE	305.5	318.6	325.3
University	120.7	122.1	132.1

Resource: Czech Statistical Office

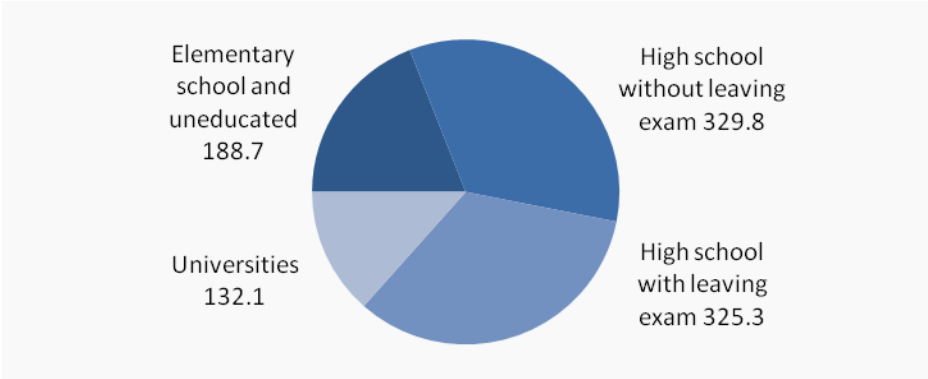


Figure 33 | Education structure of people more than 15 years old in the SMR in 2007. Resource: Czech Statistical Office

3.2.4 Housing and settlement

64.7% of the population of the region live in towns. The regional density is on average 158.5 persons per km² which is higher by 27 people then the country average. The highest density was in the Zastavka municipality (2 059.3 persons per km²) and the lowest in Louka (7.4 persons per km²). At a district level the highest density was in the Brno-město district and the lowest in Znojmo.

According to the Human Resources Strategy (2006) the most frequent reasons for moving were following relatives, housing or work. The housing reason for moving plays a significant role in moving from Brno-city to Brno-venkov, which supports the trend of suburbanization.

Brno is a significant work centre in the region. The work opportunities in Brno and the lack of them in Breclav, Blansko, Vyskov and Hodonin cause the movement into Brno-city.

The building activity in the region relates to this trend, the highest activity was noted in 2006 (5 909 dwellings started) and the lowest in 2001 (3 080 dwellings started), as shown in table 38. The total number of dwellings started in 1998 (44 448) mean the SMR in the third place of building activity in the CR.

Comparing the regions, 58% of started dwellings were in Brno-mesto and Brno-venkov. According to the index of the number of started dwelling per 1000 inhabitants, the annual average in period 1998-2007 was the highest in Brno-venkov (6.3) and the lowest in Hodonin (2.1). The regional index measured was 3.9.

Table 38 | Long term development of building activity in the SMR

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Started dwellings	3 628	3 080	4 105	3 829	5 371	4 887	5 909	5 614	4 196
Deployed dwellings	13 407	13 589	14 381	15 105	16 943	18 233	20 157	19 758	19 401
Completed dwellings	3 133	2 893	3 449	3 332	3 883	3 816	3 985	6 013	4 553

3.3 Economic system

3.3.1 Economy

The South Moravian Region is a region with great economic potential. The gross domestic product of the SMR represents 10.3% of the Czech Republic's GDP. In 2007 the SMR achieved 75.8% of EU's average GDP per capita.

Regarding to the industrial tradition of Brno and its surroundings the processing industry has a significant position in the economy of the region and contributes with 24.4% of total gross added value of the region. In comparison with other fields: the agricultural sector has a share of 2.9%; the building industry 7.8%; the trading and services sector 14% and commercial services 16.5% of total gross added value. There is also a significant presence of businesses in computer technology, telecommunications, software development and other hi-tech fields.

The South Moravian Region offers significant support to the development of technology and biotechnology incubators designed for new companies. Orientation towards the construction and development of technological parks, university campuses and scientific/research incubators together with high proportion of university students creates the basis for permanent development and brings about good conditions for investors. In 2007 the SMR showed the highest increase of investors in the CR (a total of 40 with a total investment of c.13 billion CZK, i.e c. 0.5 billion. EUR).

Traditionally, most investments are focused on the engineering industry, then on the plastic industry (especially on the producing of plastic windows) and the third is IT technology. Domestic investors are the most active. The majority of the inhabitants are employed in the service sector (34.9%) and industry (31.4%), as shown in table 39.

Table 39 | Structure of enterprises and employment in 2007 in the South Moravian Region

	Number of enterprises		Structure of employment	
		%	In thou.	%
I. Sector: agriculture, forestry	17 110	6.4	20.4	3.8
II. Sector:	68 120	25.4	223.8	41.8
Industry	37 213	13.9	168.1	31.4
Construction	30 907	11.5	55.7	10.4
III. Sector:	183 334	68.2	291.0	54.2
Services	174 172	64.8	186.8	34.9
Education, health service, public administration	9 172	3.4	103.6	19.3
Total	268 564	100	535.2	100

From the regional point of view, the highest number of economic subjects is in the Brno–mesto almost 42% of all subjects. Except agricultural and forestry sector, Brno-mesto keeps the first place in all sectors, the most frequently followed by Brno-venkov. On one hand, the most subjects in agricultural sector belongs to the district Breclav (4260) followed by the district Hodonin, on the other hand the lowest number is in the district Brno-mesto. In forestry, the most of subjects are located in districts Blansko and the least in the district Breclav. For more detail see appendix 3.4.

3.3.2 Unemployment

The economic activities of inhabitants don't achieve the CR's average, even though an increment in the number of full-time employees was registered. The main part of this increment was in industry especially in processing industry.

Despite the decreasing number of registered job applicants (by 18.3%) in 2007, the registered unemployment rate, with a value of 6.92%, is one of the highest in the CR (the 4th place, country average 5.98%). In 2007 the number of free work places was increased by 71.8%, on average there were 3.2 applicants for every work place. Positive facts are the decrease of the graduate unemployed and the increasing tendency of numbers of employees in enterprises with more than 20 employees in 2007. The improvement in this case was noted in the whole CR. The average gross wage in the region (19 893 CZK, i.e. 765 EUR)[9] was less than the CR's average (21 694 CZK, i.e. 834EUR). 84% of the 10.7 thousand foreigners living in the region were economically active.

[9] Exchange rate: 1 EUR = 26 CZK

From the viewpoint of integration the unemployment is lower in integrated regions (Brno-venkov, Vyskov) than in urban region Brno-mesto (over 1 percent). Almost double unemployment rate is in the remote regions Znojmo and Hodonin.

Table 40 | Unemployment in the South Moravian Region in relation to rate of integration of districts

	Unemployment rate	Number unemployed	Of which women	Integration
Jihomoravský kraj	6,92	44 239	24 092	
Blansko	5,59	3 225	1 869	Intermediate
Brno-mesto	5,98	13 249	7 436	Urban
Brno-venkov	4,53	4 923	2 884	Integrated
Breclav	7,46	4 774	2 322	Remote
Hodonín	10,70	8 908	4 542	Remote
Vyskov	4,88	2 350	1 313	Integrated
Znojmo	11,53	6 810	3 726	Remote

Resource: Statistical Yearbook of South Moravian Region in 2008, own calculation

3.3.3 Agriculture

In the South Moravian Region 60 % of the area is made up of agricultural land, of which 84 % is arable land (i.e. 49.7%, whilst the country's average is 33.5%). In acreage 362 937 ha of the UAA of SMR is 10.3% of UAA of the CR. The total number of holdings in the SMR is 8 522.

In the regional comparisons (as shown in table 41 and 42) the highest number of agricultural holdings is in the district Breclav, the majority (90%) is smaller than 5 ha. The highest utilized area is in the Znojmo district (102 936 ha), which is nearly double the size of the second largest UAA in the region (district Brno-venkov, 62 002 ha). The UAA in Znojmo Region is managed mainly by the large corporate farms.

Comparing the area of individual and corporate farms- at the country level the individual farms shared one third of the total area, at the regional level the share it was only one fifth of UAA of the South Moravian Region. On the contrary of the other districts near Brno (or district Brno-mesto) the highest share of individual farms is situated there.

Table 41 | Area of agricultural holdings by legal forms in 2007 in the South Moravian Region

	Area of UAA, total in ha	*Area by legal forms*					
		Individual farms	*Of which registrate individual farmers*	*Corporate farms*	*Of which*		
					Limited liability companies	*Joint-stock companies*	*Cooperatives*
Czech Republika	3 518 073	1 034 568	982 716	2 483 505	779 486	886 151	773 946
South Moravian Region	362 937	73 073	66 027	289 864	79 505	129 515	74 713
Blansko	35 081	4 703	4 128	30 378	4 542	14 644	11 191
Brno-mesto	7 335	2 779	2 656	4 557	2 278	1 796	Id
Brno-venkov	62 002	16 959	16 320	45 043	13 278	17 698	11 473
Breclav	55 853	13 164	10 579	42 688	15 064	17 958	6 571
Hodonin	56 623	9 377	7 279	47 246	9 630	36 818	Id
Vyskov	43 106	8 499	8 234	34 607	4 548	17 203	12 855
Znojmo	102 936	17 591	16 831	85 346	30 164	23 397	31 745

Table 42 | Size difference of agricultural holdings in 2007 in the South Moravian Region

	South Moravian Region	Blansko	Brno - mesto	Brno - venkov	Breclav	Hodonin	Vyskov	Znojmo
Number of agricultural holdings	8 522	424	230	1 029	3 311	2 044	231	1 253
With agricultural land								
Up to 4.99 ha	6 662	232	156	567	2 959	1 841	85	822
5 to 9.99 ha	486	70	28	110	87	70	24	97
10 to 49.99 ha	782	86	28	214	152	61	63	178
50 to 99.99 ha	194	10	5	54	34	21	17	53
100 to 499.99 ha	214	8	11	53	42	22	21	57
500 ha and over	184	18	2	31	37	29	21	46

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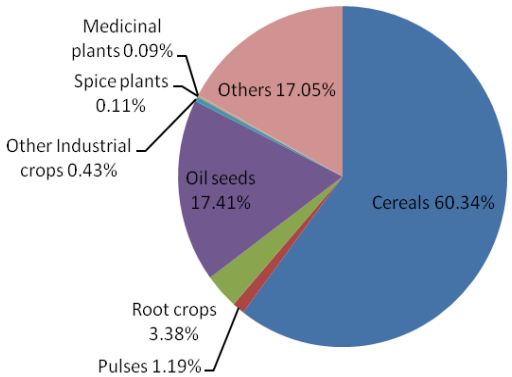

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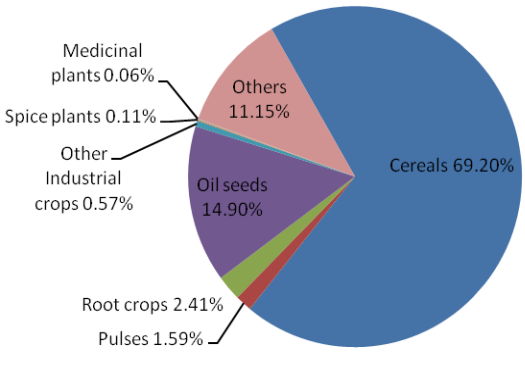


Figure 34 | Area under the farm crops in 2007: a. in the Czech Republic; b. in the South Moravian Region. Resource: data - Czech Statistical Office

Both figures show that the main agriculture crops in the Czech Republic are cereals, especially the grain maize, wheat and barley. The production of grain maize in the SMR is covered by 39% of country production. Next, significant share has the oil seeds, especially rape. In Czech production the SMR plays significant role also in production of sunflower seeds (over 50%) and soya (28%) (for more detail see appendix 3.3).

From a view point of country livestock production (see Table 43) almost one fifth of poultry production is produced in the SMR, especially in districts Znojmo and Brno-venkov. The district Znojmo also significantly shares on the regional production of pigs by 40%, i.e. 6% of country production. The other regional production shares on country production less than 10%.

Table 43 | Structure of livestock in the South Moravian Region

	Cattle total	in which Dairy cows	Pigs	Sheep	Goats	Poultry	Equidae
Czech Republic	**1 419 007**	**416 518**	**2 875 874**	**172 797**	**15 853**	**29 303 202**	**27 820**
South Moravian Region	**74 615**	**26 654**	**439 430**	**6 180**	**999**	**5 457 667**	**1 812**
Blansko	16 315	5 982	29 494	1 290	294	257 933	190
Brno-mesto	283	.	5 605	395	171	330	164
Brno-venkov	14 470	5 105	53 644	626	129	1 358 024	436
Breclav	9 584	3 461	52 780	651	91	861 989	222
Hodonin	10 172	3 701	67 282	1 579	206	951 961	356
Vyskov	8 304	2 618	52 456	830	.	291 678	246
Znojmo	15 487	5 784	178 169	809	98	1 735 751	198

Resource: data – CSO Agrocensus (2007)

3.3.4 Tourism

The accommodation services in the SMR are ensured by 502 accommodation establishments (hotels, motels, camps). In 2007 over 1178 thousands guests were housed, of which 36.7% were foreigners. This represented 9% of the total number of housed guests in the CR. Figures are represented in table 44.

According to the Structure Survey 2008[10] the most visited place was the Lednicko-Valticky areal, the less frequent was Brno and its surroundings. The visitors were almost from the distance over 100km (62%), so they spent in region more than 3 nights. The most frequent visitors came from Slovakia, Austria, Poland, Germany and the Netherlands.

Table 44 | Development of structure of accommodation establishments in the South Moravian Region

	2005	2006	2007
Collective accommodation establishments, total	496	489	502
Rooms	12 021	11 863	12 294
Beds	30 540	30 319	31 311
Guests	1 056 307	1 069 258	1 178 114
Non-residents	367 439	397 239	432 318
Overnight stays	2 321 628	2 342 743	2 353 525
Non-residents	680 503	759 570	783 502
Average number of overnight stays	2.20	2.19	2.00
Non-residents	1.85	1.91	1.81
Average time of stay, days	3.20	3.19	3.00
Non-residents	2.85	2.91	2.81

Resource: Czech Statistical Office

3.3.5 Forestry

The east-west (*Znojmo*) and the north (*Blansko* and *Vyskov*) of the region are important areas for forestry and wood production. In 2008 the managed forest area represented 207 thou. ha in the SMR and 1622 ha were afforested. Conifers were planted out on 764 ha, the non-coniferous were planted out on 858 ha. The area of conifers was extended by 26 ha and the area of non-conifers stayed the same in comparison with the previous year. In SMR the natural recovery of forest is registered on 415 ha of area which is the second largest area among regions. In 2008, the SMR exhausted 1 031 thou.m^3 of wood without bark, which is larger amount by one third than was in 2005.

[10] MU Brno(2008), p.4;
note: the numbers are related to the surveyed sample of visitors

Table 45 | Development of forestry in the South Moravian Region

	2005	2006	2007	2008
Afforestation/ reforestation (ha)	1 608	1 592	1 595	1 622
Coniferous, total	501	724	738	764
Non-coniferous, total	599	868	857	858
Timber removal (m^3 u. b.)	695 106	1 108 044	916 929	*1 031 000*
Incl.: Processed from salvage felling	289 394	638 299	356 166	*629 000*

Note: dates of timer removal in 2008 are rounded
Resource: Czech Statistical Office in Brno

3.4 Transport

The SMR is situated on the crossroads of the motorways D1 and D2 which intersect the region and are a part of the Trans-European thoroughfare West - East (France - Ukraine, E50) and North - South (Scandinavia - the Balkans, E55, E65). Further transport infrastructure includes the E461 motorway Svitavy - Brno - Pohořelice - Vienna (linked to the roads E49 and E59 in Vienna) and the E462 motorway running from Brno via Ostrava and Český Těšín to Krakow in Poland, where it further connects to E77. An important project of the city of Brno in the area of transport infrastructure is the current construction of a large city ring road. The denseness of roads is the highest in Brno – mesto (763 m/km^2) and the lowest in Hodonin (502 m/km^2) as shown in Table 46.

Table 46 | Structure and size of road in the districts of the South Moravian Region in 2008

	Motorways [km]	Road I.class [km]	Road II.class [km]	Road III.class [km]	Total [km]	Roads per km2 (m)
South Moravian Region	134	446	1475	2437	4494	625
Blansko		50	199	358	607	705
Brno-mesto	18	39	55	63	175	763
Brno-venkov	41	65	370	619	1095	731
Breclav	44	52	199	286	581	560
Hodonin		115	159	277	551	502
Vyskov	30	60	112	292	494	564
Znojmo		65	381	542	988	622

Resource: Road and Motorway Directorate; own calculation

Through the region 2 multi-mode corridors are passing, which are further linked to the TEN Trans-European network of the EU countries - the 4th Corridor Berlin - Prague - Brno - Břeclav - Vienna/Bratislava and the

line b of the 6th Corridor Gdaňsk - Katovice - Ostrava - Břeclav - Bratislava (with a direct road junction to Brno). Besides that, the city of Brno is integrated into the project of the European network of high-speed railway lines and should become one of the crossing points of this network. In the region the total railways comprise 800 km. A not-insignificant advantage of the region is the 1st class International Airport in Brno-Tuřany.

3.5 Environment

The protected area of the SMR covers 58 thousand ha (i.e 8% of the region). It represents just 4.6% of total protected area of the CR, which is 1249 thou. ha (i.e 15.8%). For the structure see Table 47.

Table 47 | Protected areas in 2007 in the South Moravian Region

Protected areas	Number	Ha
National parks	1	6 259
Protected landscape areas	3	35 405
Small scale protected areas	279	8 310
National natural monuments	13	357
National natural reservations	18	2 811
Natural monuments	153	1 624
Natural reservations	95	3 518

Source: SMR (2008), p.6

From the table 48, the increasing investment in the protection of the environment can be seen. The investments and legislation led to a decrease of the pollution, as shown in the table 52. In comparison with the CR the SMR is significantly under the country average pollution in all measured categories

Table 48 | Long term development of investment in the environment in the South Moravian Region

	2000	2001	2002	2003	2004	2005	2006
Investment in protection of Environment (thou. EUR)	49 497	49 404	87 753	159 642	109 216	96 923	80 569

Note: exchange rate 1 EUR =26 CZK
Resource: Czech Statistical Office

Table 49 | Comparison of emissions in 1995 and 2006 in the SMR and the CR

Specific emissions (t/km²)	CR 1995	SMR 1995	CR 2006	SMR (2006)
Solids	2.46	1.29	0.42	0.19
Sulphur dioxide	13.74	3.83	2.67	0.58
Nitrous oxide	2.78	1.37	1.94	0.56
Carbon dioxide	7.70	4.36	3.03	0.77

Resource: Czech Statistical Office

The area of Natura 2000 is divided into several types of biogeographical areas. In the CR there are two of them: continental and panon regions. Most of the area in CR is continental biogeographical type. The panon biogeographical type covers just part of South Moravia, mainly in the SMR (42 534 ha) and partly in the Zlin region (2 110 ha). Total area of Natura 2000 covers 92 364 ha of the SMR, i.e. 6.5% of total area of Natura 2000 in the CR (1 418 034 ha).

Table 50 | Comparison of the CR and the SMR area under the Natura 2000 in 2007

	Area (ha)	Number of pSCI	Area of pSCI (ha)	pSCI Share (%)	Number of Bird Areas	Area of Bird Areas (ha)	Share of Bird Areas (%)
CR	7886739	863	724412	9.2	38	693622	8.8
SMR	719308	187	51357	7.1	9	41007	5.7
Share (%)	9.1	21.6	7.1		23.7	5.9	

Resource: Czech Statistical Office; Note: pSCI – proposed Sites of community Importance

3.6 References

CSO (2007): Crops: available at http://czso.cz/xb/edicniplan.nsf/t/8B004F9F41/$File/13-640208q4k3.xls

CSO (2008a); Characteristics of South Moravian Region; download 19.6.2009; available at http://czso.cz/xb/redakce.nsf/i/charakteristika_jihomoravskeho_kraje

CSO (2008b); Statistic Organisation of SMR; Commentary; download 25.6.2009; available at http://czso.cz/xb/edicniplan.nsf/o/w-644003-09-v_roce_2008-komentar

CSO Agrocensus (2007); Farm Structure Survey 2007 Results - Regions and Districts; available at http://www.czso.cz/csu/2008edicniplan.nsf/publ/2129-08-

CSO Brno: Regional yearbook: available at http://www.brno.czso.cz/xb/redakce.nsf/i/lesnictvi_v_jihomoravskem_kraji_v_roce_2008

CSO; Long term development of South Moravian Region; available at http://www2.czso.cz/xb/redakce.nsf/i/1_cast_uzemi_makroekonomicke_ukazatele_zivotni_prostredi_obyvatelstvo

SMR (2006); Strategy of Human Development; download 24.6.2009; available at http://ppjmk.kr-jihomoravsky.cz/Default.aspx?PubID=51443&TypeID=2

SMR (2008); Annual report of South Moravian Region 2007; download 24.6.2009; available at http://www.kr-jihomoravsky.cz/Default.aspx?PubID=10529&TypeID=1

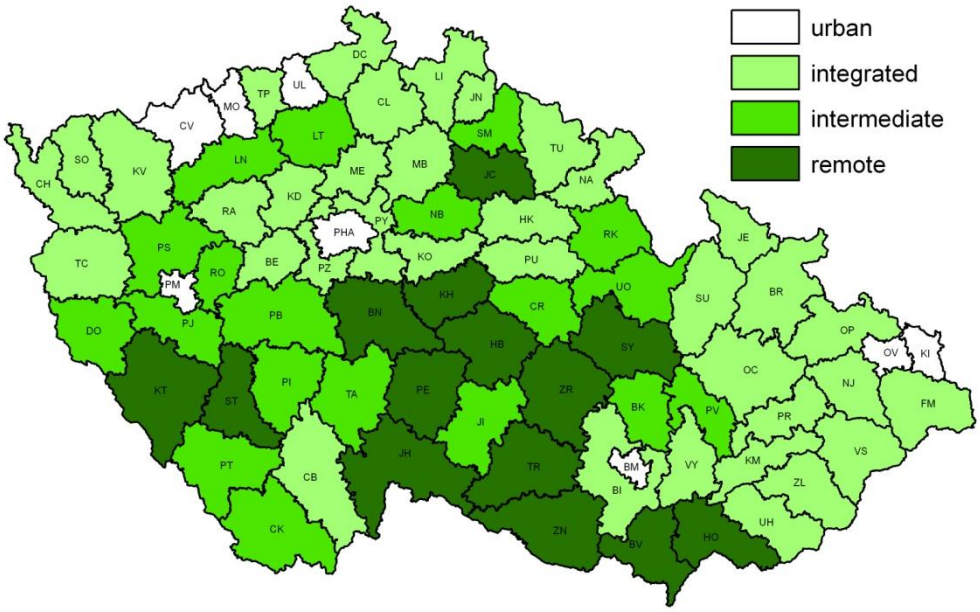
SMR (2009); Characteristics of South Moravian Region; download 19.6.2009; available on http://www.kr-jihomoravsky.cz/Default.aspx?PubID=25940&TypeID=2

S. Hutchinson: Inside Arcview GIS 8.3; Thomson Delmar Learning, ISBN: 0-7668-3475-1, http://books.google.cz/books?id=Ge2dE96aWPYC&lpg=PA97&ots=VTFTxKB6G-&dq=natural%20breaks%20arcgis&pg=PT1#v=onepage&q=&f=false

T. Ratinger (2003): IDARA, Integrated Strategy for Agricultural and Rural Development in the Czech Republic (QLRT-1526), working paper revised 4, August 2009

3.7 Appendices

Appendix 3.1 | Categories of integrity rate - according share on employment in CR



Resource: own calculation

Appendix 3.2 | Regional comparisons of population in 2007 in the South Moravian Region

	South Moravian Region	Blansko	Brno - mesto	Brno - venkov	Breclav	Hodonin	Vyskov	Znojmo
Population	1140534	105663	368533	195644	113171	157176	87519	112828
Females	585196	53759	192498	99173	57961	80030	44421	57354
Share of Foreigners (%)	2.85	1.87	4.63	3.63	1.68	0.94	1.55	1.55
Population (%)								
0 - 14 (%)	13.95	14.38	12.77	15.02	14.15	13.99	14.49	14.86
15 - 64 (%)	70.85	70.38	70.49	70.26	72.07	71.40	71.01	71.40
65+ (%)	15.20	15.25	16.73	14.72	13.78	14.61	14.50	13.74
Average age (year)	40.63	40.41	41.84	40.01	39.97	40.18	40.03	39.69
Per 1 000 population								
Natural increase (‰)	0.53	0.99	0.32	1.71	-0.38	-0.38	0.30	1.06
Net migration (‰)	6.49	4.21	4.73	23.19	2.30	-0.36	4.47	1.09
Total increase (‰)	7.02	5.19	5.05	24.91	1.92	-0.73	4.77	2.16

Resource: Czech Statistical Office

Appendix 3.3 | Area under the farm crops the SMR with comparison to the CR in 2007

Crops	2005	2006	2007	CR 2007	rate 2007 SMR/CR
Cereals, total	214 939	214 189	223 156	1 561 191	14%
Wheat	110 167	109 857	113 177	810 987	14%
Rye	2 745	1 469	2 677	37 503	7%
Barley	64 063	63 986	63 322	498 692	13%
Oats	1 741	2 140	2 192	59 016	4%
Triticale	2 746	2 339	2 274	50 051	5%
Grain maize	32 070	31 408	36 378	93 065	39%
Pulses, total	5 636	5 749	5 136	30 668	17%
Peas	5 002	4 657	4 699	22 888	21%
Root crops, total	11 186	8 775	7 778	87 364	9%
Potatoes, total	2 664	1 821	2 114	31 912	7%
Early potatoes	768	446	640	2 147	30%
Industrial sugar beet	8 284	6 672	5 331	54 272	10%
Industrial crops, total	49 902	52 786	49 888	461 629	11%
Rape	14 843	17 219	23 836	337 570	7%
Sunflower for seed	19 692	21 169	12 566	24 425	51%
Soya	2 532	2 173	2 074	7 525	28%
Poppy	4 759	5 779	6 262	56 915	11%
Mustard for seed	2 691	2 643	2 952	21 349	14%
Common flax	582	815	354	2 640	13%
Fibre flax	133	62	0	705	0%
Spice plants	520	280	359	2 815	13%
Medicinal plants	439	191	203	2 369	9%
Area under crops, total	321 524	319 478	322 485	2 587 184	12%

Resource: Czech Statistical Office (2007); Czech Statistical Office in Brno

Appendix 3.4 | Regional distribution of economic subjects in the South Moravian Region in 2007

	South Moravian Region	Blansko	Brno-mesto	Brno-venkov	Breclav	Hodonin	Vyskov	Znojmo
Total	269 366	19 346	112 785	39 437	25 282	31 550	17 506	23 460
Agriculture, forestry	17 141	1 476	1 261	2 892	4 343	3 294	1 382	2 493
Agriculture	14 919	943	1 083	2 452	4 260	3 039	1 100	2 042
Forestry	2 222	533	178	440	83	255	282	451
Fishery	53	11	8	9	12	0	2	11
Industry total	37 293	3 485	12 477	6 541	3 446	5 179	2 862	3 303
in which								
Mining	48	3	16	10	6	10	2	1
Processing industry	37 089	3 462	12 418	6 495	3 427	5 151	2 858	3 278
Electricity, gas, water services	156	20	43	36	13	18	2	24
Construction	31 107	2 180	9 486	5 539	3 140	4 344	2 892	3 526
Shops, services for households	69 380	4 906	29 773	10 141	6 275	8 676	4 030	5 579
Housing	11 907	997	4 580	1 624	1 249	1 208	748	1 501
Transport and storage	7 971	514	3 168	1 405	802	867	613	602
Financial services	7 168	562	3 238	881	720	783	451	533
Reality and business activities	56 933	2 752	36 095	6 159	2 600	3 830	2 326	3 171
Public services and social security	1 412	271	62	325	128	159	171	296
Education	4 091	286	2 085	536	310	366	230	278
Health and social care	3 751	287	1 741	471	307	404	246	295
Others services	21 153	1 619	8 806	2 914	1 950	2 440	1 552	1 872
Extraterritorial organizations	6	0	5	0	0	0	1	0

Resource: Czech Statistical Office

4 SOCIAL ECONOMIC ANALYSIS OF THE AUVERGNE REGION

This chapter is mostly based on the translation/adaptation of reports and syntheses issued by the French statistical institute (Batifoulier et al., 2007; Gauvin et al., 2005; INSEE Auvergne, 2006, 2009; Mespoulhès, 2007, 2009; Vallès, 2007, 2009a, b), as well on materials gathered for M1.4 of PRIMA.

Baptiste Hautdidier

4.1 General characteristics

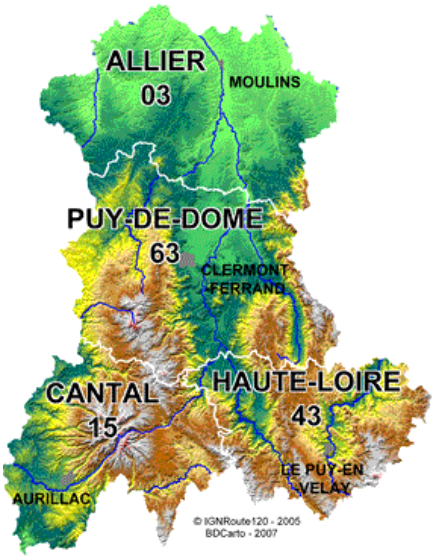


Figure 35 | Schematic map of Auvergne region, with NUTS3 & relief

4.1.1 Geographical information

Located in the centre of metropolitan France, the Auvergne region is closely associated with Massif Central, a larger geographical set of mountains and plateaus (mostly hercynian, with a chain of quaternary volcanoes). The human settlements of Auvergne are on average the highest of French regions (490m).

The region has a very dense river system, with the presence of the Allier, Loire, Lot & Dordogne rivers. The total area is 26 013 km² (5 % of metropolitan France), with 1.34 M inh. in 2006. Its population density (51 inh./km²) is below the half of the average value for the whole metropolitan France. (INSEE Auvergne, 2006)

Landlocked and mountainous, Auvergne has for long being hampered in its development by a low accessibility, even if exchanges with neighbouring regions, (mostly Rhône-Alpes and Île-de-France) have been historically sustained. As a result, Auvergne is still considered as the centre of what French pupils learn as the 'diagonal of void'.

4.1.2 Administrative structure of the Region

The NUTS2 region Auvergne is defined as a *région* in the French system, matching both an administrative level and a local government. It is the privileged scale for the subnational declinations of European policies.

It is composed of 4 '*départements*', (NUTS 3 level for France), Allier, Cantal, Haute-Loire and Puy-de-Dôme. Yet '*départements*' harbour deconcentrated and decentralised bodies that have their say on land-use dynamics and the funnelling of European funds (mostly EAFRD & ESF), their perimeter is increasingly challenged by other levels.

The LAU2 level is composed of 1310 '*communes*' in Auvergne (over 36 000 for the whole France), that are both the lowest-level administrative units and the constituencies for municipal councils (each of them electing a mayor).

Not communicated to Eurostat until quite recently, due to a hesitation between more or less functionally relevant zonings, LAU1 have been defined as '*cantons*'. '*Cantons*' are the constituencies of NUTS3 regions ('*conseil général*' of '*départements*') but in most cases do not match any local government. Some data (agricultural censuses…) are sometimes delivered at '*canton*' level when '*communes*' harbour too few statistical individuals.

Municipalities are often very small in France and there are two parallel ongoing processes to group them as *intercommunalités*, '*EPCI*' (*établissement public de cooperation intercommunale*) and '*Pays*'. While *pays* may disappear in a near future, both kinds of *intercommunalités* are relevant entities for the channelling of European Funds in rural areas.

14 *pays* (including one under construction) were covering the region in 2009, encompassing 1130 out of the 1310 municipalities of Auvergne. EPCI are more numerous, with a total number of 104, and 1238 municipalities included.

4.1.3 Rural areas

➢ According to international definitions and typologies

Table 51 | Rural typologies of Auvergne's NUTS 3 regions

	NUTS3 code	FR721	FR722	FR723	FR724	
	Name	Allier	Cantal	Haute-Loire	Puy-de-Dôme	
European Commission	OECD, taken from RD 2008 report	IR	PR	PR	IR	PU = Predominantly urban; IR = Intermediate rural; PR = predominantly Rural
	DG Regio typology	21	32	31	21	1 = Predominantly urban regions; 21 = Intermediate rural regions, close to a city; 22 = Intermediate rural, remote regions; 31 = Predominantly rural regions, close to a city*; 32 = Predominantly rural, remote regions
PLUREL project	RUR typology	3	4	4	1.2	1 = monocentric (1.0 = monocentric very large; 1.1 = monocentric large; 1.2 = monocentric medium); 2 = urban polycentric; 3 = dispersed polycentric; 4 = rural

*: Close to a city: at least 50% of the population of the regions lives at less then 45 minutes travel by road to a city o f at least 50000 inhabitants

➢ INSEE definition

Rural areas are defined by INSEE, the French statistical institute, in contrast with urbanized areas, themselves equated with the concept of *unités urbaines* (urban unit): one or several communes covered by a continuously built-up area, with no distance between habitations greater than 200 metres, and a total population greater than 2,000 inhabitants A commune is defined as 'urban' if more than 50% of its population is covered by the built-up area. If not, it is a 'rural' commune.[11].

➢ Other functional zonings

In order to take into account the dynamics of periurbanisation, approaches of urban/rural processes centered on employment and services were progressively introduced. The latest version—*Zonage en Aires Urbaines et en*

[11] http://www.insee.fr/fr/methodes/default.asp?page=definitions/unite-urbaine.htm

aires d'Emploi de l'espace Rural (ZAUER), a joint product of INSEE and INRA—was issued in 2002[12]

The 'urban pole' (*pôle urbain*), the first component of this analytical classification, is defined as a commune or an urban unit providing at least 5000 jobs. The 'urban area' (*aire urbaine*) is built in an iterative way around urban poles, by including all communes, rural or not, whose 40% of potential workers have jobs in the urban area. The 'predominantly urban space' (*espace à dominante urbaine*) is the agregation of 'urban areas' and 'multipolarized communes' (whose at least 40% of workers are attracted to *several* urban areas)

The ZAUER is to be taken as a refinement of the approach in the remaining 'predominantly rural space', with the definition of 'employment clusters of the rural space' (*pôles d'emploi de l'espace rural*), smaller replicates of the urban areas (with a threshold of only 1500 jobs). A parallel approach includes the definition of 'intermediary services clusters' (*bassins de services intermédiaires*), based on the presence and the functional influence of public and commercial facilities.

For the Auvergne region, the predominantly urban space encompasses far more LAU2 than the rural *stricto sensu* (418 instead of 109 LAU2, out of a total of 1310), defining only six large areas impacted by urban economic activity: Clermont-Ferrand/Vichy/Thiers, Moulins, Montluçon, Aurillac, Le Puy-En-Velay and the outskirts of Saint-Etienne. (*Cf* Figure 36)

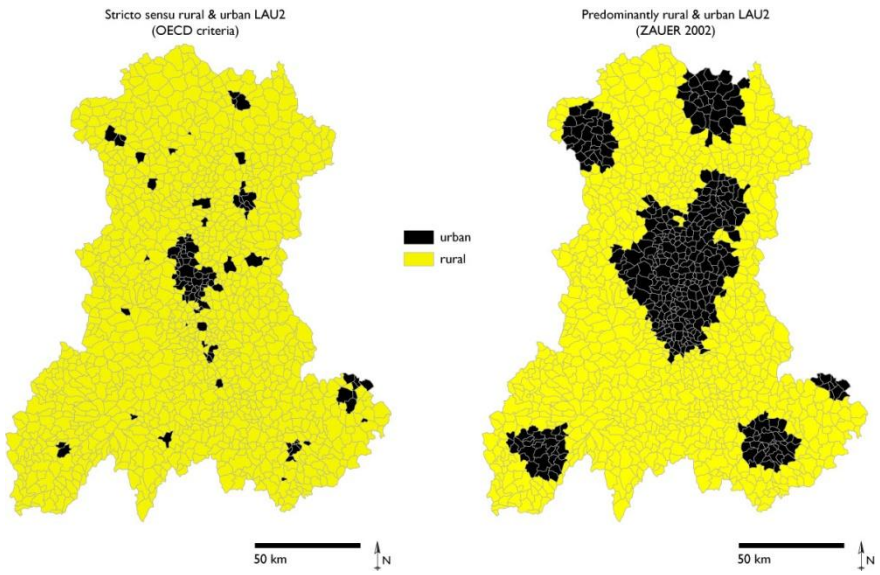


Figure 36 | Comparison of two rural/urban typologies of Auvergne's LAU2

12 http://www.insee.fr/fr/themes/detail.asp?ref_id=bassins_vie&reg_id=99&page=donnees-detaillees/bassins_vie/rapport.htm

4.2 Demographic trends

4.2.1 Population

Table 52 | Population variation rate in rural/urban settings of Auvergne

	Mean population	Population yearly variation rate						Pop. Density (inh./km²)
		Total		Net migration		Net natural growth		
	2006	1999-2006	1982-1999	1999-2006	1982-1999	1999-2006	1982-1999	2006
Auvergne	12 671	0.3	-0.1	0.4	0	-0.1	-0.1	51
Predominantly urban space	26 891	0.4	0.1	0.3	0	0.1	0.1	140
Urban pole	71 759	0.1	0	0	-0.2	0.1	0.2	235
Peri-urban ring	8 899	1.4	0.9	1.2	0.9	0.2	0	61
Predominantly rural space	6 633	0.1	-0.5	0.5	0.0	-0.4	-0.5	25
Employment clusters	10 944	0.3	-0.3	0.5	-0.1	-0.2	-0.2	46
Other municipalities	5 063	-0.1	-0.7	0.5	-0.1	-0.6	-0.6	18
Metropolitan France	20 912	0.7	0.5	0.3	0.1	0.4	0.4	106
Predominantly urban space	36 178	0.7	0.6	0.2	0.1	0.5	0.5	213
Predominantly rural space	7 754	0.7	0.1	0.8	0.2	-0.1	-0.1	35

Source : Insee, *recensements de la population*

Population change was positive over the 1999-2006 period, after a decrease during 1982-1999. The predominantly urban space, mostly driven by the metropolisation of Clermont-Ferrand, had a continuous growth during those two periods.

The reversal is very clear in the employment clusters of the 'predominantly rural space'. This reversal is mainly driven by net immigration, while the net natural growth remained negative.

This interesting respite should not mask the predictions for 2030[13]: the population of the Auvergne region should decrease by 2 to 7%, *a contrario* with the French average. This fall is explainable by the impact of the persistent natural deficit, a negative migratory balance and a low level of fecundity. While the urban space gained as much population as the rural areas lost over the twenty last years, rural areas will stop their decline for the least isolated part in the future. Growth of the urban space (in particular the Clermont area) is expected to slow down, even in the long term to reverse for the other cities.

[13] http://www.auvergne.pref.gouv.fr/pdf/auvergne_2030.pdf

4.2.2 *Age structure*

The Auvergne population is ageing, at a faster rate than the rest of France. In 2007, 25.7% of the Auvergne inhabitants are 60 or older, compared with 21.5% for metropolitan France. The young/old ratio (nb of >20 yrs /nb of >60 yrs), with a value of 0.9, is only beaten by Corsica & Limousin. (INSEE Auvergne, 2009)

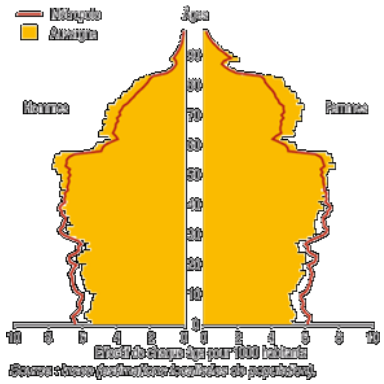


Figure 37 | Population pyramid of Auvergne (2004).
(Men on the left, Women on the right. In red, average for metropolitan France. X-axis, number of each age class per 1000 inh.)

4.2.3 *Education*

For the 2008-2009 academic year, the region had a total of 225058 students, allotted in 1401 primary schools, 201 *collèges* (secondary schools for 11-15 yrs), 55 *lycées* (secondary schools for 15-17 yrs), 34 secondary schools for vocational training. One-fifth of the students are in private schools, mostly Catholic.

Out of the 1310 communes (LAU2) of the region, 458 had no primary schools. Due to low density, a majority (55%) of primary schools have 3 classes or less (66% in Cantal, compared with a national average of 40%). Accordingly, there are 18 *collèges* with less than 100 students, kept open for the sake of territorial equity (INSEE Auvergne, 2009).

Due to the economic crisis, work-study programs that were on the rise since 2005 have suffered a severe setback in 2008, Cf. Figure 38.

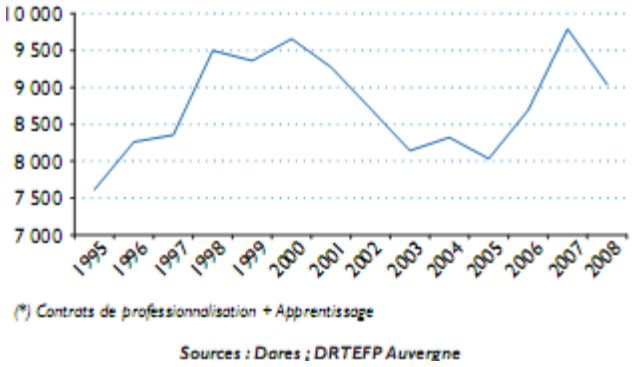


Figure 38 | Number of beneficiaries of work-study programs

4.2.4 Housing and settlement

As commented in (Mespoulhès, 2009), despite a low or negative population growth, the number of housing is on the rise in Auvergne, mainly driven by 'decohabitation' (*ie.* smaller households, with less grown-up children and grand-parents)

The interest for houses and individual ownership is highly prevalent in the region, especially in the most rural Cantal & Haute-Loire.

Table 53| Housing in Auvergne (2006)

	Auvergne		Metropolitan France	Variation 1999-2006	
	Number	%	%	Auvergne	Metropolitan France
Housing - total	766 372	100,0 %	100,0 %	+ 6,6 %	+ 8,3 %
Main homes	596 520	77,8 %	83,9 %	+ 7,2 %	+ 9,5 %
Secondary homes	96 275	12,6 %	9,9 %	- 2,6 %	+ 5,7 %
Unoccupied homes	73 577	**9,6 %**	6,3 %	+ 15,2 %	- 2,0 %
Status of main homes					
Owner	375 843	**63,0 %**	57,2 %	+ 12,6 %	+ 14,5 %
Tenant	203 834	34,2 %	39,9 %	+ 5,0 %	+ 6,8 %
of which social housing	*60 551*	*10,2 %*	*15,2 %*	*+ 3,3 %*	*+ 2,3 %*
Free housing	16 843	2,8 %	2,9 %	- 40,7 %	- 30,7 %

Sources : Insee, *Recensements de la population* 1999 & 2006

	Auvergne		*départements*			
Types of main homes	Number	%.	Allier	Cantal	Haute-Loire	Puy-de-Dôme
Houses	405 117	67,9 %	71,9 %	**72,4 %**	**74,4 %**	62,4 %
Flats	187 673	31,5 %	27,5 %	27,2 %	25,2 %	36,8 %
Others (collective housing, shacks…)	3 730	0,6 %	0,6 %	0,4 %	0,4 %	0,8 %

Sources : Insee, *Recensement de la population* 2006

The proportion of secondary homes and absentee ownership is clearly higher than the national average (and on a stark rise for the latter): nearly one-quarter of homes are never or partly occupied.

4.3 Economic system

4.3.1 Economy

➢ An economic sector impacted by an industrial print

Ramon Laplana

The Auvergne region is a land of industrial tradition and the sector stands for one-fifth of the salaried employment. One-third of the employees work in enterprises whose manpower exceed 500 people. Approximately 70% of employment are dependent on decisions coming from large groups with however a strong presence from SME. Although presents on various activities, the Auvergne industry includes some prevalent sectors: industry of the intermediate goods, rubber-plastic chemistry, metallurgy and transformation of metals; agricultural and food industries (milk industry, treatment of the meat, the work of the grain and drinks industry) (Cf. Table 54). In some areas, this strong industrial orientation is under the risk of sectoral shocks, of reorganization or delocalization.

Table 54 | Ten largest industrial employers of Auvergne in late 2005

Name	Specific activity	Salaried employment	Localisation
Michelin	Tires	10 000 to 14 999	Clermont-Ferrand
Alcan	Aluminium industry	1 500 to 1 999	Issoire
Banque de France	Printing works	1 000 to 1 499	Chamalières
Aubert & Duval	Steel industry	1 000 to 1 499	Les Ancizes-Comps
Sagem	Navigation devices	1 000 to 1 499	Domérat
Merck	Pharmaceutic industry	1 000 to 1 499	Riom
Volvic	Mineral water	750 to 999	Volvic
Peugeot Citroën	Iron foundry	750 to 999	Dompierre-sur-Besbre
Socopa	Industrial butchery	750 to 999	Villefranche-d'Allier
Valéo	Windscreen wipers	750 to 999	Issoire

Source : INSEE - CLAP 2005

➢ An economic growth based on a network of small firms

Between 1990 and 2002, the growth of the Auvergne GDP was on average outperformed by the other French areas. The economy shows characteristics related to its traditional activities confronted with major changes.

- Increasing development of service activities, which contribute to the majority of the added-value.

- The agricultural and industrial activities have an important weight in the region, but their productivity per worker ranks in the last quarter of the French regions.

- Beside some large industry groups, most companies, a little more than 50.000, are SME. The very small companies of less than 20 people, which concentrate 40% of the salaried employment, play a central role for the maintenance of the activity in the rural areas.

- A potential for research/technology/ innovation/training

With public research centres (INRA, CEMAGREF) and large private groups (Michelin, Merck, Rhône-Poulenc, L'Oreal, Pechiney, Limagrain…), two universities and engineering schools, Auvergne has important assets in the research sector, around four axes of excellence: quality of food, health and human nutrition, chemistry of the transformations and durability of materials, powerful and intelligent machines and of two specific research clusters (labelled as *pôles d'excellence* in the funding contract between State & the region) on corpuscular physics and volcanology. Centres of technology transfer allow the Auvergne companies, in particular SME, to reach their potential of research.

Two 'competitiveness clusters' (*pôles de competitivité*) have been labelled in the region, both in the agrofood sector: *Céréales Vallées* (cereal production), *Innoviande* (meat transformation).

4.3.2 Unemployment

- Unemployment rates

Auvergne shows a moderate growth of employment over these last years. The evolution of employment is marked by two contrary tendencies:

- A continuous decrease of nonpaid employment

- A continuous growth of salaried employment;

The service sector ensures most of this growth and in particular that of the services to the companies which remains however under-represented. Some sectors are strongly impacted by globalization: textile industry, electrical /electronic appliances.

As shown in Figure 39, Auvergne's figures of unemployment slightly outperform the national average since 2001, but remain highly dependent on external drivers, such as the consequences of as the financial crisis.

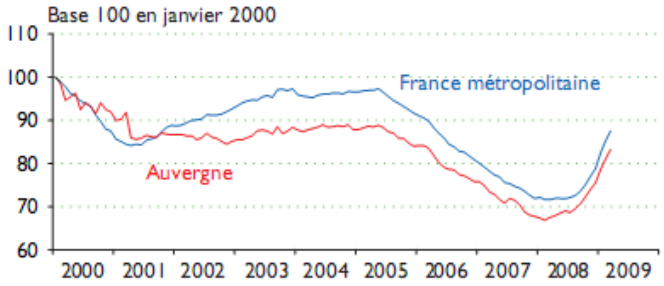


Figure 39 | Evolution of unemployment in France and metropolitan France from 2000 to 2009 (100 as the arbitrary basis in january 2000). Source: Dares, DRTEFP Auvergne, in (INSEE Auvergne, 2009)

By its structure of activity, employment in Auvergne remains characterized by an important weight of blue-collar workers and a manager-to-staff ratio below the French average. In addition, taking into account the characteristics of the population, one should expect for a reduction of job potential in 2015. This is a major challenge for the years to come as certain jobs (management, higher intellectual professions, entrepreneurs) are already concerned with ageing.

- Poverty rates

The poverty rate of Auvergne ranks consistently as one of the highest of metropolitan France (Mespoulhès, 2007). The French definition is based on a relative & monetary approach: the *poverty rate* is defined by the proportion of individuals whose estimated income is below 60% of the median income (788 € /month in 2004). The *poverty intensity* measures the relative difference between the poverty threshold and the median income of the Poor.

Baptiste Hautdidier

In this respect, the poverty intensity of Auvergne's *départements* does not differ strongly from the national average. For the poverty rate, two major differences should be noted: (i) most household types (except single-parent) of Cantal are faced with higher poverty rates than the national average; (ii) in Cantal & Haute-Loire (predominantly rural *départements*), the elderly experience higher poverty rates.

Table 55 | Poverty rates in Auvergne's *départements* (2004)

		département					
		Allier	Cantal	Haute-Loire	Puy-de-Dôme	Auvergne	Metropolitan France
	Poverty rate (%)	12,8	**17,5**	13,9	11,5	12,9	11,7
	Intensity of poverty (%)	16,7	17,8	16,9	17,2	17,1	17,2
	Median income (€/UC)	14 660 €	13 900 €	14 460 €	15 660 €	14 980 €	15 770 €
	Interdecile ratio	2,81	2,97	2,79	2,98	2,92	3,14
Poverty rate by household type (%)	Childless couple	7,3	**14,1**	10,0	6,2	8,0	6,0
	Couple with children	12,5	**16,2**	12,7	10,2	11,9	11,0
	Unattached individual	15,6	**23,1**	**19,6**	16,5	17,4	13,9
	Single-parent family	**25,1**	22,9	22,6	20,5	22,2	21,2
Poverty rate by age (%)	0 to 17 yrs	19,0	20,7	16,8	15,4	17,1	16,4
	18 to 29 yrs	15,3	17,0	14,1	14,8	15,0	14,3
	30 to 64 yrs	11,5	**15,4**	12,0	9,6	11,1	10,1
	> 65 yrs	9,2	**19,4**	**15,0**	9,4	**11,5**	7,8

Source : Insee-DGI, *Revenus disponibles localisés* 2004

4.3.3 Agriculture

Baptiste Hautdidier
Ramon Laplana

Agriculture, another traditional activity, represents nearly 7% of regional employment. With an influence on 60% of the area of the region, it plays also an important role in the dynamics of land use and the safeguarding of landscapes.

In early 2008, Auvergne harboured 24 200 farms, of which 17 000 had a professional status, with 93% of the UAA. The figure was above 30 000 in 2000: one-fifth of farms have quit since (INSEE, 2009). The erosion has been less severe for the professional farms (with a yearly withdrawal rate of 2%, better than the national average). Their average UAA is 85 Ha, (11 more than in 2000, and 5 more than the national average). Yet, even if farmers are relatively younger than the national average, the passing on of farms remains an acute question in the region.

Most of the activities are centered on cattle breeding: 72% of the professional farms are specialized in beef livestock (meat and/or dairy, the first specialization now supplanting the latter), to be compared with the 31% national average. With 80% of the regional UAA occupied by grass, Auvergne is the largest meadow of France. Pig breeding and aviculture, in progression, remain still marginal.

36 000 workers (leaving out seasonal workers) are involved in professional agriculture. This employment is mostly family-based (only 2000 salaried workers). One-third of the workers are women, but their number is declining (-21 % vs. - 17 % for men). The involvement of farms in associations of producers (mostly the *Groupement Agricole d'Exploitation en Commun*) is on a stark rise, but individual holdings are still highly prevalent (69 % of farms, vs. 59 % for national average).

Non-professional farms are smaller and disappearing at a faster rate (-5% /yr). Cattle breeding is also the dominant activity, but with 36% of farms specialized in sheep, and 22% in beef.

According to its natural characteristics - landscapes and cultural heritage, land uses (importance of meadows, forest) and agricultural specificities (AOC products…) the dynamics of the Auvergne region are directly and greatly impacted by changes in consumer attitudes:

- New consumer attitudes on food products: the change in society models, the new sensibility of consumers and the demand to agriculture for aspects of healthy, safety, quality, ethic in food products.
- Demand for environmental, ecological and landscape values: the demand to agriculture towards activities able to guarantee positive effects on environment, in terms of management and improvement of natural resources and landscape.
- Demand for economic contribution: the demand to agriculture towards employment, viability of the rural country side and regional development with aspects connected to tourism and leisure activities.
- Socio-cultural demand: the demand to agriculture for a socio-cultural role, to cultural heritage values, to ethical values, with the aim of education or assistance to people with social or health problems.

4.3.4 Tourism

Ramon Laplana
Baptiste Hautdidier

Tourism constitutes one of the economic development leverage of the region. The weight of tourism consumption is estimated at 2.6-2.8bn € (between 7 to 7.5% of regional GDP), while the expenditures of tourism clients amounts to 1.2-1.4 bn €.

The area is endowed with a highly favourable natural environment: two regional parks, recent facilities supporting this development, natural (volcanoes, forests) and historical sites, nine thermal stations (Vichy, Néris-les-Bains, Bourbon-l'Archambault, Chaudes-Aigues, Royat, Le Mont-Dore, La Bourboule, Châteauneuf-les-Bains and Châtelguyon). Winter tourism remains an important source of revenue, with six downhill ski stations (all of them below 1850 m though, and thus rather vulnerable to variability or decrease of snowfall).

With about 600 000 marketed beds and 29-31 millions nights, the accommodation capacity amounts to the equivalent of 12% of Auvergne population, without taking into account over 90.000 secondary homes. The ratio of marketed beds to population places the area at the head of the landlocked regions of the country.

Figure 40 allows to gain a broad overview of the main tourism sites of the region in 2001. A theme park in Allier (Le Pal) and summit of the Puy-de-Dôme volcano are the two most visited sites in 2007, with ~ 400 000 visitors

each (SPOT Auvergne, 2008). A theme park dedicated to volcanoes ranks third (not on the map, as it opened later, in the outskirts of Clermont-Ferrand), with 261 000 visits in 2007).

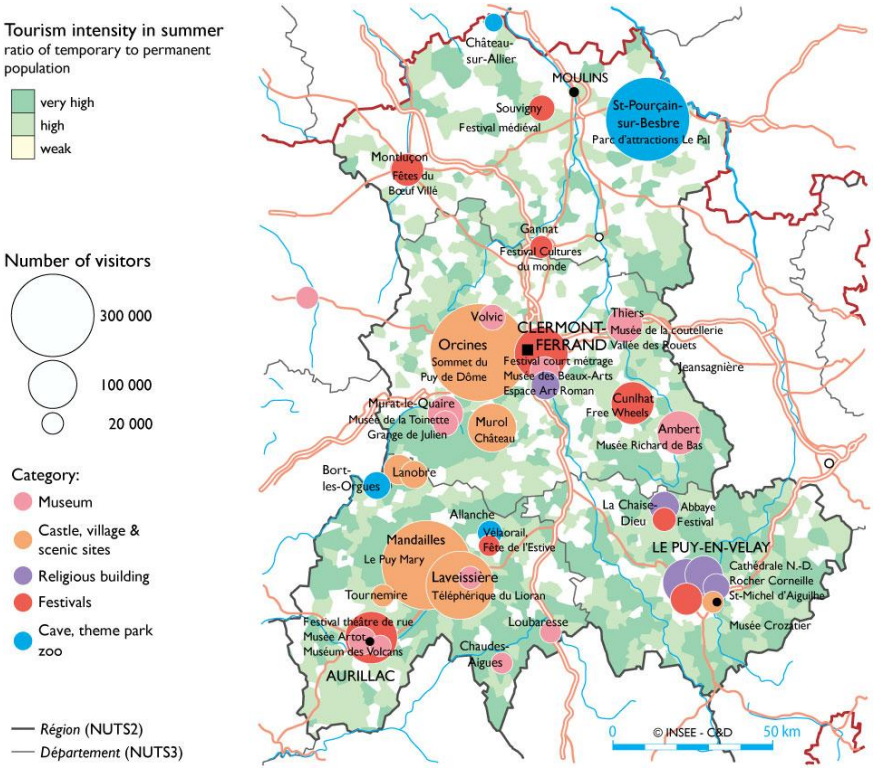


Figure 40 | Attendance of the main tourism sites of Auvergne in 2001. Adapted from (INSEE Auvergne, 2002).

The weak points of the Auvergne tourism sector lie in the uneven quality of the facilities and a seasonal variation still too marked, as shown in Figure 41.

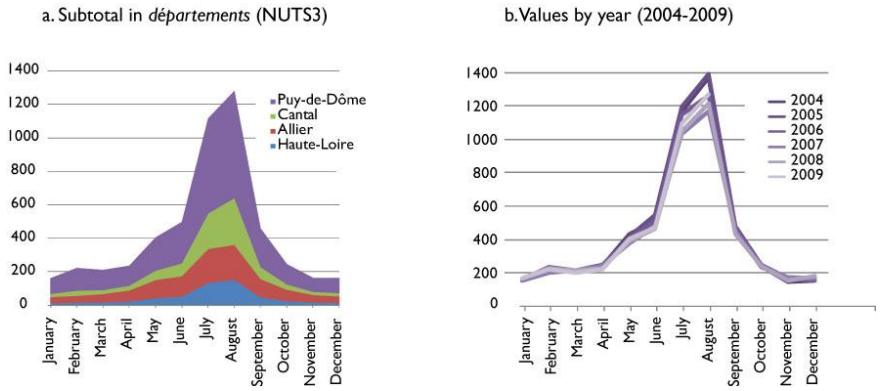


Figure 41 | Number of marketed "beds" (hotels and campings) in Auvergne (thousands). Sources : Insee ; ministère délégué au Tourisme, direction du Tourisme

Most of the visits are concentrated in the mountainous *départements* of Puy-de-Dôme (and Cantal), and the summer visits have fallen, on the 2004 to 2009 period.

4.3.5 Forestry

Baptiste Hautdidier

Covering one-quarter of the region—a figure close to the national average—most of Auvergne's forests are located in highlands, with a notably high proportion of conifers plantations (black spruce and Douglas fir) that result from the subsidies of *Fonds Forestier National*[14] (1946-1999).

While the proportion of softwood/hardwood is 51%/49% for the whole region, some areas are characterized by a higher importance of broadeaved forest. The Allier *département* forest is for example composed at 80% by highly-reputed lowland oak high forests. On the contrary, the south of Cantal is covered by chestnut coppices of a particular value with respect to social use and cultural heritage. Similar forest covers may conceal a wide diversity of prospects for the owners and users: between a Douglas fir plantation in Puy-de-Dôme (East of the region: 17 m3.ha-1.yr-1) and a broadleaved high forest of Cantal (SW of the region: 2.4 m3.ha-1.yr-1), there is a seven-fold decrease of gross forest production.

84 % of Auvergne forest areas (590 000 ha) are privately owned, a figure slightly higher than the national average. With 240 000 landowners and an average area of 2.3 ha, these forests are also more fragmented than in the rest of the country.

Public forests, whose management is ensured by a State-owned forestry enterprise (*Office National des Forêts*), display also a very high fragmentation. In a region dominated by private forestry, non-state public forest is only marginally owned by municipalities or by public entities of a larger extent. Department or intercommunal forests are not anecdotal: derived from structures initially designed for other purposes, the latter may include only municipalities (*syndicat intercommunal de gestion forestière*), have a mixed membership (*syndicat mixte de gestion forestière*) with a possible inclusions of institutional actors (public utility institutions, mutual insurance companies, credit unions) or be set up as groupings (*groupement syndical forestier*).

[14] A post WW2 fund aimed at insuring the long-term self-reliance of the country for its needs in pulp and paper

Table 56 | Forest areas in Auvergne, broken down by ownership types

	Forest area (ha)
State forest (national property)	35 810
Communal (& departmental) forest	13 834
Community forest (*forêts sectionales*)	55 093
Intercommunal forest (*syndicats mixtes de gestion forestière*)	7 279
Private forest	601 335
Grand total	713 351

Sources: ONF[15] & CRPF Auvergne[16]

Nearly 65% of non-state public forests of Auvergne are owned by '*sections*', *ie.* the dwellers of sub-communal hamlets, usually medieval parishes. Their management is supervised—as municipal forests—by the state forestry service, but decisions and benefits are funnelled into adhoc committees—and not the municipal council. With an average area of 3.3 ha, the 1585 sectional forests of Auvergne appear as such hindrances for efficient forest management that the region, backed by EAFRD and the departments, decided to subsidize a grouping plan[17].

Two schemes should be noted, as they aim at strengthening the links between forest management and rural development, with an explicit rationale for multifunctionality; and are supported by structural funds: (i) Territorial forest charters; (ii) Forest massifs development plans.

Territorial forest charters (*Chartes Forestières de Territoire*) are aimed at increasing the value of forest multifunctionality, as part of local development processes. Funded by EARDF[18], ten of them were ongoing in late 2009, mostly endorsed by *intercommunalités* groupings of municipalities (*pays* or EPCI), Cf. Table 57.

[15] http://www.onf.fr/auvergne-limousin/sommaire/onf/chiffres_cles/@@index.html

[16] http://www.crpfauvergne.fr/pdf/SRGS_Part02.pdf

[17] http://www.auvergne.org/fiche-aide.html?id=86

[18] As part of measure 341 of the Regional declination of EARDF implementation plan (PDRH): Training, leadership and implementation of local strategies for the development of the forestry-wood chain.

Table 57 | Territorial forest charters of Auvergne in 2009

Name	Client
Faille de la Limagne	Mairie de Royat
Jeune Loire et ses rivières	Pays Jeune Loire et ses rivières
Margeride-Truyère	CC[19] de Margeride-Truyère
Massif de la Rhue et du Haut Cantal	CC du pays de Gentiane
Massif de Randan	CC des Coteaux de Randan
Montagne Bourbonnaise	CC de la Montagne Bourbonnaise
Pays des Combrailles	Pays des Combrailles[20]
Pays de Murat	CC du pays de Murat
Tronçais	CC du Pays de Tronçais
Volvic - Sources et Volcans	CC Volvic - Sources et Volcans

Source: http://portail.fncofor.fr/afficherAccueilSite.do?idRubrique=166

Forest massifs development plans *(plans de développement de massif forestier*) are based on the work of an employed facilitator (usually a forest technician) towards private owners, in forests areas between 1000 & 6000 ha. The general aim is to stimulate the intensity of forest management & increase the wood harvest. Forest massifs development plans complement the territorial forest charters in two ways, as a plan may act as: (i) the starting point for a subsequient charter; (ii) the operational translation of the charter towards private owners. For this EARDF cofunded scheme launched in 2004 and renewed in the 2007-2013 programmes, 12 plans were achieved in late 2007[21], covering 56 650 ha of private forest and 22 500 landowners (a 10% ratio, concentrated mostly in mountainous and conifer massifs).

According to (Gauvin et al., 2005), the regional forestry-wood chain employs about 13 400 persons, with a dominance of silviculture and wood transformation. With an important workforce located in the Haute-Loire and Cantal *départements*, the chain is often based on SME. The manpower, mostly male, is also younger tha the average. Auvergne SMEs have higher investment rates than in other regions.

4.4 Transport

The opening-up of the region, hampered by lagging railway and road infrastructures, has been identified for long as one of the major stakes of its economic and demographic development,. Even if significant advances were carried out with the support of structural funds on the 2000-2006 period (among others with the achievement of the westward A89 motorway),

[19] CC stands for '*Communauté de communes*'

[20] The full name is *Syndicat mixte pour l'aménagement et le développement du pays des Combrailles*

[21] http://www.crpfauvergne.fr/fichiers/CRPf_42.pdf

transport infrastructures remain the first of the priorities for the sustainable development of the area, with a regional 'railway plan' (*plan rail Avergne*) aimed at the upheaval of the rail network for the 2009-2013 period, and an important axis of the ERDF operational programme devoted to the accessibility and attractiveness of the region. The improvement of the linkages with high-speed train lines, the promotion of intermodal networks around the cities of the regions are amongst the top priorities of the programme.

4.5 Environment

An environmental profile was issued in October 2008 (DIREN Auvergne, 2008a, b), identifying 22 major stakes for the Auvergne region. As summed up in (INSEE Auvergne, 2009), the three most important seem to be the consequences of urban sprawl, the limitation of GHG emissions, the slowing down of biodiversity losses.

Table 58 | Land-use trends in Auvergne for 1993-2003

	France	Auvergne	Allier	Cantal	Haute-Loire	Puy-de-Dôme
Forests	+2.7%	+2.7%	+2.4%	+2%	+4.7%	+1.7%
Croplands	- 2.2%	- 1.7%	- 1.1%	- 1.3%	- 2.7%	- 2.3%
Other natural areas	-7.5%	-5%	-3.5%	-2.3%	-11.3%	-2.6%
Agricultural and natural areas	- 1.2%	- 0.7%	- 0.6%	- 0.5%	- 0.7%	- 1.1%
Artificial surfaces	+15.6 %	+13%	+10.7 %	+11.5%	+12.4 %	+15.7 %

Source: Ministry of Agriculture. *Teruti* 1993-2003

While artificial surfaces are not a dominant land-use of Auvergne, their increase over the 1993-2003 is in line with the national trend, and made at the expense of agricultural and natural areas. The ratio of artificial surfaces to population remains high, which is also indicative of the "extensive" nature of urbanization processes in Auvergne: with 1183 m²/inh. in 1993 and 1057 m²/inh. (to be compared with 744 m²/inh. for France).

In 2005, Auvergne emitted 15.8 $MtCO_2eq$, reaching 3.3% of the national total, with transport (47%) and housing (26%) accounting for the majority of energy-related emissions. While the increase from 1999 to 2005 was moderate for total emissions (+1.4%), the room for manoeuvre seems important. Auvergne acknowledges delays for the development of alternative renewable energies, in spite of a strong potential. For the next years, the Region has pro-moted a plan for the development of these energies. This plan concerns wood, solar, wind energies and biofuel.

With a wide diversity of habitats and landscapes, Auvergne harbours over 4 500 vegetal species, 76 mammals including 26 bats, 347 birds, 22 amphibians and 20 reptiles. While much more preserved than in most neighbouring regions, Auvergne's habitats are faced with several pressures (water pollution, land conversion and fragmentation): 369

In this respect, the network of protected areas (natural reserves and protection orders) appears rather loosely-woven, setting heavier responsibilities on Natura 2000 sites and natural regional parks (Livradois – Forez and Volcans d'Auvergne).

Table 59 | Environmental zonings in Auvergne (source: DIREN Auvergne)

Name	Number	Area (ha)	%	Number for France
Natural areas of interest [22]	403 type I	226 200	8,7 %	14 836
	27 type II	627 000	24,1 %	
Natura 2000 sites	94	375 307 + 2 082km (linear sites)	14,3 %	1 700 sites
National Natural reserves	4	4 240	0,16 %	160
Biotope protection regional order[23]	13	434		
Regional natural parks	2	707 227	27 %	45

Several collective water management schemes (*Schémas d'aménagement et de Gestion de l'eau*) are currently implemented in the region, the ten of them being at various steps of the review process.

[22] Or ZNIEFF (*zone naturelle d'intérêt écologique, faunistique et floristique*): these zonings have been defined for inventory purpose, and have no binding character.

[23] Or *Arrêté préfectoral de protection de biotope:* a NUTS3 level protection order.

4.6 References

BATIFOULIER A. ; WASZAK C. (2007) Produit intérieur brut auvergnat : une analyse depuis 1990. INSEE Auvergne La Lettre, n° 44. http://www.insee.fr/fr/insee_regions/auvergne/themes/lettre/lettre44/lettre44.pdf

DIREN AUVERGNE (2008a) Profil Environnemental Auvergne 2008. Tome 1: Enjeux et indicateurs. http://www.auvergne.ecologie.gouv.fr/Fichiers_WinSCP/Profil_Environnemental/Profil_Environnemental_Auvergne_2008_fin-version_web_Tome1.pdf

DIREN AUVERGNE (2008b) Profil Environnemental Auvergne 2008. Tome 2: Diagnostic. http://www.auvergne.ecologie.gouv.fr/Fichiers_WinSCP/Profil_Environnemental/Profil_Environnemental_Auvergne_2008_fin-version_web_Tome2.pdf

GAUVIN M. ; GRAS D. ; BOUVATIER S. (2005) La filière bois : une spécialité auvergnate. INSEE Auvergne La Lettre, n° 30. http://www.insee.fr/fr/insee_regions/auvergne/themes/lettre/lettre30/lettre30.pdf

INSEE AUVERGNE (2002) Atlas du Massif central. INSEE Auvergne: les dossiers, n° 5. http://www.insee.fr/fr/themes/document.asp?ref_id=6012

INSEE AUVERGNE (2006) Auvergne. In: La France et ses régions, (ed INSEE), p. 58-61. http://www.insee.fr/fr/insee_regions/auvergne/faitsetchiffres/presentation/fsr06fc.pdf

INSEE AUVERGNE (2009) L'année économique et sociale 2008. INSEE Auvergne: les dossiers, n° 21. http://www.insee.fr/fr/insee_regions/auvergne/themes/dossier/dossier21/dossier21.pdf

MESPOULHÈS A. (2007) Une pauvreté plus accentuée en Auvergne. INSEE Auvergne La Lettre, n° 21E. http://www.insee.fr/fr/insee_regions/auvergne/themes/lettre/elect21/elect21.pdf

MESPOULHÈS A. (2009) Recensement 2006 : le parc des logements s'agrandit. INSEE Auvergne La Lettre, n° 29E. http://www.insee.fr/fr/insee_regions/auvergne/themes/lettre/elect29/elect29.pdf

SPOT AUVERGNE (2008) Le Panorama Auvergne sur l'année touristique 2007. http://www.spot-auvergne.fr/publication/article.php?id=723

VALLÈS V. (2007) Projections démographiques du Puy-de-Dôme à l'horizon 2030. INSEE Auvergne La Lettre, n° 48. http://www.insee.fr/fr/insee_regions/auvergne/themes/lettre/lettre48/lettre48.pdf

VALLÈS V. (2009a) Recensement 2006 : les communes périurbaines alimentent la croissance démographique auvergnate. INSEE Auvergne La Lettre, n° 24E. http://www.insee.fr/fr/insee_regions/auvergne/themes/lettre/elect24/elect24.pdf

VALLÈS V. (2009b) Un renouveau démographique qui profite aux intercommunalités d'Auvergne. INSEE Auvergne La Lettre, n° 27E. http://www.insee.fr/fr/insee_regions/auvergne/themes/lettre/elect27/elect27.pdf

5 SOCIAL ECONOMIC ANALYSIS OF THE ALTMARK REGION

5.1 General characteristics

Sahrbacher, A.
Ostermeyer, A.
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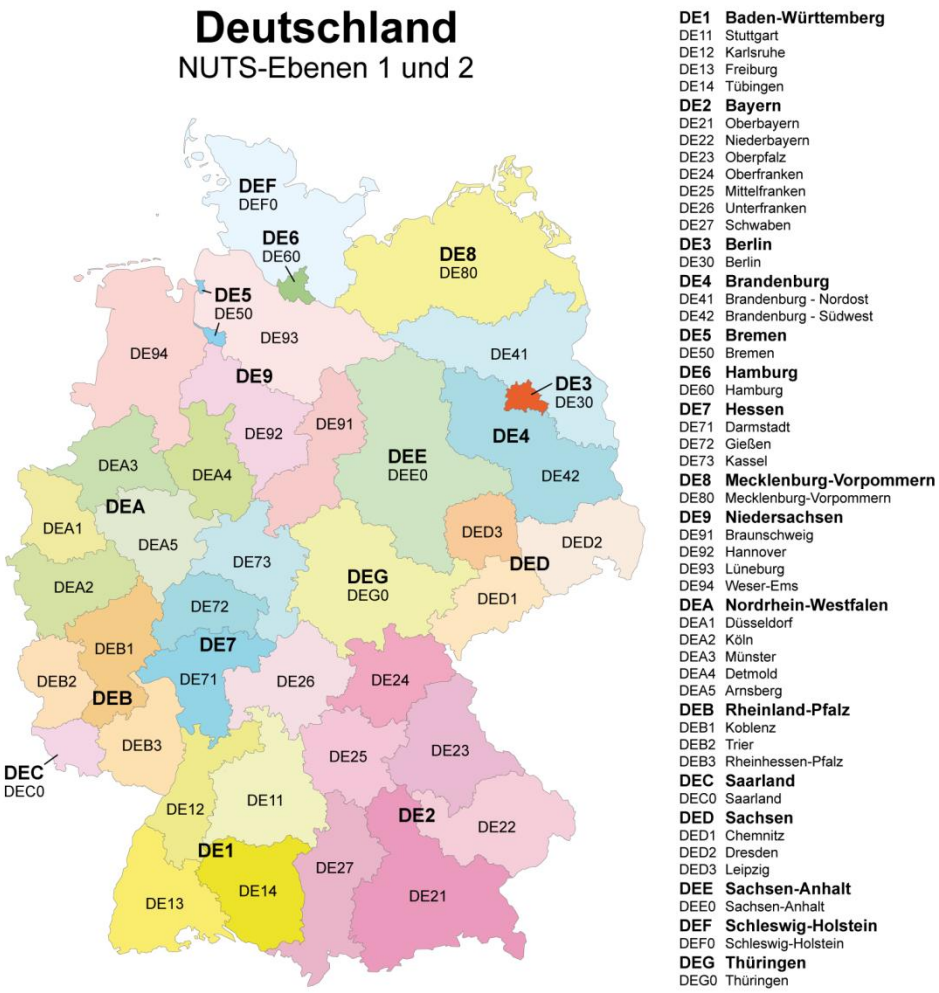
The German Federal Republic consists of:

- 39 Cohesion Regions (Regierungsbezirke) at the NUTS 2 level,
- 429 Regions (Landkreise) at the NUTS 3 level,
- 539 Districts (Verwaltungsgemeinschaften) at LAU 1 level and
- 13,176 Municipalities (Gemeinden) at LAU 2 level.

The Altmark Region consists of the regions Stendal (DEE0D) and Salzwedel (DEE04) on NUTS 3 level. The Altmark region is located in the Northern part of the NUTS 2 Sachsen-Anhalt (DEE0) as shown in fIg 40.

Figure 42 | Map of Germany illustrating NUTS 1 and NUTS 2 levels.



Source: Dörrbecker, M. via www.wikipedia.de

Some summary characteristics are provided below as regards the Altmark region:

Size: 4,715.5 km²
Population: 220,787
Density of population: ca. 47 inhabitants/km²
Number of districts: 2
Number of towns and cities: 15
Statutory cities: Stendal (population 36,306) and Salzwedel (20,514)
Number of municipalities: 224
Highest point: Langer Berg (159.9 m)
Lowest point: Hoyersburg (18 m)

5.1.1 Geographical information

The Altmark region is located in the North of Sachsen-Anhalt and shares borders with the federal state Niedersachsen and Brandenburg. Its area is of 4,715.5 ha (ca. 1.3% of Germany) and the population of 220,787 inhabitants places the Altmark to be one of the most sparsely populated region in Germany.

There is no specific natural centre in the Altmark. The two largest cities are Stendal (Eastern part) and Salzwedel (Northwest of Altmark) in which a quarter of the Altmark population lives. Stendal is a rather rural city located near the River Elbe. Therefore mainly companies oriented towards food production and processing as well as vehicle construction settled down in the district of Stendal. The existence of a university of applied science with ca. 1,700 students offers companies the possibility to integrate educated resources. Salzwedel is smaller than Stendal.

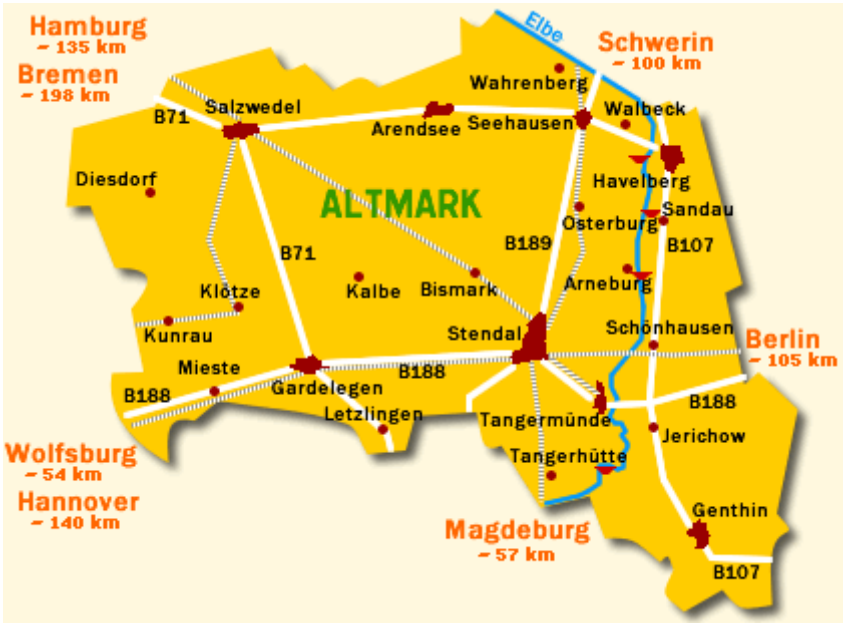
The whole Altmark is rather agricultural-oriented. Because of the poor soils the main farm type to be found is livestock farming, especially dairy production. The region has a relatively high percentage of grassland (ca. 26 %) compared to the rest of Saxony-Anhalt.

As regards landscape diversity, the region could be divided into 4 main zones:

- The Eastern part of the Elbe River: Historically, the territories beyond the Elbe (Prignitz) in the East inherited another structure than in the rest of the Altmark: the Elbe river constitutes a natural “frontier” between Altmark and Prignitz.
- The Wische and Kalbescher Werde: Lowland area, often floods but rich soils (half-bog, clayey). This zone has been drought 50 years ago in the GDR times to extent the UAA.
- Drömling: lowmoor area, classified as protected area.
- Colbitz-Letzlinger Heide: the biggest coherent heathland in central Europe, sandy soils and forest, partly a military training area.

The above mentioned zones contain lots of protected areas, e.g. the “Naturpark Drömling” (landscape conservation area (LCA) and nature reserve (NR)), the "Untere Havel/Elbe/Schollener Land" (LCA, NR), “Salzwedel-Diesdorf” (LCA), the "Aland-Elbe-Niederung" (LCA, NR), the "Uchte-Tangerquellen" (LCA) and the "Colbitz-Letzlinger Heide" (NR). These areas cover approx. 90,000 ha. In total a share of ca. 20 % from the Altmark territory is protected.

Figure 43 | Map of the Altmark region



The region lacks good infrastructures. There are no highway crossing it but in the next years the A14 will be prolonged through the Stendal district from Magdeburg. As shown in

Figure 43, the main national roads B 71 and B 189 connect the Altmark with the capital of Saxony-Anhalt Magdeburg in the South, Brandenburg in the Northeast and Lower Saxony in the Northwest. Two horizontal roads between Salzwedel and Seehausen (B 190) and between Gardelegen and Stendal (B 188) are linked with the two main roads B 71 and B 189. There are as well important train connection (Berlin-Hannover, Uelzen-Magdeburg and Stendal-Braunschweig). The air connection is ensured by airports in max. 120 km distance (Berlin, Hannover, Hamburg). Another infrastructure is provided by waterways. Rivers Elbe and Havel are navigable. Main Ports are Tangermünde (Elbe) and Havelberg (Havel).

5.1.2 Administrative structure of the Region

The region consists of 15 districts (*Verwaltungsgemeinschaften* and *Stadtverwaltungen*):

- In the Stendal district: Seehausen, Havelberg, Osterburg, Arneburg-Goldbeck, Bismark-Kläden, Tangerhütte Land, Tangermünde, Elbe-Havel-Land, Stendal-Uchtetal
- In the Altmarkkreis Salzwedel district: Gardelegen, Salzwedel, Arendsee-Kalbe, Beetzendorf-Diesdorf, Klötze, Salzwedel Land, Arendsee.

These districts are subdivided into 224 municipalities.

The Altmark will undergo an administrative reform which should be achieved by the 1st of January 2010. The objective of this reform is to rebuild administrative units into larger units in order, roughly, to save money. The reform consists in:

- Merging very small villages/administrative units together around a focal village/town,
- Merging these new created small units within bigger administrative consortia around a focal point, mostly a town, able to deliver a complete panel of services to surrounding citizens.

5.1.3 Rural areas

According to the definition of the OECD, at the LAU2 level, municipalities with a density of inhabitants lower than 150 inhabitants per km² have to be classified as rural areas. According table 60, this concerns almost 94% of the total area in the Altmark. That is that approximately 6.5% are urban areas with more than 150 inhabitants per km². Round 150,000 inhabitants can be considered as living in rural areas in the Altmark.

Table 60 | Delimitation of rural areas in the Altmark according to the OECD at the LAU 2 level (threshold 150 inh/km2)

	Area		Density		Agricultural area		Numbers of municip. in rural area	Numbers of inhab. in rural area
	km²	Share of total area (%)	in rural area inh/km²	in total area inh/km²	km²	Share of total UAA (%)		
Altmark	4,410.11	93.52	33.73	46.82	3,067	100	220	148,749

Source: data - destatis 2007, own calculation

None of the Altmark districts can be classified as urban. Only the cities Salzwedel, Stendal, Tangermünde and Tangerhütte have more than 150 inh./km².The rest of the region is considered as rural area. Agricultural area covers almost 70% of the rural area of the region.

5.2 Demographic trends

5.2.1 Population

With a population of nearly 221 thousand inhabitants the Altmark is a very sparsely populated region in Germany. While the population throughout Germany decreased in the last four years by a marginal 0.4 % the Altmark was facing a decline in population of 5.6 %. As shown in table 61, the two districts constituting the Altmark region are especially tenuously inhabited. Table 62 reports the proportion of people belonging to each gender between 2003 and 2007.

Table 61 | Development in population density since 1990.

	population density		change in the population density
	1990	2007	1990/2007
	Inh./km²	Inh./km²	in %
Dessau-Roßlau	467	368	-21.3
Halle	2,321	1,735	-25.2
Magdeburg	1,395	1,145	-17.9
Altmarkkreis Salzwedel	46	41	-11.1
Stendal	64	53	-18.4
Sachsen-Anhalt	141	118	-16.1

Source: Statistisches Landesamt Sachsen-Anhalt, Berechnung des Ministeriums für Landesentwicklung und Verkehr, 2007

Table 62 | Recent development of the population in the Altmark Region

		2003	2004	2005	2006	2007
Altmark	Total Population	233,923	230,363	227,307	224,026	220,787
	Of which women	117,934	116,242	113,425	519,825	110,890
Stendal	Total Population	135,647	133,187	131,267	129,481	127,481
	Of which women	68,424	67,356	65,237	65,312	64,253
Salzwedel	Total Population	98,276	97,176	96,040	94,545	93,323
	Of which women	49,510	48,886	48,188	47,317	46,637

Source: Statistisches Landesamt.

Among the ex-GDR Federal States, Sachsen-Anhalt had to face the strongest decrease in population since 1989 due to net emigration rates rather than higher mortality. Migration flows take the direction of the Western Federal States of Niedersachsen, Nordrhein-Westfalen, Bayern and Baden-Württemberg. The majority of emigrants are constituted of women. Generally people under 25 years of age are the ones who migrate in the direction of Western Federal States while the older migrants (older than 65 years of age) leave in a somewhat moderate manner. Following a study from the Leipziger Institute for Market Research in Leipzig, 78% of young people emigrated in a Western Federal State because they found a job position there; 43% because of attractive remunerations; 36% to escape from unemployment zones; 26% because of better life quality standards and; 13% because of a better leisure offer (Gericke/Karig 1996).

However, the net migration is somewhat lower towards neighbouring Federal States like Niedersachsen for instance; this is due to the fact that people tend to commute and continue living in Sachsen-Anhalt while working in Niedersachsen. This is for instance the case in the Altmark and particularly in the Altmarkkreis Salzwedel district, directly neighbouring the state of Niedersachsen.

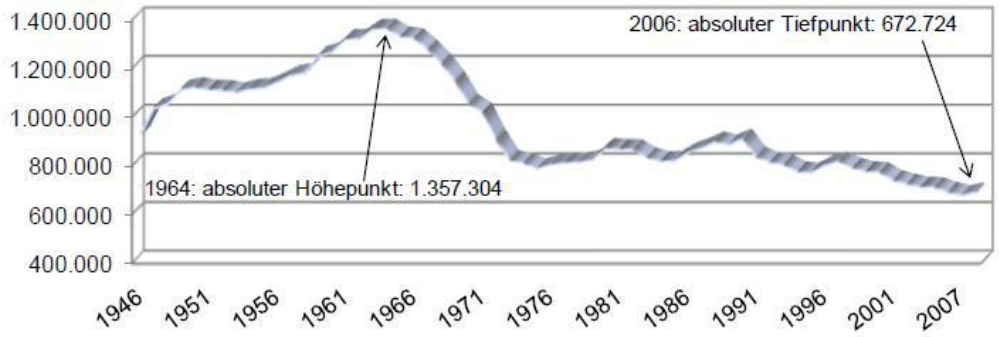
Table 63 | Net migration rates to/from Sachsen-Anhalt's districts toward Western Federal States between 1991 and 2002.

	1991	1993	1995	1997	1999	2000	2002	Rank 91/02
Dessau	-1,315	-346	-504	-532	-702	-1056	-864	1
Halle	-5,638	-1,256	-904	-884	-1,870	-2,759	-2,331	2
Magdeburg	-2,938	-1,223	-925	-669	-1,262	-1,934	-1,292	11
Altmarkkreis Salzwedel	-816	-320	-119	-383	-225	-395	-578	21
Stendal	-2,227	-811	-656	-471	832	-1,182	-1,018	5

Source: Statistisches Landesamt Sachsen-Anhalt; BiB, J. Roloff.

Table 63 illustrates that the decreasing trend in population was much higher in the two cities Halle and Dessau than in other rural districts in Sachsen-Anhalt. Especially the district Altmarkkreis Salzwedel only scores the 21. Rank in terms of net migration rates in the whole state of Sachsen-Anhalt.

Figure 44 | Development of births in Sachsen-Anhalt since the end of World War II.



Source: own figure, based on Statistisches Bundesamt 2007.

As regards birth rates in Sachsen-Anhalt, a maximum never reached since then appeared in the year 1964; since the World War II births number have steadily increased (Figure 44). Afterwards, 1975 constituted a first low with only 782,310 births during this year. After the fall of the Berlin wall, birth numbers dramatically decreased in the new Federal States, in such ways that there were not preceding cases in the German history; however Sachsen-Anhalt did not have the worst ones. Especially since the mid 90's the situation has slightly improved due to higher fertility rates by women between 25 and 34 years of age. Interestingly, districts which present high net migration rates are those where birth rates are the highest.

Table 64 | Birth rates compared to the average in the whole state Sachsen-Anhalt (=100)

	1991	2002
Dessau	83.8	91.8
Halle	94.7	99.8
Magdeburg	95.8	97.3
Altmarkkreis Salzwedel	119.9	106.4
Stendal	110.1	108.2

Source: Statistisches Landesamt Sachsen-Anhalt; BiB, J. Roloff.

As shown in table 64, the rural districts Altmarkkreis Salzwedel and Stendal constituting the Altmark case study region presented quite high birth rates compared to Sachsen-Anhalt cities.

5.2.2 Age structure

In the last years, two facts are to be highlighted: the ageing of the population and the decreasing proportion of children. In 2007 the share of children was of 11% in the Altmark (in Germany 13,72 %), the share of inhabitants in productive age was of 67 % (in Germany 66%) and the number of inhabitants older than 65 year was of 21% (in Germany 20%).Table 65 reports the recent development in population in the Altmark.

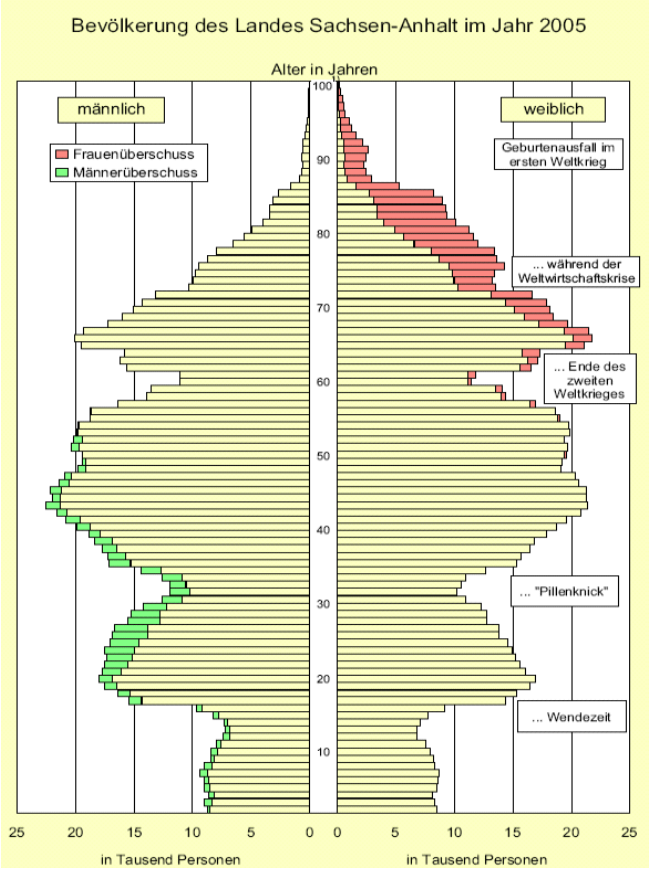
Table 65 | Recent developments in the age structure in the Altmark

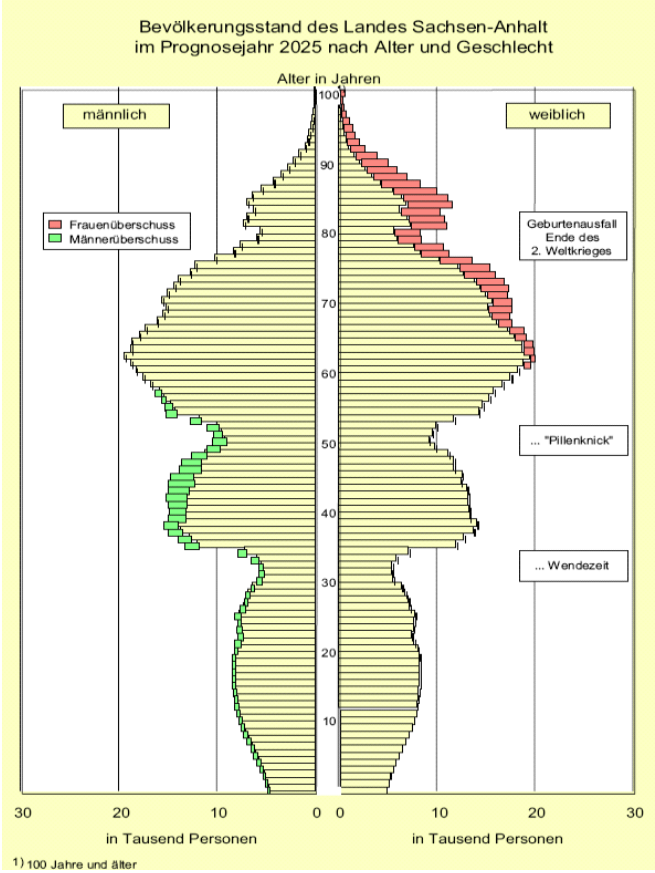
	2003	2004	2005	2006	2007	2007 (Germany)
0-14	28,824	27,121	25,566	24,991	24,756	11,281,696
15-64	162,625	159,271	154,434	152,526	148,960	54,417,397
➢ 64	42,474	43,971	45,343	46,509	47,071	16,518,744
% of people aged (0-14 years old)	12.32	11.77	11.25	11.16	11.21	13.72
% of people aged (15-64 years old)	69.52	69.14	67.94	68.08	67.47	66.19
% of people aged (> 64 years old)	18.16	19.09	19.95	20.76	21.32	20.09

Source: Statistisches Landesamt Sachsen- Anhalt.

Both ageing of population and decreasing proportion of children due to weak fertility rates will play an important role in future demographical change in the Altmark, as shown in Figure 45. By 2025 a higher proportion of elderly people will remain in the Altmark that the today proportion, coupled to a decreasing number of births. Believing the projection below, the population of Sachsen-Anhalt should shrink by one fifth of its current stand until 2025; most of inhabitants will be constituted of elderly people, especially women living alone.

Figure 45 | Age pyramid for Sachsen-Anhalt in 2005 (left) and 2025 (right, projection)





Source: Statistisches Landesamt Sachsen-Anhalt 2007,6 and 13.
Notes: women data are to be found on the right sides of the above figures, man data on the left. „Wendezeit“: fall of Berlin Wall; “Pillenknick”: introduction of the anti-conception pill; “Ende des zweiten Weltkrieges”: end of World War II; “während der Wirtschaftskrise”: 30’s crisis; „Geburtenausfall im ersten Weltkrieg“: decrease of births due to World War I.

It is highly plausible that the population in the Altmark will follow the same trends in the years to come. This gives the question of education and schooling a particular difficult background to deal with for policy makers.

5.2.3 Education

Considering past and future expectations on demographical changes, the education and schooling policy has to somewhat adapt to these constraints.

Table 66 | Number of schools in the Altmark

	Basic primary school	Secondary school	High school	University
Altmarkkreis Salzwedel	25*	9*	3*	0*
Stendal	34	11	4	1

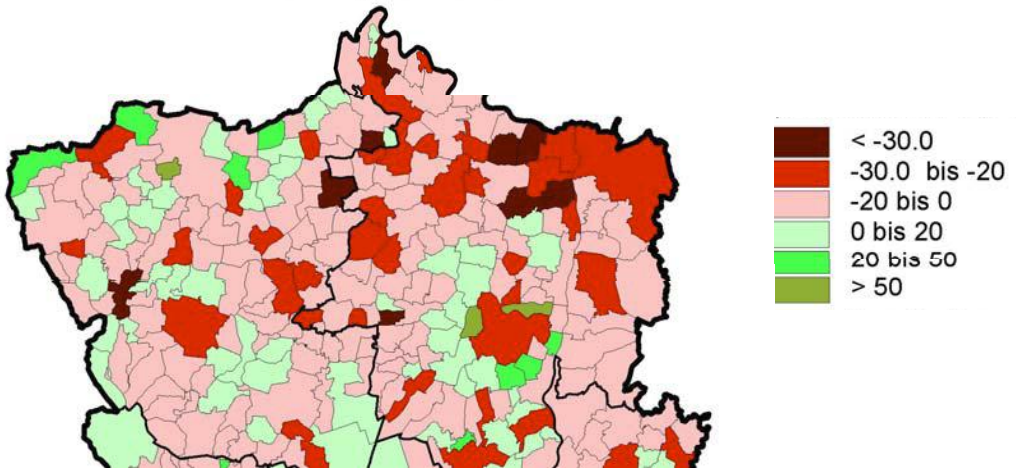
Source: *Mittelfristige Schulentwicklungsplanung im Landkreis Stendal (aktualisiert 28.08.2008)*; personal communication from the Head of Finance department of Altmarkkreis Salzwedel for the district (*plan for 2013/2014)

The current trend consists in the progressive closing of basic schools in small villages which do not gather enough pupils. This trend is due to both depopulation and administrative costs. Generally the Altmark combines quite negative factors of which: low and onwards decreasing population density, decreasing education and job offer opportunities, high number of commuters and low diversified and not competitive economic structures and infrastructures.

5.2.4 Housing and settlement

Following the trend in the last decades (see Figure 46) the housing and settlement policy and sector have to be considered regarding the following factors influencing the development in the Altmark: a low population density, the drop in birth rates since 1989/90, the net emigration, unemployment and commuters' rates and the low diversified economic structure. Moreover, there is no large metropolis in the neighbourhood of the region. Stendal is the biggest city with 35,000 inhabitants. Municipalities and districts have to face the challenge consisting in stabilising the economic and demographical situations. At the same time public administration has to try to be present overall in the region while trying to adapt the continuously new situation. Pilot projects are initiated to find out the right profile municipalities have to create and develop in face of those challenges. In Stendal for instance, some organisations based on citizen initiative offer services compensating the absence or not satisfying supply by the public sector.

Figure 46 | Demographic development in the Altmark between 1990 and 2007 (% of total population in 1997).



Source: Ministerium für Landesentwicklung und Verkehr, 2009.

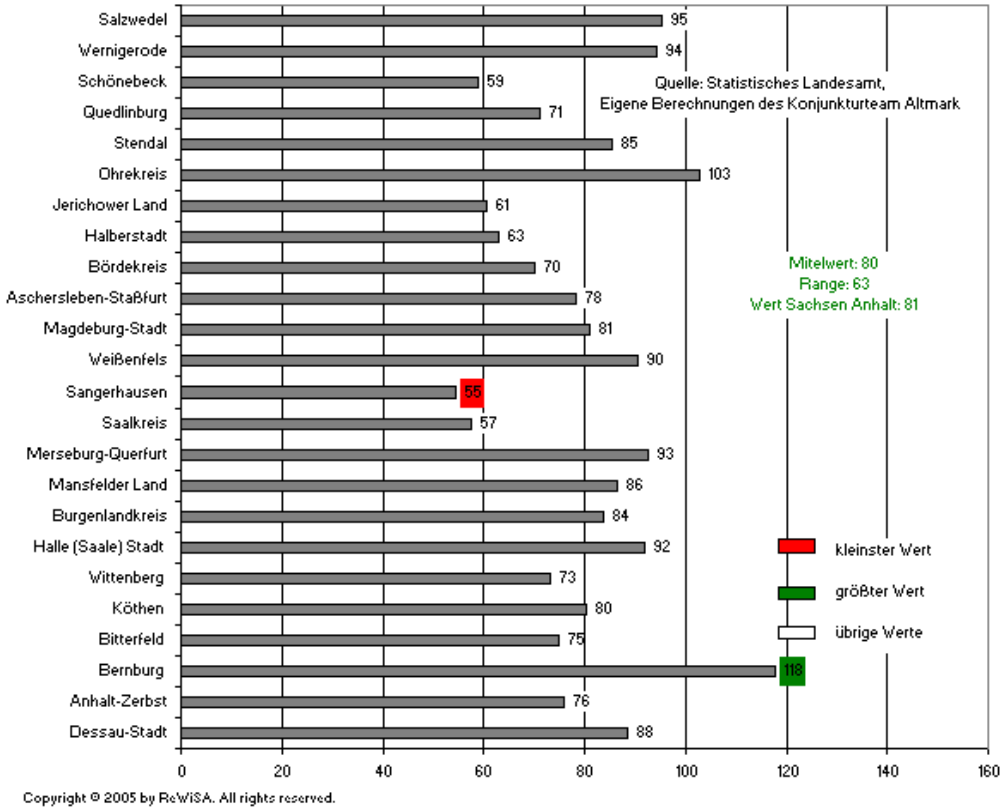
As regards housing, a decrease in house occupation has being observed for the district of Stendal between 2001 and 2007. This has not been the case in the district of Altmarkkreis Salzwedel where house occupation has remained quite stable. Moreover, as regards new housing possibilities, this latter district has known the less severe decrease over the whole state of Sachsen-Anhalt since 2002.

5.3 Economic system

5.3.1 Economy

The Altmark remains quite a rural region. There is no big industry hiring more than several thousands employees to create a development basin, but rather disaggregated small and medium industries and enterprises in the sector of car industry (with the opportunity of the presence of Volkswagen in the neighbouring federal state Niedersachsen), of timber processing, of food processing and various third sector activities. As shown in figure 47, average number of employees per enterprise over Sachsen-Anhalt in general and the Altmark in particular (districts Stendal and Salzwedel, respectively in 5th and 1st in the followings chart) rarely exceeds 90 employees.

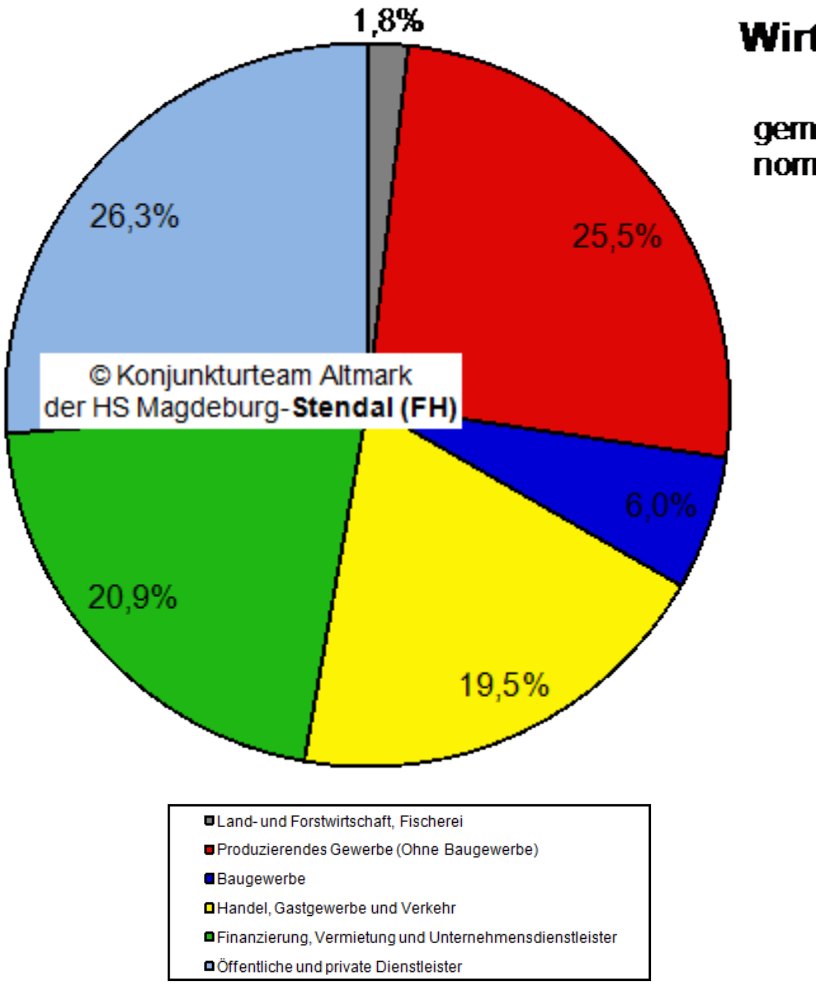
Figure 47 | Average size in terms of employees in processing enterprises in Sachsen-Anhalt in 2004



Source: Statistisches Landesamt, calculations made by Konjunkturteam Altmark (http://www.stendal.hs-magdeburg.de/project/konjunktur/risa/kreisuebersichten/frame_kreisuebersichten_vgcharts.htm)

Figure 48 illustrates the division of GDP among sectors at the Sachsen-Anhalt level. It illustrates that the third of activities are due to the industrial sector while agriculture "only" produces 1.8% of the regional GDP. Services and other third sector activities dominate the picture.

Figure 48 | Economic structure of Sachsen-Anhalt in 2008 – proportion of regional GDP

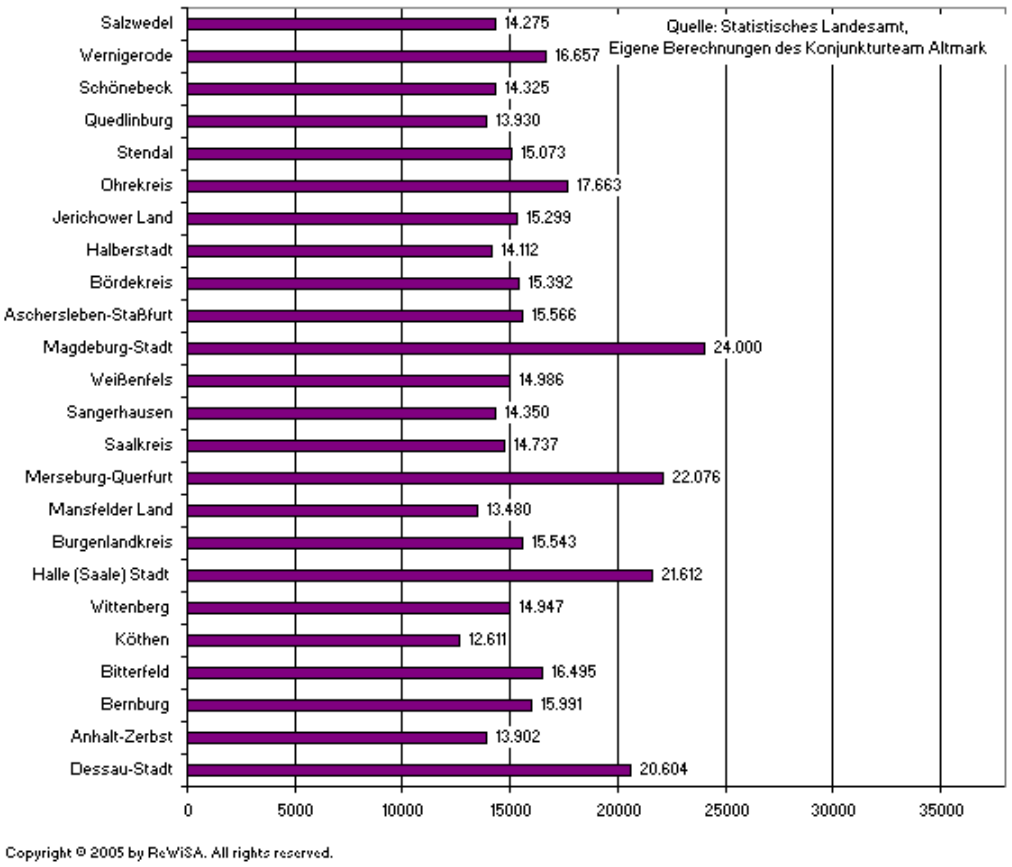


Source: Statistisches Landesamt, calculations made by Konjunkturteam Altmark (http://www.stendal.hs-magdeburg.de/project/konjunktur/image030.gif)
Legend: agriculture, forestry and fisheries; industry (without building); building industry; trade, tourism and transport; finance, renting activities and services for firms; public and private services.

The Altmark lies at the crossroad between the economic centres Hamburg, Hannover, Magdeburg and Berlin. The economical structure is composed of rather small and medium enterprises in the field of industry, manufacturing, trade and agriculture. The local policy supporting innovation is translated in the form of two innovation centres in Stendal (BIC for Business Innovation Centre) and Salzwedel (*IGZ for Innovationsgrundzentrum*); these centres offer practical help for new enterprises interested in settling in the Altmark (http://www.altmark.de/wirt/wirt_01.htm).

Moreover, the University of Applied Science Magdeburg-Stendal offers the possibility for students to study Business Administration and Economics among other topics; the studies students provide on business situation in Sachsen-Anhalt and the Altmark which are used in this section in the form of illustrations describing main economic features.

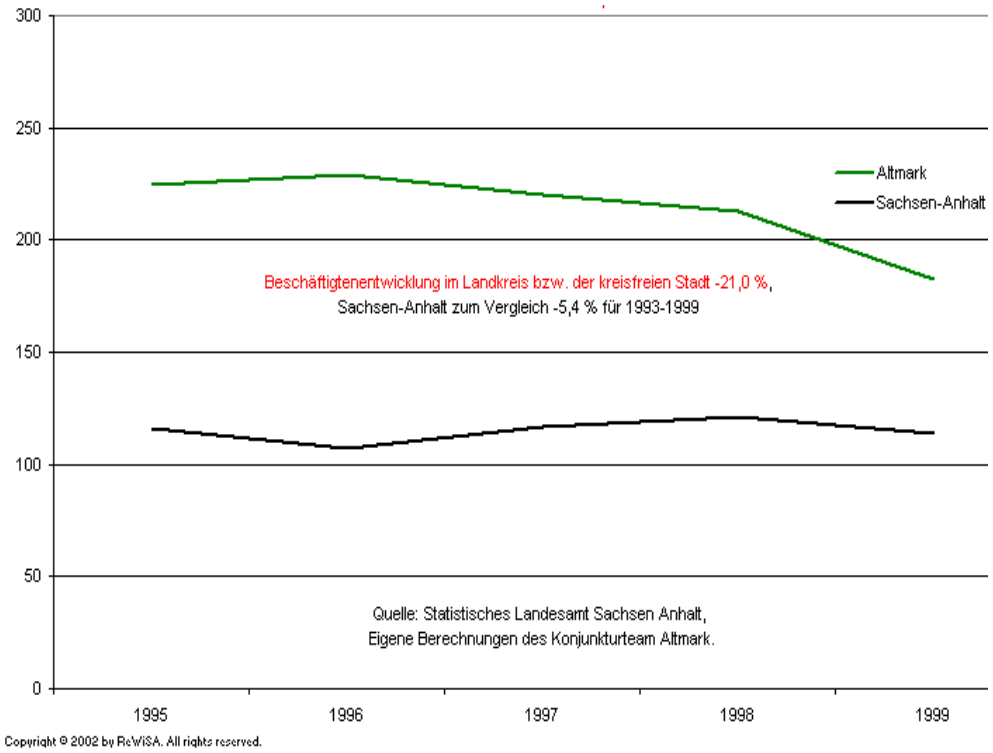
Figure 49 | GDP per head in Euros in 2002 in the different districts of Sachsen-Anhalt in 2002



Source: Statistisches Landesamt, calculations made by Konjunkturteam Altmark (http://www.stendal.hs-magdeburg.de/project/konjunktur/risa/kreisuebersichten/frame_kreisuebersichten_wohlfartscharts.htm)

As shown in Figure 49, the Gross Domestic Product (GDP) per head over the districts in Sachsen-Anhalt does not vary much among the rural districts; however, compared to the cities of Halle, Magdeburg, Merseburg and Dessau, rural districts produce 30% less GDP in average. As shown in Figure 50, the proportion of people employed in agriculture in the Altmark is quite high relative to the average over Sachsen-Anhalt.

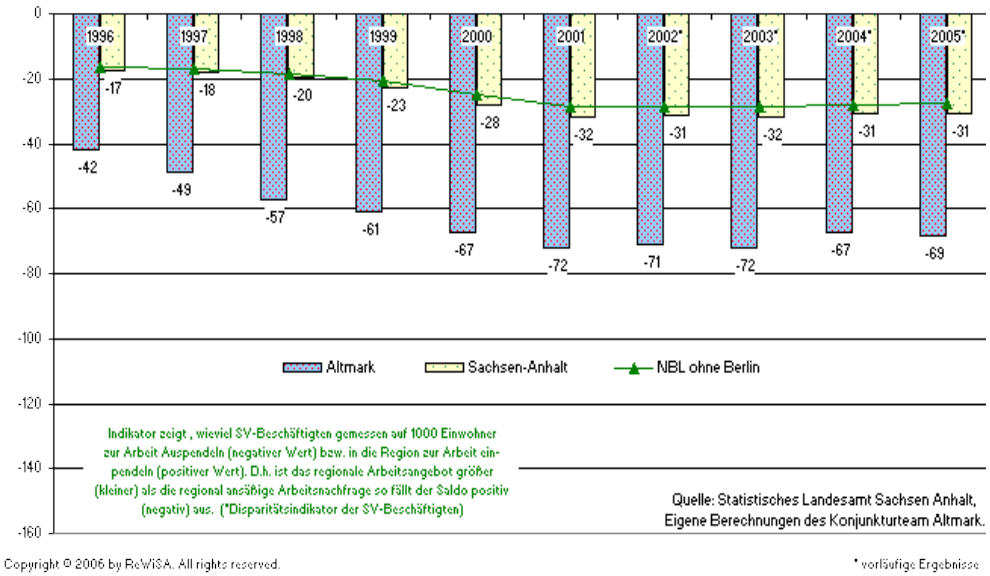
Figure 50 | Proportion of people employed in agriculture (per 1,000 inhabitants)



Source: Statistisches Landesamt, calculations made by Konjunkturteam Altmark (http://www.stendal.hs-magdeburg.de/project/konjunktur/risa/altmark/frame_altmark_sv_beschaeftigtencharts.htm)

What is interesting and reflects much about the Altmark and its situation in Germany is the commuters balance as shown in Figure 51. The figure shows that people living in Sachsen-Anhalt do not necessarily work in this federal state, as it seems to be generally the case over new German federal states. However, the Atmark laying near the old federal state Niedersachsen the proportion of commuters is more than the double than the one in Sachsen-Anhalt.

Figure 51 | Development of the balance of commuters (per 1,000 inhabitants)



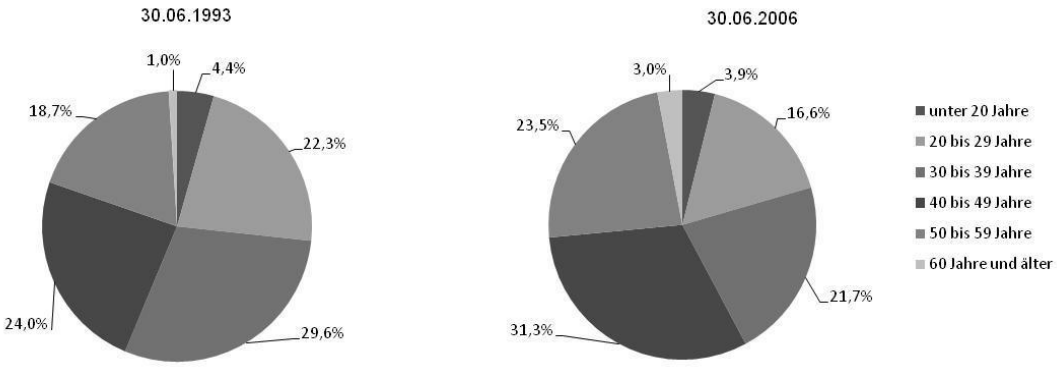
Source: Statistisches Landesamt, calculations made by Konjunkturteam Altmark (http://www.stendal.hs-magdeburg.de/project/konjunktur/risa/altmark/frame_altmark_sv_beschaeftigtencharts.htm)
Notes: "NBL ohne Berlin": new federal states without Berlin.

This last figure permits to switch to the description of the structure of employment in the Altmark and Sachsen-Anhalt.

5.3.2 Employment

In past years the number of active persons decreased from 1.3 millions in 1991 to 988,000 in 2005 in the Federal State of Sachsen-Anhalt. At the same time the proportion of active population decreased at the level of 5% to reach only 40% of the whole population in Sachsen-Anhalt. In June 2006, 57.8% of active population was older than 40 years old. Between 1993 and 2006, the proportion of active people older than 60 years old increased from 1 to 3%. On the other hand the proportion of active people under 30 years old of age decreased of 6% to reach the level of 20.5%. As regards the intensity of occupation, part-time jobs are mostly characterised by a high proportion of female employees (86% of total employees).

Figure 52 | Age structure of the active population in Sachsen-Anhalt



Source: figure from *Hochschule Harz* based on data from *Statistisches Landesamt Sachsen-Anhalt 2007.*

In the future the number of active people (between 15 and 65 year-olds) should decrease to reach only 30.7% of the total active population by 2025. Due to the hypothesis that from 2010 twice as much people will quit the active population than those who will become active, there will be a deficit also called "demographic pitfall". Already nowadays, the emigration of young people causes deficit in some sectors and the increase of the average age of employed people. This trend is particularly serious in sectors which need qualified workforce.

Table 67 | Unemployment in the Altmark 2007

	Number	%
Germany	3,776,425	9
Sachsen- Anhalt	202,098	16
Altmark	21,038	-
Salzwedel	8,090	15.8
Stendal	12,948	19.7

Source: Arbeitsmarktstatistik der Arbeitsverwaltung und -vermittlung der Bundesagentur für Arbeit, 2007

As shown in table 67, unemployed in the Altmark is set at a quite high level compared to the average in Germany. Table 68 reports some detailed figures on regional unemployment.

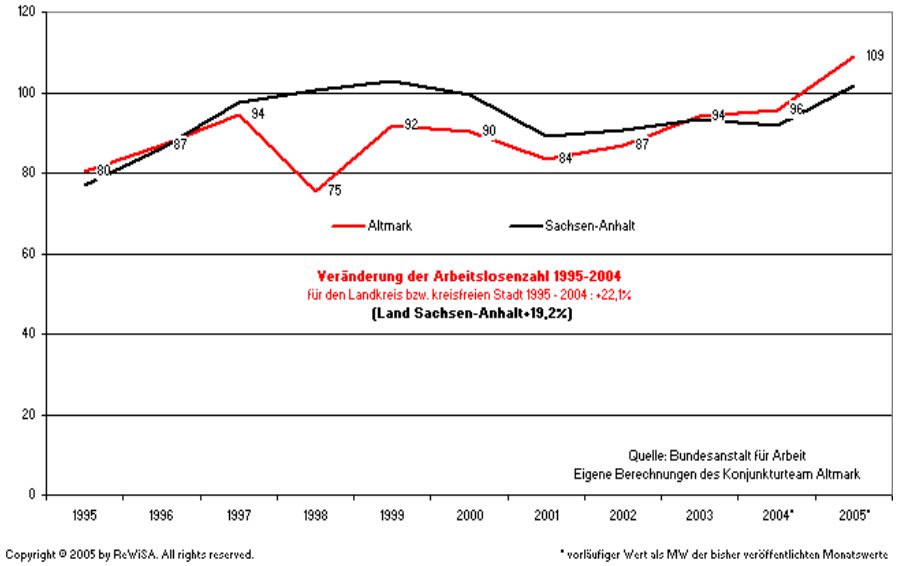
Table 68 | Details on unemployed population in the two Altmark districts in 2009

	Stendal		Altmarkkreis Salzwedel	
	Numbers	%	Numbers	%
Total	10,211	100	6,450	100.0
Of which:				
Men	5,357	52.5	3,397	52.7
Women	4,854	47.5	3,053	47.3
Without degree	2,799	27.4	1,559	24.2
15 to 25 yr-olds	1,085	10.6	762	11.8
50 to 65 yr-olds	2,986	29.2	1,913	29.7
Long term unemployment	3,477	34.1	2,169	33.6
Handicapped	325	3.2	233	3.6
Foreigners	247	2.4	149	2.3

Source: Statistik der Bundesagentur für Arbeit. Kreisreport – Der Arbeitsmarkt im Juni 2009

There are more than two third of the unemployed population which was not employed for a long time. This poses problems in reintegrating this workforce into the market. As shown in Figure 53, the development of unemployment has rather increased since the mid 90's.

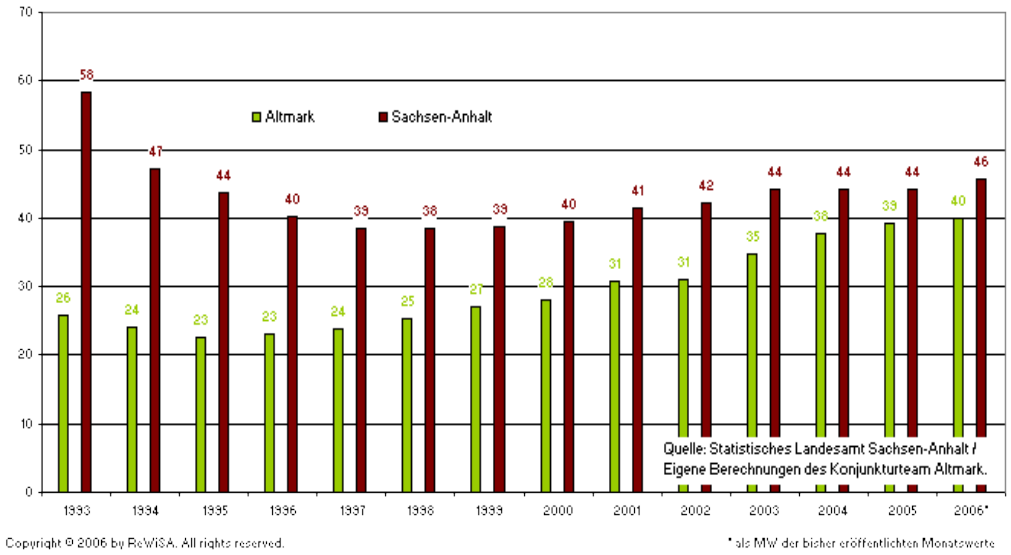
Figure 53 | Unemployment in the Altmark and Sachsen-Anhalt (per 1,000 inhabitants)



Source: Bundesanstalt für Arbeit, calculations made by Konjunkturteam Altmark (http://www.stendal.hs-magdeburg.de/project/konjunktur/risa/altmark/frame_altmark_amcharts.htm)

The next figure (Figure 54) illustrates the concentration of industries among processing enterprises in the Altmark and Sachsen-Anhalt.

Figure 54 | Employment in the industrial sector in firms of more than 20 employees in the Altmark and Sachsen-Anhalt (per 1,000 inhabitants)



Source: Statistisches Landesamt Sachsen-Anhalt, calculations made by Konjunkturteam Altmark (http://www.stendal.hs-magdeburg.de/project/konjunktur/risa/altmark/frame_altmark_vgcharts.htm)

Figure 54 shows that employment in the industrial sector has been increasing faster in the Altmark in the last years in comparison with Sachsen-Anhalt were it has been strongly decreasing until 1998 to stay rather constant since then.

The agricultural sector may not have played a marginal role in the maintenance of some employment in the region. The next section aims at shortly describing this important sector for the Altmark.

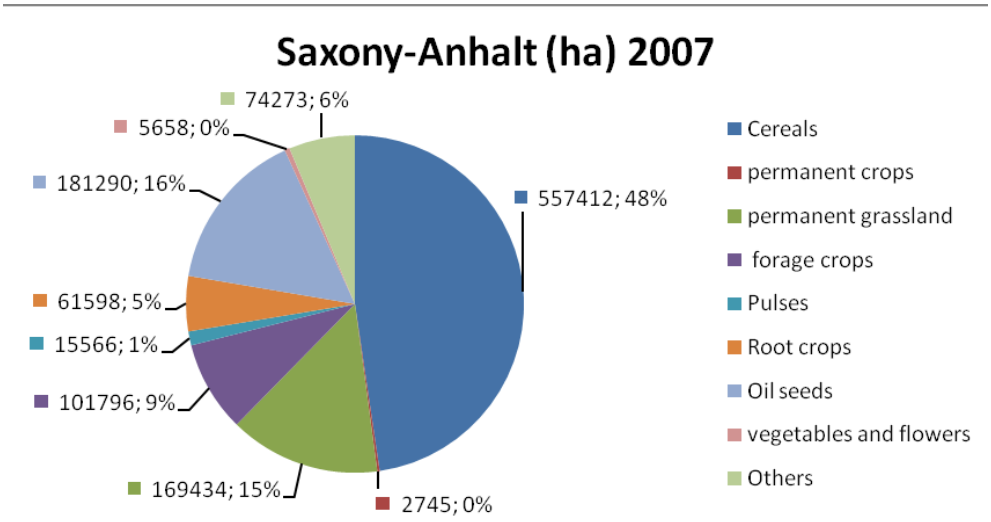
5.3.3 Agriculture

As a foreword to this section, is it to mention that current agricultural structures are inherited from the old socialist system which ended up in 1989. Before that, farms in the new federal states have been collectivised into larger structures by policy makers in ancient times. It means that small structures cohabit nowadays with very large farms, mostly grouped into farmers' associations. Another important feature in the Altmark is the structure of ownership; most of the agricultural land is rented.

As shown in

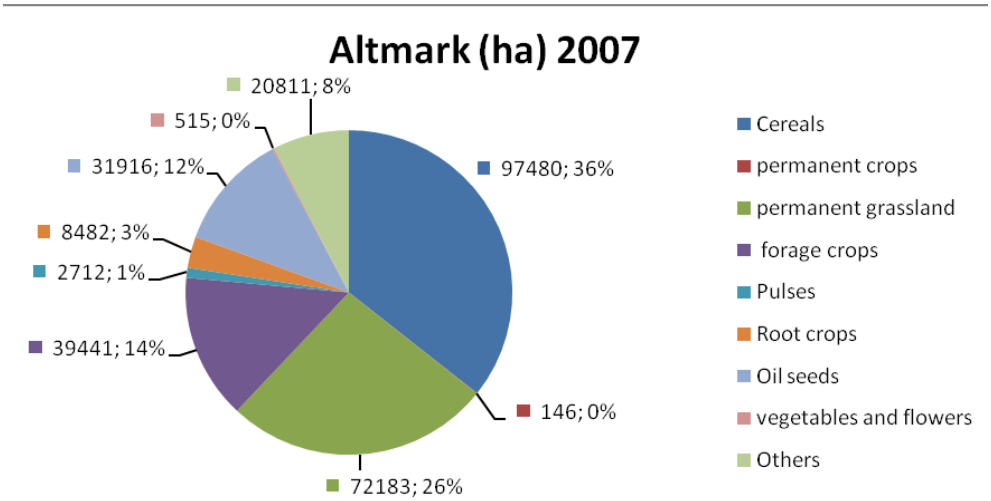
Figure 55 and Figure 56, crops (including forage crops) and permanent grassland predominate in Sachsen-Anhalt and Altmark as regards the Utilised Agricultural Area (UAA). In particular in the Altmark the ratio of permanent grassland reaches almost 30% of the total UAA

Figure 55 | Area under different crops in 2007 in Sachsen-Anhalt



Source: Agrarstrukturerhebung 2007, Statistisches Landesamt

Figure 56 | Area under different crops in 2007 in the Altmark



Source: Agrarstrukturerhebung 2007, Statistisches Landesamt

The relative high ratio of permanent grassland is due to the traditional production of milk and meat in the region. Table 69 reports the structure of livestock in the two districts of the Altmark in 2007. It is to note that almost the half of dairy cows in Sachsen-Anhalt are to be found in the Altmark, as well as a bit more than one third of total cattle.

Table 69 | Structure of livestock in the Altmark in 2007

	Cattle total	of which Dairy cows	Pigs	Sheep	Goats	Poultry
Sachsen-Anhalt	**334,826**	**129,425**	**1,072,337**	**111,373**	**-**	**8,903,391**
Altmark	**135,364**	**52,674**	**140,513**	**19,132**	**-**	**978,295**
Altmarkkreis Salzwedel	64,930	25,984	73,726	8,839	-	511,826
Stendal	70,434	26,690	66,787	10,293	-	466,469

Source: Statistische Ämter des Bundes und der Länder,2009

As regards farm structure, tables 70 & 71 report the distribution of agricultural holdings among the main farm legal forms to be found in the Altmark., as well as the size distributions of those agricultural enterprises. The 273,686 ha of UAA in the Altmark are quite equally distributed between the two districts Stendal and Altmarkkreis Salzwedel, as well as does the number of farms among the two districts.

Table 70 | Number and area of agricultural holdings by legal forms in 2007 in the Altmark

	UAA (ha)	*Number, of which:*	*Ind. Farms*	*Farm Assoc.*	*Private companies*	*Civil Associations*	*Other*
Sachsen-Anhalt	1,116,772	4,842	3,450	247	1,125	6	14
Altmark	**273,686**	**1,239**	**855**	**121**	**263**	**-**	**-**
Salzwedel	125,595	555	374	52	129	-	-
Stendal	148,091	684	481	69	134	-	-

Source: Agrarstrukturerhebung- Teil 1, Statistische Berichte, 2007

Table 71 | Size distribution of farms in 2007 in the Altmark

	Number of farms		UAA in hectare	
	Sachsen-Anhalt	**Altmark**	**Sachsen-Anhalt**	**Altmark**
Total:	**4,842**	**1,239**	**1,169,772**	**273,686**
Up to 10 ha	1,298	263	4,727	447
11 to 50 ha	1,024	295	25,268	7,214
51 to 100 ha	445	129	32,313	9,294
101 to 200 ha	586	166	85,785	24,888
201 to 500 ha	827	237	263,684	73,940
501 to 1,000 ha	382	85	267,906	58,841
1,001 to 2,500	243	60	365,994	87,249
More than 2,500 ha	37	4	124,096	7,816

Source: Agrarstrukturerhebung- Teil 1, Statistische Berichte, 2007

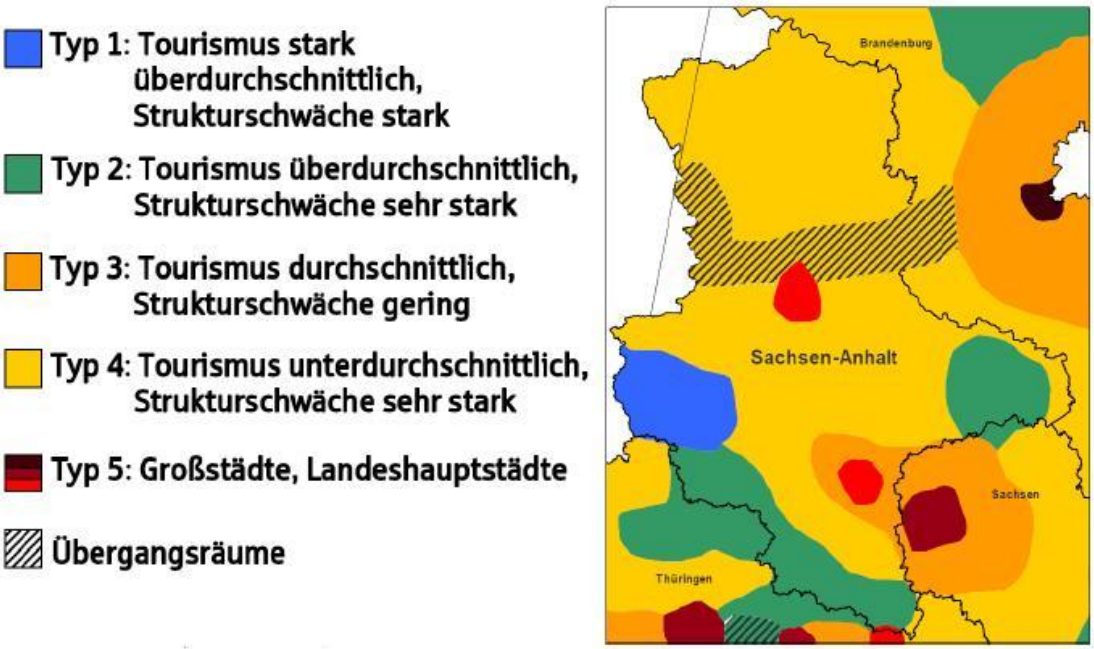
As regards farm size distributions, more than 50% of farms in the Altmark are smaller than 100 hectares. However, these farms occupy less than 6% of the total UAA.

5.3.4 Tourism

As regards tourism, Germany is the main provider of visitors for Sachsen-Anhalt. Over the different touristic zones in Sachsen-Anhalt, the Altmark may have the least appealing call for tourism. However, Altmark's potentials are still to be discovered, but there are some good paths already: the Elbe bicycle road is quite famous among others. Gastronomy and natural landscapes play an important role in the overall attractiveness of the region. In the future, the prolongation of the highway A14 from Magdeburg could provide the chance to drag more people from the Southern part of Sachsen-Anhalt. Cultural inheritage plays an important role for the region as well (network of Hanseatic cities, road of old burgs – "*Strasse der Romanik*") and this may be important for the local tourism as it is foreseen that soon people who will live and travel in Germany will be 50 years olds (and older). As one fifth of tourists visiting parts of Sachsen-Anhalt actually come from the same federal state the development of demography will play a role in the future supply of touristic attractions as well. The qualitative development of the touristic sector may therefore be the core for future visits.

Figure 57 illustrates the attractiveness of tourist areas in Sachsen-Anhalt. Type 1 stands for both a strong tourism sector combined to quite good infrastructures as well ("*Übergangsräume*" means passage zone – due to the presence of the highway A2 at this place). The Altmark zone is unfortunately combining a quite weak touristic attractiveness and weak infrastructures; combined to the Southern part of the federal state, the Altmark can be considered as quite disadvantaged in the matter tourism.

Figure 57 | Classification of touristic zones in Sachsen-Anhalt as regards attractiveness and quality of infrastructures



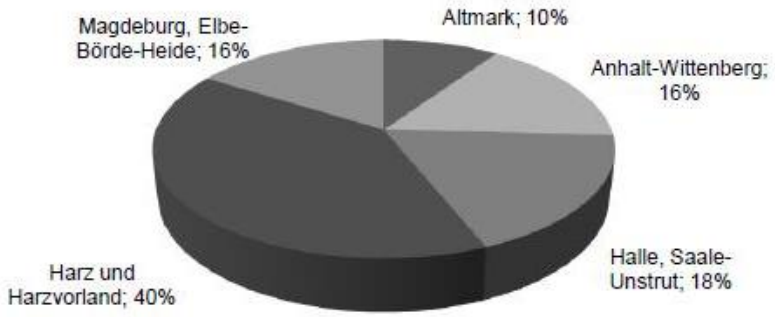
Source: dwif-Consulting GmbH 2008

Therefore, parallel to the development of adequate supply for an ageing population, think tanks advise both the general improvement of infrastructures as well as the search for a regional identity to be marketed abroad (dwif-Consulting GmbH 2008).

The relative delay of the Altmark in comparison to the other Sachsen-Anhalt tourist zones is illustrated below in

Figure 58. This figure illustrates the proportion each relevant touristic zone supplies to potential visitors; although the Altmark covers almost 30% of the total area of Sachsen-Anhalt, the district only provides 10% of the total accommodations to be found in the federal state.

Figure 58 | Regional distribution of accommodation offers in 2007 in Sachsen-Anhalt.



Source: own figure, based on Statistisches Landesamt Sachsen-Anhalt 2008

The quality of the environment and of forests combined to cultural highlights will constitute the core of touristic supply in the Altmark where this market is still under development.

5.3.5 Forestry

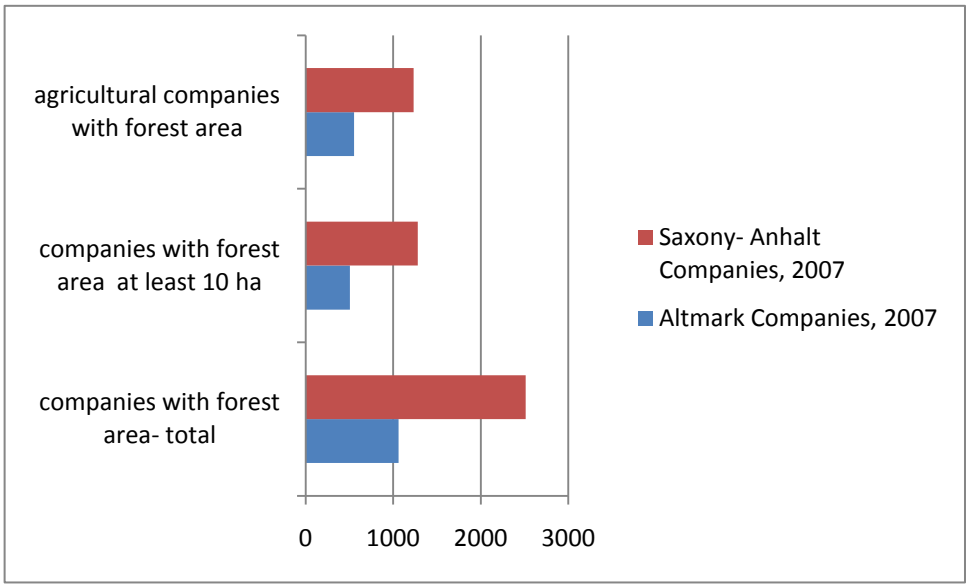
In 2003 21.8% of the total area of the Altmark was constituted of forests (Sachsen-Anhalt: 23%); this proportion was of 27.8% in the district Altmarkkreis Salzwedel and of 17% in the district of Stendal. The Altmark is composed of three North German lowlands: the middle Brandenburger sandy valley and moraine lowlands, the Western Prignitz and Altmark old moraine lowlands and the North German old moraine lowlands. In quite dry climatic conditions these soils only provide medium to low quality soils. This explains why a wide diversity of trees cannot be found in the region: the best tree to plant and manage is the pine.

For forestry matters, the Altmark region is administratively subdivided in four zones. However, only the two zones of Klötze (Western part of the Altmark) and the North-Eastern zone will be kept in the analysis, because of the two other zones one is occupied by the Colbitz-Letzlinger Heide for the most (military place) and the other is a bit aside from the area of the Altmark kept for study in PRIMA.

In the Klötze sub district, there are predominantly private forest constituted small structured holdings: 4,000 owners are to be found, each owning in average 5.5 ha. In the North-Eastern sub district, forests are privately owned as well for the majority; there are 3,000 owners spread on 18,000 hectares. In average each owns 6 ha. Private owners are grouped into

Forstbetriebsgemeinschaft (FBG)[24]; there are 22 FBG in the Altmark in total, managing 80 to several thousands hectares of forests.

Figure 59 | Number of companies owning forest land in the Altmark and Sachsen-Anhalt.

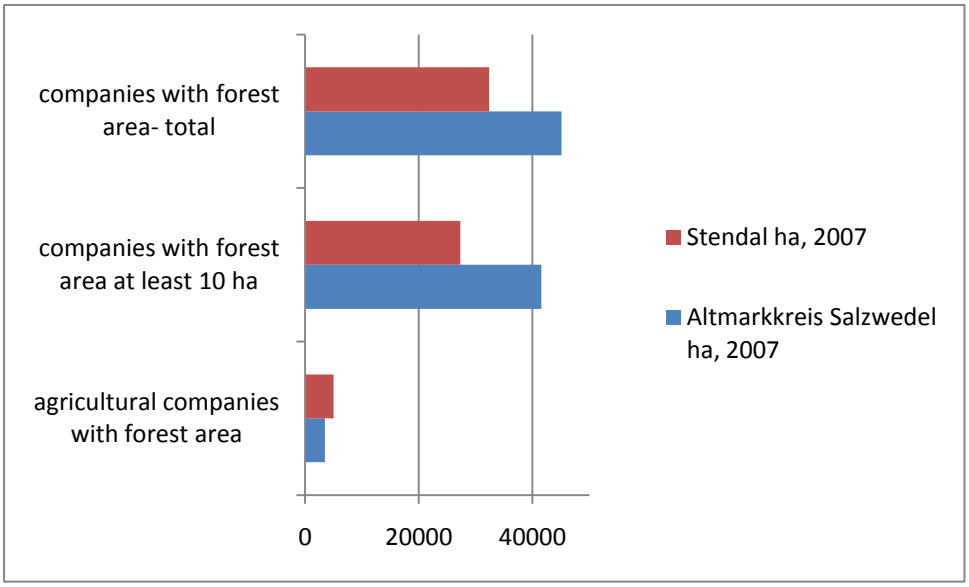


Source: Statistisches Landesamt Sachsen-Anhalt.

The Altmark region is a heaven for foresters; there is a quite well developed secondary industry present in the region for the forestry sector, costs for production and transport are among the lowest in Germany (interviews made in the framework of WP2). The Altmark is one of the most suitable places in Germany if not in the world to grow pine trees; because of the favourable processing facilities in and in the neighbourhood of the Altmark and because of low costs this sector is quite dynamic and should remain so in the future.

[24] These firms can be described as owner associations. Their size varies between 400 and 6,000 ha in the Klötze zone for instance. They organise the common selling of wood, care for the maintenance, the protection and the cultivation of forests under their control. A forester is in charge of the management of trees under responsibility of the FBG

Figure 60 | Area of forests managed by different companies in the Altmark



Source: Statistisches Landesamt Sachsen-Anhalt

Timber produced in the Altmark is mostly processed the following ways:

- 50% pulpwood (derived timber products industry, pulp industry)
  - Firm Glunz (Nettgau): each year 1,5 Millions steres processed
  - Firm Mörser (Arneburg): 3 millions steres
  - Processor (direction Magdeburg): 0.6 millions steres
  - possibilities to deliver timber in the neighbouring federal states (Niedersachsen, Mecklenburg-Vorpommern)
- 50% saw logs (construction, OSB and chipboards):
  - Chipboard in Niedersachsen
  - 2 big sawmills in Mecklenburg-Vorpommern
  - Even export to South-East Asia

5.4 Transport

The Altmark region can be somewhat considered as “missing” the main highways. Some places in the North of the Altmark are located too far away from the highway A2 linking Magdeburg to Hannover; the highway A24 linking Berlin to Hamburg is unfortunately located at least an hour away from the centre of the region. Moreover, the construction of the prolongation of the A14, already linking Dresden-Leipzig to Magdeburg, and planned to be built towards the direction of Schwerin straight to the North have not begun yet. This future highway should cut the district of Stendal quite vertically from South to North.

However beside this, at the federal state level there should be quite a lot of credits spent in the next years for the renewal of roads; around 350 millions Euros are planned for national and state roads. In the district Altmarkkreis Salzwedel, there are some renewals planned as regards main national roads crossing the district (Ministerium für Landesentwicklung und Verkehr, http://www.sachsen-anhalt.de/LPSA/index.php?id=746): the B71 and the B188 should be partially rebuilt. In the Stendal district those works will concern the B188, the L2 and the L16.

Table 72 | Road network in Sachsen-Anhalt

	Length (km)	Proportion (%)
Highways	385	3.5
National roads	2,325	21.23
State roads	3,951	36.08
District roads	4,292	39.19

Source: Ministerium für Landesentwicklung und Verkehr, http://www.sachsen-anhalt.de/LPSA/index.php?id=731.

The core of infrastructure investments for the joint growth of old and new German federal states took place from April 1991 (*Verkekrsprojekte Deutsche Einheit* or VDE). As the Altmark is located at the edge of one of those old federal states, there were some plans to practically "build bridges" in the form of railways, roadways or waterways to make the junction to the West more easily after the fall of the Berlin wall, as illustrated in table 73.

Table 73 | Main projects held in the framework of the VDE concerning the Altmark.

Projects	State
1. Railways	
VDE 3 Uelzen - Salzwedel - Stendal	First Step accomplished
VDE 4 Hannover - Stendal - Berlin	in service
2. Roads	
VDE 11 Highway A 2 / A 10 Hannover - Berlin, Berliner Ring	ready
VDE 12 BAB A 9 Berlin - Nürnberg	partially ready
VDE 14 BAB A 14 Halle - Magdeburg	ready
3. Waterways	
VDE 17	partially ready
Mittellandkanal	In construction
Elbe-Havel-Kanal (watergate Zerben and Wusterwitz)	In construction
Low Havel-waterway	In construction*

Source: Ministerium für Landesentwicklung und Verkehr, http://www.sachsen-anhalt.de/LPSA/index.php?id=763.

However, there have been some train connections abandoned since some decades, handicapping populations who were used to using these connections before; this is the case for the connections between Salzwedel, Arendsee and Wittenberger as well as between Salzwedel, Oebisfelde and Wolfsburg. Moreover the train connection linking Stendal and Wolfsburg via Gardelegen may be fast (ICE), unfortunately it does not stop in Gardelegen.

5.5 Environment

The Altmark contains protected areas, namely:

- The “Naturpark Drömling”, classified as landscape conservation area (LCA) and nature reserve (NR),
- The "Untere Havel/Elbe/Schollener Land" (LCA, NR),
- The “Salzwedel-Diesdorf” (LCA),
- The "Aland-Elbe-Niederung" (LCA, NR),
- The "Uchte-Tangerquellen" (LCA) and,
- The "Colbitz-Letzlinger Heide" (NR).

These areas cover round 90,000 ha. In total a share of round 20 % of the Altmark territory is classified as protected.

5.6 References

Bericht über die demographische Entwicklung Sachsen-Anhalts 1990 bis 2007, Ministerium für Landesentwicklung und Verkehr, Anlage 1, 2009.

Bericht zur Stadtentwicklung und zum Stadtumbau Ost sowie zur Mieten- und Wohnungsmarktentwicklung im Land Sachsen-Anhalt. Berichtsjahre 2006 und 2007. Ministerium für Landesentwicklung und Verkehr und Investitionsbank in Kooperation mit dem Institut für Strukturpolitik und Wirtschaftsförderung gemeinnützige GmbH (isw Institut), 20.10.2006.

Der demographische Wandel und die Tourismuswirtschaft in Sachsen-Anhalt. Eine Studie der Hochschule Harz im Auftrag des Ministeriums für Landesentwicklung und Verkehr des Landes Sachsen-Anhalt in Kooperation mit dem Ministerium für Wirtschaft und Arbeit des Landes Sachsen-Anhalt. Stand: 31.12. 2007, mit Überarbeitungen, Stand 30. Mai 2008.

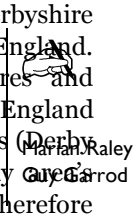
Gericke, T., Karig, U. (1996): Projekt „Mobillität junger Erwachsener des Freistaates Sachsen“. Abschlussbericht. Leipzig.

Regionales Entwicklungskonzept Altmark [REK II]. Leitziel und Leitbilder für die regionale Entwicklung der Altmark. Regionalmanagement Altmark [RemA], Dr. Ulf Schmidt. Stendal/Salzwedel, Oktober/November 2003.

Zukunftchancen junger Frauen in Sachsen-Anhalt - Zukunftchancen junger Familien in Sachsen-Anhalt, FH Magdeburg-Stendal im Auftrag des Landesregierung Sachsen-Anhalt, Ministerium für Bau und Verkehr, Ministerium für Gesundheit und Soziales, Abschlussbericht, 30. November 2004.

6 SOCIAL ECONOMIC ANALYSIS OF THE DERBYSHIRE/NOTTINGHAMSHIRE CASE STUDY REGION

The wider United Kingdom study area consists of the counties of Derbyshire and Nottinghamshire and lies in the East Midlands region of England. Derbyshire and Nottinghamshire occupy 4,600 square kilometres and contain a resident population of 1.5 million. They lie in the middle of England and have good transport connections. The study area contains 2 cities (Derby and Nottingham) and a ring of other cities lie beyond the study area's boundary. Many of the rural areas, defined by settlement size, are therefore mostly fairly close to urban centres. At district level (LAU1) there is little variation in the industrial structure across the study area, which displays above-average levels of manufacturing. Raised levels of tourism and farming employment are evident in the most rural district, Derbyshire Dales. However, small pockets with higher levels of farming can be discerned from LAU2 level data.



This is a heterogenous area including both flat or gently rolling lowland areas with good agricultural land, and upland areas which are disadvantageous to farming but possess very high landscape and biodiversity value. Indeed the north western zone has been designated as a National Park and contains large Natura 2000 sites. Farm income here is highly dependent on agri-environment payments and tourism enterprises. It is subject to very high volumes of day visitors due to its proximity to large urban populations. Another tourist hot spot is Sherwood Forest, which, being ancient woodland, also has high biodiversity value. Generally woodland cover is low, in common with much of England, although the newly established National Forest lies on the southern border of Derbyshire. As most of the open land is farmed, the maintenance and improvement of biodiversity is closely connected to farming practice and take-up of agri-environment schemes.

Much of the Derbyshire and Nottinghamshire is relatively prosperous, with below-average unemployment and strong population growth. However, this brings development pressure for new housing and for better transport systems. Outside the main urban areas, three main types of area can be recognised. There are the former coalfield areas which straddles the border between the two counties. These areas are recovering from the sudden collapse of the coal industry in the early 1980s. Generally, they have static population sizes, higher levels of unemployment and lower qualification levels than other areas. Next are attractive rural areas close to towns of which Rushcliffe is a prime example. Its residents are highly qualified, population growth is strong, unemployment is low, and house prices are very high. Finally are the deep rural areas which lie further from urban centres, and do not have the coal mining history. Again house prices are high and the population age structure suggests they are subject to retirement in-migration. Access to services is likely to be an issue here for non car-owners.

6.1 General characteristics

6.1.1 Geographical information

The counties of Derbyshire and Nottinghamshire occupy 4,600 square kilometres and are situated in central England approximately 2.5 hours drive from London. There are effective road and rail routes going to north and south, although east-west connections are poorer. The overall population is nearly 2 million of which over a quarter live in the area's two cities, Derby (population 220,000) and Nottingham (population 270,000).

There is a very varied landscape, with 13 different major landscape types recognised. These, and the traditional economic activities and settlement patterns, are closely related to the underlying geology. A substantial part of the area is underlain by Carboniferous period geology. This produces the high land in the north west and in west where gritstone and limestone scenery are evident, and Coal Measures and sandstone in the central area, along the Nottinghamshire-Derbyshire border. Younger Permian deposits lie in the south.

Topographically in the south and east are found relatively flat or gently rolling land which, along with high soil quality provides high value agricultural land capable of intensive arable production. The upland areas to the north and west are of intermediate or poor agricultural value, but of very high landscape and recreational value, leading in 1951 to the designation of a substantial part of the area as the Peak District National Park, England's first National Park. The spatial pattern of traditional economic activities is also closely linked to geology, with coalmining in the central area (until the 1990s when public financial support for the industry was withdrawn), and limestone, aggregate, and mineral extraction in many other places, sometimes conflicting with National Park purposes. The biggest river is the Trent which flows eastwards through Nottingham, and eventually enters the North Sea at Hull. It has a wide floodplain with deep alluvium beds and supports agriculture, mineral extraction and, thanks to its proximity to the coal fields, electricity generation. Its main tributary in the study area is the River Derwent, which flows southwards through Derbyshire.

A ring of large towns or cities surround the 2 counties, and will be the urban centres of choice for the populations of the peripheral areas rather than the county towns of Derby and Nottingham. The principal of these are Manchester, Leeds, Doncaster, Stoke-on-Trent and Leicester.

6.1.2 Administrative structure

In common with many other areas in England, there is a two-tier system of elected local government in Derbyshire and Nottinghamshire. The lowest tier (level) is the Local Authority District (LAD) and the upper tier is the County Council (of which there is one each for Derbyshire and Nottinghamshire). As with many large towns, there is single tier local government (known as a

Unitary Authority) for the cities of Derby and Nottingham. Unitary, district and county councils are governed by elected members and are responsible for delivery of many service, within guidelines set by central government, such as education, housing, social services, planning, environmental health, and waste disposal. They also play a role in economic regeneration. Increasingly, service provision is contracted out to private sector and third sector organisations.

The lowest level of elected government are parish and town councils which exist in many small towns and villages. They have very limited powers and budgets and are principally concerned with public realm improvements, and providing a voice for local people.

The Peak District National Park (PDNP), one of 10 National Parks in England, includes north west Derbyshire and contiguous portions of the neighbouring counties of Cheshire, Staffordshire and West Yorkshire. The PDNP Authority is an independent authority and is the statutory planning authority within the National Park boundary. England's National Parks have 3 purposes: the preservation and enhancement of natural beauty, wildlife and cultural heritage; to promote opportunities for the understanding and enjoyment of the Park by the public; and, in realising these purposes, to foster the economic and social well-being of local communities (HM Government, 1995). Responsibility for other local government functions, however, resides with the component district or county councils.

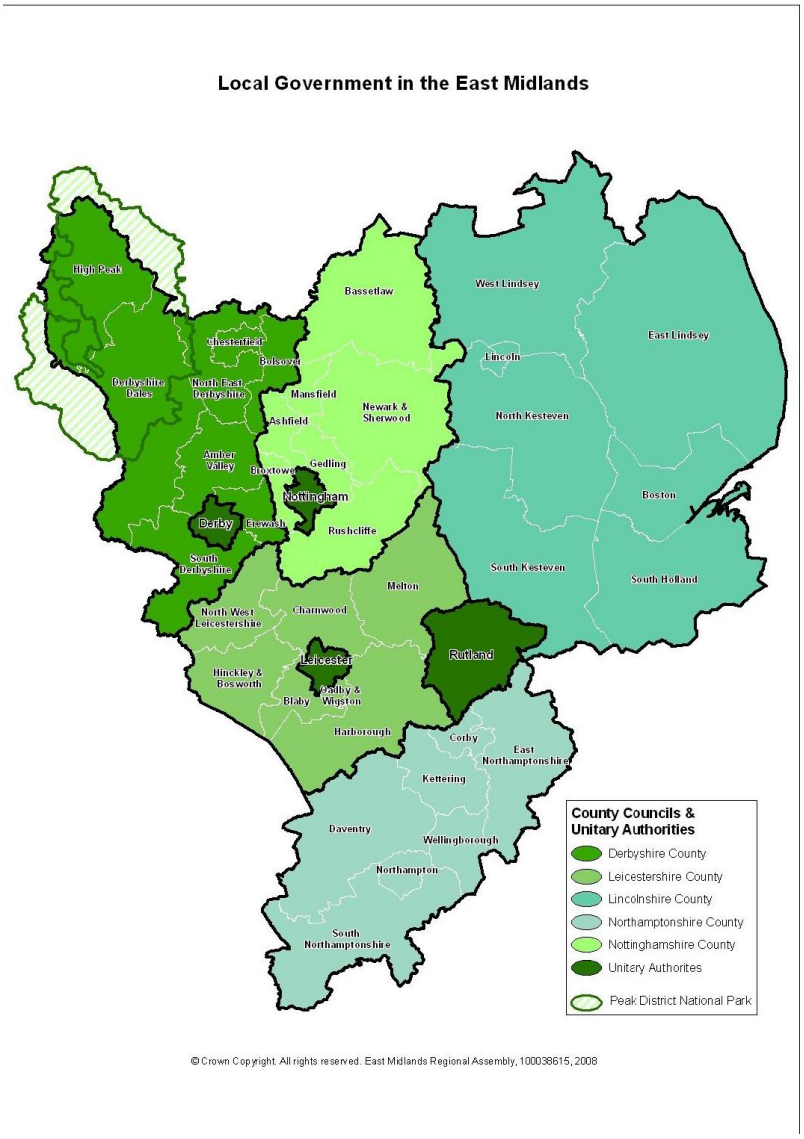
There are also important regional bodies which, in addition to Derbyshire and Nottinghamshire, serve the counties of Lincolnshire, Northamptonshire, Rutland and Leicestershire. The most important are the Government Office for the East Midlands (GOEM), and the East Midlands Development Agency (EMDA). The Government Office is a regional hub of several government departments, whereas EMDA is responsible for many aspects of economic regeneration. These include the development of strategy and the administration of important funding streams including Cohesion Funds and the Rural Development Programme for England (EARDF funds with the exception of Pillar 2).

Partnership working is an important aspect of governance. Local Strategic Partnerships (LSP) bring together representatives from the public, private and voluntary sectors. They develop and help to implement Local Area Agreements which identify local priorities and shape the delivery of services by local authorities and other organisations. There are 6 district-based LSPs in Derbyshire based and 7 in Nottinghamshire. At sub-regional level, a recent development (1st November 2009) has been the formation of Strategic Sub-Regional Partnerships (Derbyshire Economic Partnership, and Alliance in Nottinghamshire) which aim to deliver economic regeneration at a local level through partnership working. They have responsibility for spending national regeneration funds in support of new initiatives and projects that address the specific needs of their sub-regions.

Under EARDF, there have been two rounds of applications for LEADER funding with no further rounds expected. The first round, concluded in January 2008, resulted in the selection of 4 LAGs in the East Midlands, two

of which are in Derbyshire, namely Bolsover and North East Derbyshire, and the Peak District Rural Action Zone. Both of these build on existing structures. Three further LAGS were selected in the second bidding round**.** One of these, the Bassetlaw and Newark and Sherwood LAG, lies in Nottinghamshire.

Figure 61 | Local government in the East Midlands Region



Source: East Midlands Regional Assembly, 2008

6.1.3 Rural Areas

Table 74 shows population distribution between rural and urban areas, defined by England's Urban-Rural definition (Bibby and Shepherd, 2005). There is a single local authority in the most rural category (Derbyshire Dales), and 5 in the next most rural (High Peak, N.E. Derbyshire, Bassetlaw, Newark and Rushcliffe). Amber Valley, Bolsover and South Derbyshire appear in the following category (Significant Rural).

Table 74 | Rural areas, as defined by Defra (2005), and population density

			as a % of total population					
Area	Total Population	Total Rural Population	All rural areas	Rural Towns	Villages	Dispersed rural	Rural / urban class	Population density (persons per km²)
Unitary Authorities								
Derby	221,856	373	0.2	0.2	0.0	0.0	OU	28.41
Nottingham	267,208	0	0.0	0.0	0.0	0.0	LU	35.78
Derbyshire								
Amber Valley	116,484	50,421	43.3	27.2	11.7	4.4	SR	4.39
Bolsover	71,762	33,815	47.1	35.9	8.1	3.1	SR	4.48
Chesterfield	98,769	1,833	1.9	0.3	1.3	0.3	OU	14.97
Derbyshire Dales	69,616	69,616	100.0	51.3	40.3	8.3	R80	0.88
Erewash	110,095	11,010	10.0	5.1	3.7	1.2	LU	10.04
High Peak	89,574	59,804	66.8	48.1	10.8	7.8	R50	1.66
North East Derbyshire	96,833	71,573	73.9	53.3	14.0	6.6	R50	3.52
South Derbyshire	81,693	35,295	43.2	25.4	13.8	4.1	SR	2.41
Nottinghamshire								
Ashfield	111,295	1,609	1.4	0.6	0.0	0.9	OU	10.17
Bassetlaw	107,577	68,581	63.8	38.5	22.2	3.0	R50	1.69
Broxtowe	107,539	3,184	3.0	2.4	0.5	0.1	LU	13.43
Gedling	111,663	20,489	18.3	13.6	2.9	1.9	LU	9.32
Mansfield	98,229	14,384	14.6	12.7	1.9	0.0	OU	12.8
Newark and Sherwood	106,194	67,552	63.6	39.9	17.6	6.1	R50	1.63
Rushcliffe	105,588	60,014	56.8	39.2	15.0	2.7	R50	2.58

Source: ONS, Regional Trends (population density);
Defra Rural/urban local authority classification, download from http://www.defra.gov.uk/evidence/statistics/rural/rural-definition.htm

Notes
1 Population figures based on Census 2001 population estimates, Office for National Statistics
2 Total rural population includes residents of large Market Towns
3 Urban-Rural classes for local authority/unitary authorities are defined as follows:

MU: Major Urban: districts with either 100,000 people or 50 percent of their population in urban areas with a population of more than 750,000.

LU: Large Urban: districts with either 50,000 people or 50 percent of their population in one of 17 urban areas with a population between 250,000 and 750,000.

OU: Other Urban: districts with fewer than 37,000 people or less than 26 percent of their population in rural settlements and larger market towns.

SR: Significant Rural: districts with more than 37,000 people or more than 26 percent of their population in rural settlements and larger market towns.

R50: Rural-50: districts with at least 50 percent but less than 80 percent of their population in rural settlements and larger market towns.

R80: Rural-80: districts with at least 80 percent of their population in rural settlements and larger market towns.

There is considerable variety among rural areas and they may be characterised as follows:

- Significant commuting to cities (South Derbyshire, Rushcliffe, Amber Valley)
- Upland, high scenic value (Derbyshire Dales, High Peak)
- Former coalfield areas and fringe (Bolsover, N.E. Derbyshire,
- Mixed (Bassetlaw, Newark and Sherwood)

6.2 Demographic trends

6.2.1 Population

As already seen, Table 75 shows population size and density: over the last 15 years, population growth in the East Midlands region has exceeded the national rate, with exceptionally high growth rates in S.E Derbyshire. Areas accessible to urban areas such as Rushcliffe, Newark and Sherwood and Amber Valley also have strong growth rates. Population growth has been very low or even negative in the former colliery areas of Chesterfield, N.E. Derbyshire, Broxtowe, Gedling and Mansfield.

Table 75 | Population, size, growth, and age structure

Area	Population 2008 All ages (000s)	% change population, 1993 to 2008	% Aged 0 to 15, 2008	% working age, 2008	% SPA +, 2008	Change in % SPA+, 1998 to 2008
Unitary Authorities						
Derby	239.2	6.2	19.5	62.2	18.3	0.1
Nottingham	292.4	4.9	16.7	69.4	13.9	-2.9
Derbyshire						
Amber Valley	121.1	7.5	18.1	60.7	21.2	1.7
Bolsover	74.3	4.9	18.6	60.6	20.9	0.9
Chesterfield	100.8	0.3	17.9	60.7	21.4	1.5
Derbyshire Dales	70.7	3.8	17.3	57.9	24.9	3.1
Erewash	111.3	4.3	18.1	61.5	20.2	1.8
High Peak	93.2	8.0	18.3	61.9	19.7	2.2

North East Derbyshire	98.2	0.1	16.9	59.5	23.6	3.4
South Derbyshire	92.7	25.4	20.0	62.1	17.8	1.2
Nottinghamshire						
Ashfield	116.5	6.5	18.7	61.3	19.9	1.5
Bassetlaw	112.2	6.9	18.2	60.8	21.1	2.3
Broxtowe	112	2.1	16.0	63.8	20.2	1.4
Gedling	112.1	0.3	17.6	60.8	21.7	2.7
Mansfield	100.6	-0.9	18.5	61.5	20.0	1.6
Newark and Sherwood	113.3	9.2	18.5	59.7	21.7	2.2
Rushcliffe	109.8	9.4	18.5	61.1	20.4	1.7
East Midlands	4433.0	9.3	18.4	61.9	19.7	1.3
United Kingdom	61383.2	6.4	18.8	62.0	19.2	0.9

Source: Office for National Statistics. Downloaded from Intelligence East Midlands, 18th Nov 2009

Notes

1. Population taken from mid-year estimates

2. Working age is 16 to 64 for men and 16 to 59 for women.

6.2.2 Age structure

Table 75 illustrates age structure. An 'elderly' population is shown by a high proportion of people of State Pension Age (SPA). Whereas the two cities contain a below average proportion of older people, most districts have an above-average proportion with compensating reductions in children and working age residents. In the 2 areas with the greatest concentrations of older people, it is likely that 2 different processes have been at work: in-migration of older people to the attractive Derbyshire Dales, and out-migration from North-East Derbyshire following the decline in coal mining and a consequent reduction in the size of the working age population and their children.

6.2.3 Education

Table 76 shows the highest qualification held by residents. The highest levels of qualifications are held in Rushcliffe, Gedling, Broxtowe, Derbyshire Dales, High Peak and S. Derbyshire. The most poorly qualified live in Bolsover, N.E. Derbyshire, Ashfield, Bassetlaw and Mansfield.

The pattern of occupational groups is less clear (Table 77). Higher level jobs are indicated by employment in professional, managerial and technical occupations (shown in aggregate in the right hand column of Table 77). Overall, despite qualification levels being above average in several districts, there is not a generally corresponding higher proportion in higher level jobs with the notable exception of Rushcliffe and to a lesser extent S. Derbyshire and Gedling.

Table 76 | Women aged 19 to 59 and men aged 19 to 64: highest qualification held, 2007

Area	Percentage possessing as highest level qualification				
	Level 4	Level 3	Level 2	< Level 2	No qualification
Unitary Authorities					
Derby	27.1	17.5	18.0	20.5	17.0
Nottingham	23.1	22.1	17.8	19.9	17.1
Derbyshire					
Amber Valley	29.2	18.2	23.1	17.8	11.6
Bolsover	19.5	15.3	22.9	27.3	15.0
Chesterfield	23.2	22.2	22.7	21.0	10.9
Derbyshire Dales	35.6	16.6	22.6	13.6	11.5
Erewash	22.3	24.2	23.0	16.2	14.4
High Peak	38.1	18.8	15.8	18.3	8.9
North East Derbyshire	18.7	22.1	25.2	22.4	11.5
South Derbyshire	35.0	17.9	21.0	13.7	12.4
Nottinghamshire					
Ashfield	16.9	26.3	22.2	21.5	13.0
Bassetlaw	27.0	18.7	17.4	23.2	13.7
Broxtowe	37.4	18.9	17.8	16.8	9.0
Gedling	35.2	20.9	14.7	16.1	13.1
Mansfield	16.4	22.5	22.2	24.8	14.1
Newark and Sherwood	23.6	19.8	22.6	19.0	14.9
Rushcliffe	48.3	15.2	13.5	15.0	7.9
East Midlands	27.3	19.8	20.2	19.7	13.1
England	30.2	18.9	19.9	18.6	12.5

Source: IEM (2009)

Examples of qualifications

Level 4 and above:	Includes post graduate qualifications, first degree, and sub-degree higher education qualifications
Level 3:	Advanced vocational qualifications; academic qualification of 2 or more A levels
Level 2:	Ordinary' level vocational or professional qualifications, apprenticeships; academic qualifications including five or more GCSE grades A*-C or 1 'A' level

Table 77 | Occupational group of employed people, 2007

	Percentage of all in employment by occupational group									
Area	managers & senior officials	pro-fessional	associate prof & technical	administrative & secretarial	skilled	personal services	sales and customer service	process, plant and machine	elementary occupations	*sum of managers, professionals, and*
Unitary Authorities										
Derby	10.9	13.6	12.2	12.7	10.8	9.0	7.3	10.3	13.0	*36.7*
Nottingham	10.9	11.5	11.2	9.9	10.5	9.4	9.7	9.4	17.3	*33.6*
Derbyshire										
Amber Valley	19.4	11.1	9.7	10.3	17.2	8.2	6.6	4.5	13.0	*40.2*
Bolsover	11.3	4.7	10.2	10.5	17.1	12.0	5.6	15.3	13.3	*26.2*
Chesterfield	16.7	10.0	14.3	12.2	11.7	11.5	5.1	8.8	8.9	*41.0*
Derbyshire Dales	19.4	10.7	10.2	11.7	10.7	3.3	9.4	8.9	15.8	*40.3*
Erewash	13.4	7.5	15.2	13.2	10.9	5.1	12.9	8.9	12.9	*36.1*
High Peak	10.8	13.9	13.0	14.9	14.4	8.9	10.4	5.5	8.1	*37.7*
North East Derbyshire	13.7	11.1	15.2	15.0	8.9	6.8	10.0	10.2	9.1	*40.0*
South Derbyshire	18.6	13.7	15.4	7.5	12.9	9.8	4.4	12.5	5.3	*47.7*
Nottinghamshire										
Ashfield	11.8	5.6	10.1	11.8	14.0	7.8	9.2	10.5	18.7	*27.5*
Bassetlaw	22.2	10.4	12.1	8.5	14.7	2.7	9.1	6.8	13.6	*44.7*
Broxtowe	13.9	13.6	14.7	10.9	13.3	5.3	7.7	5.9	14.0	*42.2*
Gedling	15.4	16.3	14.8	10.3	16.0	7.7	5.5	2.8	10.6	*46.5*
Mansfield	14.6	8.5	11.7	13.4	9.2	7.5	5.4	10.6	18.3	*34.8*
Newark and Sherwood	15.9	9.4	10.6	10.6	17.1	8.2	5.8	9.5	11.1	*35.9*
Rushcliffe	26.1	20.4	12.4	7.0	8.1	8.2	6.0	4.3	7.6	*58.9*
East Midlands	15.7	11.3	12.5	11.0	11.8	8.0	7.4	8.9	13.2	*39.5*
England	15.7	13.1	14.6	11.8	10.7	7.8	7.5	7.1	11.3	*43.4*

Source: Inter-departmental Business Register (Download from Intelligence East Midlands)

6.2.4 Housing

The deficit between housing need and the available supply (and the consequent high price of housing) is a political issue of considerable significance in the UK. In recent years an additional source of pressure for housing, arising from an increase in the rate of household formation, has become evident. Projections of number of households suggest that by 2026, the number of dwellings needed will have increased by 25% compared to 2006 (Table 78). Average household size will be smaller, but nevertheless this places further development pressure on land. Derbyshire and Nottinghamshire have a projected increase which is similar to that for England, though smaller than some other counties in the East Midlands. The most striking deficit is in S.Derbyshire, followed by Newark and Sherwood.

Pressure for new housing in rural areas raises two important issues: housing shortages may restrict economic development due to the lack of a suitable pool of entrepreneurs and labour; yet new housing may degrade landscape quality.

Table 78 | Future demand for housing and housing affordability in relation to Rural-Urban classification

		New household formation, 2006 to 2026			Affordability		
Area	Rural-urban class	Households, 2006 (000s)	Households, 2026 (000s)	Ratio of households 2026/2006	Mean lower quartile house price, 2008 (£)	Ratio 1998	Ratio 2008
Derby	OU	100	124	1.24	96,900	2.37	5.09
Nottingham	LU	126	168	1.33	83,000	2.71	4.86
Amber Valley	SR	52	65	1.25	103,000	3.06	6.03
Bolsover	SR	32	39	1.22	82,500	2.72	4.96
Chesterfield	OU	45	54	1.20	99,500	2.96	6.36
Derbyshire Dales	R80	30	36	1.20	149,000	4.95	9.77
Erewash	LU	48	58	1.21	95,000	3.13	6.46
High Peak	R50	39	50	1.28	123,000	3.89	6.54
North East Derbyshire	R50	42	49	1.17	103,800	3.50	6.48
South Derbyshire	SR	37	54	1.46	114,600	3.72	6.15
Ashfield	OU	50	65	1.30	83,000	2.95	5.59
Bassetlaw	R50	48	60	1.25	91,500	3.06	5.86
Broxtowe	LU	48	62	1.29	110,000	3.52	6.69
Gedling	LU	49	59	1.20	100,000	3.55	6.71
Mansfield	OU	43	54	1.26	82,000	2.75	5.50
Newark and Sherwood	R50	48	64	1.33	104,000	3.44	6.72
Rushcliffe	R50	45	57	1.27	140,000	4.71	9.31
East Midlands		1,849	2,413	1.31	107,000	3.29	6.59
England		21,515	26,674	1.24	124,000	3.65	6.98

Sources: For the rural-urban classification, Defra (2005); for house price/earnings ratio, IEM (2009); for household projections, CLG (2009)

Notes

1. 'Ratio' refers to lower quarter house price divided by lower quartile earnings, and is an indicator of affordability
2. Rural-urban class refers to England's Rural/Urban Local Authority (LA) Classification (Bibby and Shepherd, 2005)

Approximately 80% of housing in England is either privately owned or, to a lesser extent, rented in the private rental market. The proportion of privately owned homes is largest in rural areas, whereas the largest proportion of social housing is in urban areas. The lack of affordable housing for households with relatively low incomes in rural areas is an issue of longstanding importance in England. The underlying causes include a lack of suitable rental accommodation, and excessively high prices in the private housing market, resulting from a restricted supply and the consequent bidding up of prices. Factors influencing this situation include restrictions on built development (especially in areas of high landscape value) and demand from affluent commuters, second home owners, and holiday accommodation businesses who can afford to pay more than the traditional occupational classes.

Table 78 illustrates wide variation between districts in the price of the cheapest housing. The most attractive residential or commuter areas (Derbyshire Dales, High Peak and Rushcliffe) display the highest prices. Affordability may be shown by the ratio between wages and house prices. It may be seen from Table 78 that in 2008 the ratio of price to earnings was greatest in Rushcliffe and Derbyshire Dales. Moreover, in all districts the cheapest housing (lowest quartile) has become much more expensive in relation to wages since 1998.

6.3 Economic system

6.3.1 Economy

Table 79 shows the structure of the economy by sector of employment based on place of residence rather than place of work. The relatively minor role of agriculture is apparent. At this level of aggregation a distinct rural economy is not recognisable, although the most rural district, Derbyshire Dales, displays increased employment in agriculture and tourism. Relatively high levels of manufacturing employment are found in many areas.

Table 79 | Industrial sector of employment. Percentage employed in sector, 2001

Area	Agriculture; hunting and	Mining and quarrying;	Manufacturing	Construction	Wholesale and retail	Hotels & restaurants	Transport storage and	Financial Intermed-iation	Real estate; renting and	Education	Health and social work	Public administration	Other
Unitary Authorities													
Derby	0.5	0.9	22.4	5.8	16.7	5.1	6.4	2.7	11.7	7.9	11.7	3.9	4.4
Nottingham	0.4	1.4	15.2	6.4	18.2	6.5	6.1	3.2	12.1	8.5	12.3	4.6	5.1
Derbyshire													
Amber Valley	1.3	1.0	28.3	7.9	15.8	3.8	5.2	2.0	9.4	7.3	9.4	4.7	3.9
Bolsover	1.4	2.3	23.3	7.6	18.7	4.8	6.2	2.1	7.6	6.2	11.6	4.4	3.8
Chesterfield	0.8	1.2	19.0	6.8	18.0	4.4	8.1	2.2	9.3	6.9	13.7	5.5	4.0
Derbys. Dales	4.5	2.3	16.5	6.9	14.8	6.5	5.2	1.9	10.9	9.4	10.9	5.3	5.0
Erewash	0.7	1.1	26.0	7.2	17.4	4.0	7.1	2.7	9.4	7.2	8.9	4.3	3.9
High Peak	1.6	2.1	21.8	6.1	14.6	4.3	6.0	3.1	10.7	9.5	11.3	4.6	4.4
N.E Derbyshire	1.6	1.1	19.6	8.2	17.8	4.4	6.0	3.4	9.2	8.0	11.2	5.4	4.2
S. Derbyshire	2.0	1.4	24.7	6.7	16.4	3.8	6.6	2.3	11.0	7.6	10.0	3.8	3.7
Nottinghamshire													
Ashfield	0.8	1.4	26.6	8.4	18.9	3.5	6.0	2.2	8.5	5.3	10.4	4.3	3.6
Bassetlaw	2.4	2.8	19.0	7.5	18.7	4.8	6.3	2.1	7.8	7.2	12.7	4.6	4.2
Broxtowe	0.5	1.1	18.5	6.9	18.1	4.0	6.1	3.4	11.4	10.3	10.3	5.5	4.0
Gedling	0.9	1.4	15.1	8.3	18.6	3.9	6.1	3.6	10.9	8.6	12.0	6.1	4.6
Mansfield	0.9	3.0	19.0	9.0	18.6	5.1	5.4	2.4	8.1	6.5	12.2	5.3	4.5
Newark &Sher	3.1	2.0	18.0	7.8	17.7	5.3	5.6	2.2	9.9	7.7	10.8	5.2	4.7
Rushcliffe	1.6	1.2	13.3	5.6	16.2	3.9	4.4	4.4	15.3	11.7	11.0	6.1	5.2

Source: Office for National Statistics, Population Census, 2001

6.3.2 Unemployment

Table 80 shows that during the middle of the present decade unemployment rates were modest, and similar to the UK rate. In the last two years, the rate has almost doubled.

In 1999 unemployment rates were above the regional and national average in the former coalfield-industrial areas of Bolsover, Chesterfield, Ashfield, Bassetlaw and Mansfield, as well as in the cities of Derby and Nottingham. By 2007, only Chesterfield, Derby and Nottingham had rates substantially higher than the national average. Table 80 suggests that economies might have different levels of resilience. Following the onset of recession, by October 2009, Bolsover and Mansfield were again experiencing above-average unemployment. Erewash, having previously maintained the regional average, now has above-average unemployment. Below-average

unemployment levels have persisted since 1999 in the rural districts of South Derbyshire, High Peak and Derbyshire Dales as well as Rushcliffe.

Table 80 | Unemployment, 1999 to 2009

		Unemployment as % of resident working age population						Unemployed, total
Area	Rural-urban class	1999	2005	2006	2007	2008	2009	2009
Unitary authorities								
Derby	OU	3.9	2.9	3.2	2.5	3.1	5.0	7,412
Nottingham	LU	5.4	3.5	4.1	3.7	4.1	6.2	12,556
Derbyshire								
Amber Valley	SR	2.4	1.6	1.9	1.5	2.2	3.6	2,633
Bolsover	SR	3.4	2.5	2.7	2.2	2.8	4.5	2,016
Chesterfield	OU	4.4	2.9	3.2	2.6	2.9	4.8	2,943
Derbyshire Dales	R80	1.7	0.9	1.1	0.9	1.1	2.1	847
Erewash	LU	2.8	2.0	2.3	2.0	2.8	4.7	3,208
High Peak	R50	2.0	1.4	1.6	1.5	2.0	3.3	1,927
North East Derbyshire	R50	3.1	2.0	2.1	1.6	2.1	3.8	2,198
South Derbyshire	SR	1.8	1.1	1.2	0.9	1.4	2.9	1,650
Nottinghamshire								
Ashfield	OU	3.9	1.9	2.3	1.9	2.5	4.4	3,176
Bassetlaw	R50	3.6	1.9	2.0	1.6	2.1	3.5	2,390
Broxtowe	LU	2.2	1.4	1.7	1.5	1.9	3.2	2,323
Gedling	LU	2.5	1.6	1.8	1.7	2.2	3.6	2,465
Mansfield	OU	3.6	2.3	2.5	2.0	2.6	4.4	2,706
Newark and Sherwood	R50	2.3	1.4	1.6	1.3	1.6	2.8	1,913
Rushcliffe	R50	1.8	0.9	1.1	0.9	1.3	2.2	1,459
East Midlands GOR		2.7	2.0	2.3	2.0	2.4	4.1	111,598
United Kingdom		3.2	2.3	2.5	2.1	2.5	4.2	1,582,555

Source: DWP: Claimant Count, October each year. Downloaded from Nomis (https://www.nomisweb.co.uk)

Notes

Figures relate to the month of October each year.

6.3.3 Agriculture

Although Table 80 showed the relatively small role of agriculture in the economy overall, there are pockets in which it is of considerable local importance.

As expected from the variety of geology, topography, weather and soils, there is a wide variety of agricultural activity (Table 81). There are large areas of better quality of land suitable for arable production in Bolsover, South Derbyshire, Ashfield, Newark and Sherwood and Rushcliffe. Much of the rest of the land is under permanent grass and supports sheep and beef and

relatively high levels of dairy production. The least productive land is rough grazing which is concentrated in High Peak. Poor conditions also exist in part of Derbyshire Dales which also contains a substantial proportion of upland LFA farms. It is apparent from Table 82 that large farms are most prevalent in the arable areas.

Table 81 | Agricultural land use and farm type, 2007

		Land cover as % total farm area								% of farms by main farm type*		
	Area (hectares)	% tillage	% rough grazing	% wood	% cereals	% crops	% hort	% pigs &poultry	% dairy	% LFA livestock	% lowland livestock	% mixed
Derbyshire												
Amber Valley	17731	18.5	1.2	1.6	10.4	1.4	#	#	20.7	8.4	42.3	8.7
Bolsover	10146	59.6	#	1.7	49.5	11.7	#	#	5.8	0.0	33.0	#
Chesterfield	2368	61.8	#	#	54.8	0.0	#	#	16.1	0.0	29.0	#
Derbyshire Dales	64113	8.0	8.5	1.9	3.8	0.9	2.9	6.9	21.2	44.3	14.3	5.8
Erewash	5133	39.5	2.7	1.4	#	#	#	#	16.9	0.0	50.7	22.5
High Peak	41334	0.2	49.2	1.4	#	#	1.8	#	10.1	77.5	0.0	3.2
North East Derbyshire	18599	27.9	6.0	3.1	16.5	3.5	4.4	6.5	12.6	20.9	19.5	16.0
South Derbyshire	25504	42.0	1.1	4.1	24.6	5.6	3.3	6.1	14.7	0.0	36.5	9.1
Nottinghamshire												
Ashfield	3748	43.6	#	1.2	27.5	#	#	#	#	0.0	53.8	18.8
Bassetlaw	47558	72.4	0.6	2.2	42.5	20.2	#	#	#	0.0	22.6	8.4
Broxtowe	3981	47.3	1.4	2.3	35.9	#	#	#	#	0.0	51.3	12.8
Gedling	6219	59.9	0.5	2.9	39.5	#	#	#	0.0	0.0	37.2	23.3
Mansfield	2667	70.7	#	1.0	30.0	#	#	#	0.0	0.0	40.0	30.0
Newark and Sherwood	49798	69.1	0.4	3.1	42.7	13.1	5.8	9.0	3.9	0.0	17.0	8.4
Rushcliffe	33172	63.0	0.2	1.3	47.5	7.3	5.6	#	#	0.0	28.4	8.8
England	9291357	41.5	6.0	3.3	20.4	7.4	7.7	7.5	9.2	11.3	28.4	8.0
East Midlands	1229750	59.6	2.7	2.1	32.1	10.9	5.8	7.0	6.4	7.1	22.7	7.8

Source: Defra (2007). June survey of agriculture and horticulture. Download from: https://statistics.defra.gov.uk/esg/junesurvey/june_survey.htm

Notes

# indicates nil or negligible.

* omits the category 'other', which includes a high proportion of very small farms.

There has been a long term and apparently inexorable decline in the number of people working in agriculture, with farmers and farm managers switching from full-time to part-time and the substitution of seasonal labour for regular labour. Table 82 illustrates the small numbers currently working on farms, with approximately equal numbers of full and part-timers. Note these figures exclude employment arising from diversified activities.

Table 82 | Agriculture: farm size, tenure and labour

	% area rented	% area >=100 hectares	Total regular FT per farm	Total regular PT per farm	Total regular L per farm	Total labour*
Derbyshire						
Amber Valley	37.4	6.7	0.6	0.8	1.5	940
Bolsover	43.7	14.4	#	#	#	424
Chesterfield	62.2	8.7	#	#	#	109
Derbyshire Dales	34.7	11.7	0.7	0.9	1.6	2692
Erewash	31.2	5.7	#	#	#	276
High Peak	62.7	10.9	#	#	#	1096
North East Derbyshire	28.3	4.4	0.6	0.9	1.5	1020
South Derbyshire	41.2	13.2	0.8	0.9	1.7	1050
Nottinghamshire						
Ashfield	37.2	#	#	#	#	252
Bassetlaw	36.5	24.7	1.1	0.9	2.0	1433
Broxtowe	61.9	12.9	#	#	#	152
Gedling	32.7	11.6	#	#	#	348
Mansfield	43.8	#	#	#	#	152
Newark and Sherwood	38.6	20.4	#	#	#	1564
Rushcliffe	40.3	21.2	0.9	1.0	1.9	1031
East Midlands	36.1	18.8	0.9	1.0	1.9	39159
England	34.8	15.4	0.9	0.9	1.8	353061

Source: Defra (2007). June survey of agriculture and horticulture. Download from: https://statistics.defra.gov.uk/esg/junesurvey/june_survey.htm

Notes

FT denotes full-time farmers, paid managers and regular labour.

PT denotes part-time farmers, paid managers and regular labour.

# indicates unable to calculate due to small raw numbers

Table 83 provides data from the Farm Business Survey. Farmers are able to continue farming in the short run if their cash flow is positive, and this is illustrated by positive farm business income. However the very small financial reward received by livestock farmers indicates that the situation for them is dire. An alternative measure of farm income, *Management and Investment Income*, which notionally pays farmers and spouses for their labour, and shows a negative return on the capital which livestock farmers have invested in livestock, crops and machinery. This suggested poor long term prospects for continuing farming.

Table 83 | Farm income by farm type, East Midlands

	Farm business income (£)					Mangagement and investment income (£)				
Farm type	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Cereals	46,245	25,087	27,387	37,863	67,795	26,625	3,407	-434	7,401	35,192
Dairy	32,774	40,474	41,901	32,922	47,598	7,475	9,437	3,877	-3,939	11,471
General cropping	64,808	37,136	50,413	74,678	71,309	40,420	7,572	18,987	46,672	36,769
LFA livestock	12,141	15,322	13,884	9,269	10,997	-5,575	-3,186	-11,131	-16,031	-17,359
Lowland livestock	8,603	9,688	13,767	9,761	6,096	-3,741	-7,318	-7,432	-5,492	-16,406

Source: Defra, Farm Business Survey (Download from http://www.farmbusinesssurvey.co.uk/regional/index.asp)

Definitions

1. Farm business income represents the financial return to all unpaid labour (farmers and spouses, other partners/directors and their spouses, family workers) and on all their capital invested in the farm business, including land and buildings.

2. Management and investment income (MII) is the return to the farmer and spouse for their management and tenant-type capital of the business. It is net of the value of the farmer and spouse's own manual labour, the value of which are imputed

The LFA farms are mostly located in the Peak District National Park. With livestock production making heavy losses, such farms are highly dependent on support payments (Single Farm Payment and agri-environment schemes) as well as diversification activities to survive. Lowland livestock farms are also dependent on these additional income source (FBS, 2009). Tenant farmers are disadvantaged relative to freeholders in this respect due to the lack of capital assets against which they may borrow in order to start a new enterprise, and because the conditions of tenancy agreements may restrict the activities available to them.

6.3.4 Tourism

The Regional Spatial Strategy recognises tourism as a major economic driver in the East Midlands, and estimates that it contributes 3.5% of regional GDP (ODPM, 2005). In the study area there are two internationally recognised attractions: Sherwood Forest with its connection to the Robin Hood legend, and the Peak District National Park. Additionally, World Heritage Status has fairly recently been awarded to The Derwent Valley Mills sites. These are attractive riverside sites whose significance lies in their critical place in the history of industrial textile manufacturing. The National Forest is a strong regional attraction. Other areas, notably the White Peak area around Ashbourne experience very high visitor numbers, yet lie outside the National Park boundary.

The impact of tourism in Derbyshire and Nottinghamshire has been estimated using the STEAM[25] model, and results are shown in Table 84 (East Midlands Tourism, 2009).

[25] STEAM is the Scarborough Tourism Economic Activity Monitor, operated and owned by Global Tourism Solutions (UK) Ltd.

Table 84 | Tourism, including day trips and staying visitors, estimated by STEAM model.

	2003	2004	2005	2006	2007	2008
Peak District and Derbyshire						
Economic impact of tourism	£1.216bn	£1.254bn	£1.286bn	£1.33bn	£1.404bn	£142.bn
Total tourist numbers	36.575m	36.25m	35.827m	35.736m	36.074m	35.27m
Number of staying visitor trips, both overseas and domestic	3.19m	3.47m	3.48m	3.52m	3.61m	3.648m
Number of staying visitor nights, both overseas and domestic	9.05m	9.5m	9.67m	9.84m	9.95m	9.578m
Spend by staying visitors, both overseas and domestic	£397.02 m	£428.51m	£445.99 m	£473.41m	£504.4m	£511.8m
Number of day visitor trips	33.39m	32.78m	32.35m	32.21m	32.46m	31.62m
Spend by day visitors	£818.832 m	£825.18m	£839.972 m	£856.429 m	£899.657 m	£912.2m
Employment supported by tourism expenditure - full time equivalents*	24,510	24,316	24,015	23,859	24,568	24,336
Nottinghamshire						
Economic impact of tourism	£1.188bn	£1.225bn	£1.342bn	£1.378bn	£1.437bn	£1.388bn
Total tourist numbers	36.53m	36.934m	39.21m	38.421m	38.135m	35.446m
Number of staying visitor trips, both overseas and domestic	3.25m	3.14m	3.36m	3.36m	3.47m	3.348m
Number of staying visitor nights, both overseas and domestic	7.86m	7.72m	8.08m	8.47m	8.76m	8.492m
Spend by staying visitors, both overseas and domestic	£371.3m	£374.66 m	£411.25m	£445.83 m	£475.89 m	£462.16m
Number of day visitor trips	33.28m	33.8m	35.85m	35.06m	34.66m	32.09m
Spend by day visitors	£816.209 m	£850.732 m	£930.959 m	£932.111 m	£960.69 m	£925.76 m
Employment supported by tourism expenditure - full time equivalents*	21,622	21,576	22,547	22,132	22,476	21,362

Source: East Midlands Tourism. (Download from http://eastmidlandstourism.co.uk/text.asp?PageId=123)

*Full time equivalents (FTEs) Includes people involved in seasonal and part time work, with figures worked out to the equivalent full time value

6.3.5 Forestry

Woodland covers approximately 8 percent of the land area of Nottinghamshire and 7% of Derbyshire. Approximately one third of woodland is owned or managed by the Forestry Commission (the state forestry organisation). Table 85 shows the distribution by type between districts, with a greater proportion of broadleaves in Derbyshire than Nottinghamshire. This is primarily due the considerable planting (of conifers) by the Forestry Commission (the state forestry organisation) particularly in the 1950s.

Records of planting reflect Forestry Commission activities and the incentives offered for afforestation in the form of planting grants and tax breaks. Nottinghamshire shows virtually no conifer planting before the 1920s, followed by decades of planting, peaking in the1950s, and declining in the

1980s and 1990s. Broadleaved plantings have been much more modest, and show peaks following the 2 World Wars. By the 1990s incentives were targeted nationally at broadleaved planting. By contrast, apart from the 1960s, 70s and 80s, Derbyshire has seen a greater area of broadleaves planted than conifers.

The Regional Forestry Framework for the East Midlands sets out a vision in which forestry contributes to the health and diversity of the environment, to the vitality of the economy, and the quality of life of people who live and work in the region (FC, 2006). It sets out both direct and instrumental economic objectives. These are firstly, to support business activity in key areas of environmental management, leisure and tourism, renewable energy, added value wood products and processing to improve the security of the economic sustainability of woodland; and second to promote a wider acknowledgement and support for the role that trees and woodlands play in assisting regeneration and creation of an attractive setting for inward investment and growth.

Table 85 | Forestry: type and area of woodland

	Area in hectares								
	Broadleaved	Coniferous	Felled	Ground prepared for planting	Mixed	Shrub	Young trees	Grand Total	% broadleaved
Derbyshire	9,608.6	2,952.4	178.0	5.1	2,400.5	117.9	1,388.7	16,651.2	57.7
Amber Valley	1,208.2	69.2	2.8		292.3		46.2	1,618.7	74.6
Bolsover	839.2	71.4	38.2		99.1	5.9	203.9	1,257.8	66.7
Chesterfield	203.5	13.1	0.9		16.1	9.5	39.1	282.1	72.1
Derbyshire Dales	3,480.4	1,023.4	62.3	5.1	1,030.4	45.0	229.2	5,875.8	59.2
Erewash	190.8	3.7	1.9		50.6	4.4	22.8	274.2	69.6
High Peak	1,531.6	1,251.5	63.7		277.6	20.4	77.0	3,221.9	47.5
North East Derbyshire	1,477.2	292.3	5.6		273.6	22.3	40.8	2,111.9	69.9
South Derbyshire	677.6	227.9	2.4		360.8	10.3	729.7	2,008.8	33.7
Nottinghamshire	7,629.1	6,025.0	511.3	0.0	1,208.0	36.9	1,488.2	16,898.5	45.1
Ashfield	402.9	620.7	37.6		41.3	1.6	217.7	1,321.8	30.5
Bassetlaw	2,760.6	1,770.9	156.0		515.1	20.5	371.0	5,594.0	49.3
Broxtowe	249.5	49.2	10.5		42.0		15.3	366.5	68.1
Gedling	733.8	363.0	44.3		126.9	2.4	92.7	1,363.1	53.8
Mansfield	392.2	354.2	13.5		8.3		126.2	894.4	43.9
Newark and Sherwood	2,299.5	2,731.4	213.5		355.0	9.3	521.5	6,130.2	37.5
Rushcliffe	790.7	135.6	36.0		119.5	3.1	143.8	1,228.6	64.4
Grand Total	17,237.7	8,977.5	689.3	5.1	3,608.5	154.8	2,876.9	33,549.7	51.4

Source: Forestry Commission (extracted from the National Inventory of Woodland and Trees)

Notes:

Reference date, 31 March 2002

Consists of woodland of 2ha and larger

Sherwood Forest is an important visitor attraction to the area, attracting tourists from outside the region who contribute to the local economy through their associated expenditure including accommodation. The National Forest, in South Derbyshire and adjacent Leicestershire, results from a major period of grant-aided tree planting in the 1980s and 1990s and receives substantial volumes of local visitors. There are significant areas of ancient woodland including Sherwood Forest and the dales woodland which are of high biodiversity value.

6.4 Transport

As a whole, the study area has a well developed transport infrastructure and is relatively easy to access. East Midlands Airport, a medium-sized international airport offering mostly European destinations, lies close to the cities of Derby and Nottingham and is close to the major north-south motorway, the M1. The new and (as yet) small Robin Hood airport is near Doncaster, just beyond the study area's north east border. Both Manchester and Birmingham are fairly accessible and have major international airports, which offer a much large selection of destinations including long-haul flights.

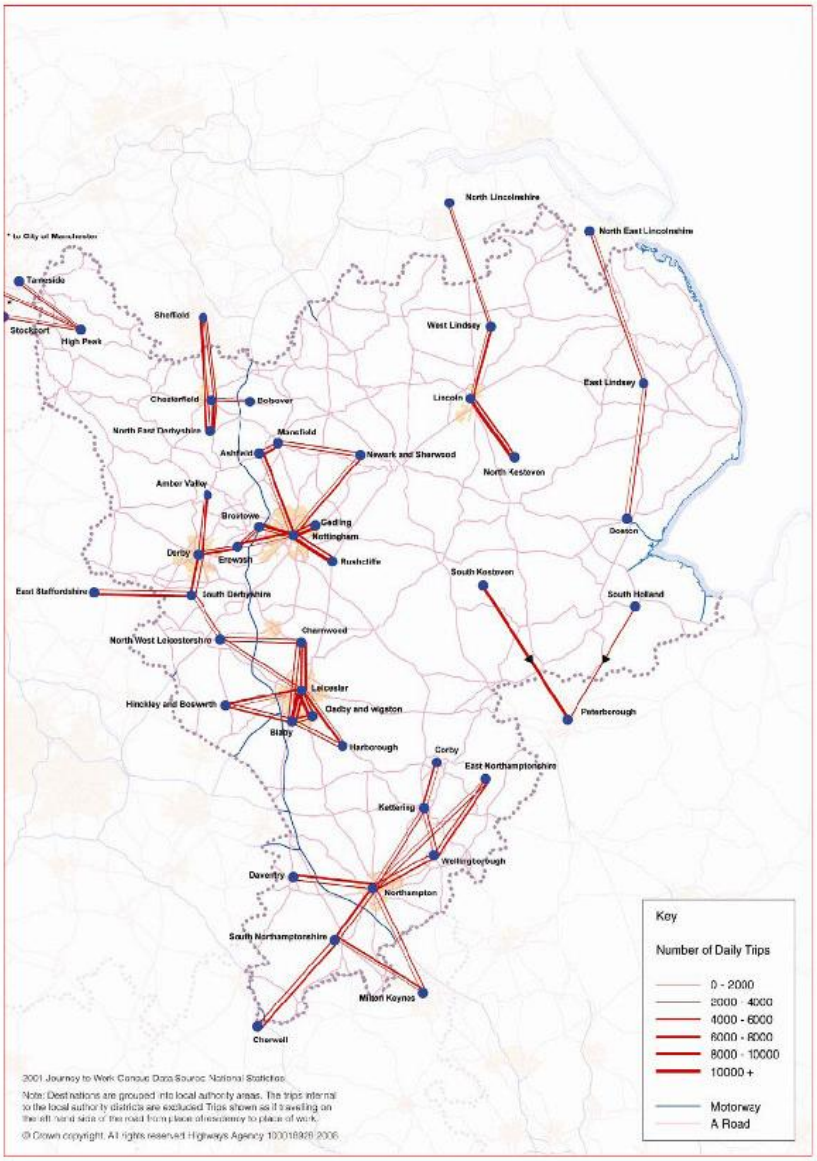
The eastern and central parts of the study area encompass both major road and rail routes. There are 2 motorways, the M1 and the A1 which run from north to south through the study area. In the south are fast roads to the west (A50) and south west (A42 and A38). Derby is an important railway centre where the north-south line between London and Sheffield/Leeds meets the main line between the south-west and north-east of England and also the east-west line running to Lincoln and Stoke-on-Trent. The east of the study area is served by the fast East Coast mainline which runs from London to Edinburgh and stops at Newark.

However, travel within the study area is mostly by slower trunk roads (single carriageway) with an especially poor road network in the upland areas in N.W Derbyshire. Although well-served with major rail connections, there are few stations, or local railway lines. Exceptions are a line going Buxton througyh the Peak District into Manchester, a line between Matlock and Derby, and a new railway station serving the East Midlands airport.

It is estimated that 70% of employed people in the East Midlands drive to work. Figure 62 shows the main commuter flows. The Regional Transport Strategy for the East Midlands attempts to address these issues, and identifies 4 main aims:

- to reduce the need to travel, especially by car and traffic growth
- to promote a 'step change' in the level of public transport
- to make better use of existing networks through better management
- to only deliver highway capacity when all other measures have been exhausted (ODPM, 2005)

Figure 62 | Journey to work movements



Source: Highways Agency Regional Network Report for East Midlands (2008). Reproduced in Atkins (2009)

6.5 Environment

The study area is highly diverse, and 13 major landscape types are described in the Countryside Character Maps for Derbyshire and Nottinghamshire (Countryside Agency,1999). The proportion of environmentally significant sites in the East Midlands region is relatively small, and is biased downwards by the prevalence of intensive farming activities in the region's lowland areas, particularly Lincolnshire. Biodiversity in the region has been declining as habitats are lost or deteriorate due to fragmentation. The more intensively

farmed areas of Nottinghamshire are likely to have suffered this fate. In the uplands, recovery programmes are in place to improve the condition of the peatlands, which are internationally important habitats.

The most environmentally significant sites are designated as Natura 2000 sites[26], and the distribution of these by local authority is shown in Table 86. The sites are designated predominantly on the grounds of their vegetation, but also include geological and water-based sites. The very substantial areas in High Peak and Derbyshire Dales lie in the Peak District National Park. Here it is necessary to maintain traditional livestock farming to maintain the landscape. Yet such farms are financially marginal, and the condition of the landscape and biodiversity are closely connected to agricultural policy and payments made to farmers to maintain their activities.

Table 86 | Natura 2000 areas

Area	Area (ha)
Unitary authorities	
Derby	4
Nottingham	8
Derbyshire Dales	
Amber Valley	236
Bolsover	40
Derbyshire Dales	6,138
Erewash	7
High Peak	21,532
North East Derbyshire	1,717
South Derbyshire	157
Nottinghamshire	
Ashfield	91
Bassetlaw	1,318
Broxtowe	257
Gedling	39
Mansfield	164
Newark and Sherwood	1,383
Rushcliffe	63
Grand Total	33,155

Source: Derived from Joint Nature Conservation Committee data

Conflicts between built development and the environment are common. Development control is especially tight in the National Park, and where development is permitted it must be appropriate to the area in terms of design and materials. Yet new economic activity is essential, so some development must be permitted. Limestone quarrying and mineral extraction also create much-needed jobs in upland areas but disputes arise as proposals

[26] Almost all Natura 2000 sites are designated nationally as Sites of Special Scientific Interest (SSSI), and vice versa.

are often contrary to the wishes of residents and tourists. In the lowland areas there will be particular pressure for new housing round the cities.

6.6 References

Atkins Transport Planning (2009) East Midlands Partial Review. A statement of transport conditions and issues. Report to the East Midlands Regional Assembly. Download at: http://www.emra.gov.uk/files/partial-review-statement-of-transport-conditions.pdf

Bibby P. and Shepherd J. (2005). Developing a New Classification of Urban and Rural Areas for Policy Purposes. Department for Environment, Food and Rural Affairs. Download at: http://www.defra.gov.uk/evidence/statistics/rural/documents/rural-defn/rural-urban-method.pdf

Countryside Agency (1999). Countryside Character. Volume 4: East Midlands. Gloucester, Countryside Agency.

Farm Business Survey (2009). East Midlands Commentary on 2007. On-line at: http://www.farmbusinesssurvey.co.uk/regional/index.asp

Forestry Commission (2006). Space4trees East Midlands. The Regional Forestry Framework for the East Midlands.

HM Government. (1995). Environment Act 1995. London: Office of Public Information.

Office of the Deputy Prime Minister (2005). Regional Spatial Strategy for the East Midlands (RSS8). London: The Stationary Office. Download at: http://www.gos.gov.uk/497296/docs/229865/229886

7 ALTERNATIVE SCENARIOS

7.1 Introduction

This chapter gives an overview over the scenario approach and used in the PRIMA project and is the starting point for the development and validation of scenarios on regional and national level inWP5.

Diana Kopeva

On the basis of analysis of current EU policies and their implementation on regional level, alternative scenarios will be developed. They will focus on policy changes and possible results/outputs of EU policy implementation on regional and local (LAU) level. Alternative scenarios are sensitive to policy changes. They could be taken as a standard measurement or fact against which downscaling and upscaling results will be compared (in WP 3 and WP4). All the scenarios are supposed to be modelled in terms of impacts by aggregated approaches. Alternative scenarios, developed under WP1, will be verified and improved in relation with other WPs, during the project duration. They will interact with WP 2, WP 4 and WP 5 all along the project. Alternative scenarios are developed on the basis of analysis and assessment of implementation of EU policies in agriculture, forestry, environment and tourism (D1.1).

7.2 What is scenario and scenario planning?

The word scenario is derived from Italian and means "*that which is pinned to the scenery"***.** The content of "scenario" is a synthetic description of an event or series of actions and events. A scenario is also an account or synopsis of a projected course of actions, events or situations.

According to the **`Forecasting Dictionary`**, a scenario is "a story about what happened in the future". The complex definition of scenario is given in the *Millenium Ecosystem Assessment (2005) : 'A scenario is a plausible, simplified, synthetic description of how the future of a system might develop, based on a coherent and internally consistent set of assumptions about key driving forces and relationships among key variables.'*

The concept is first used by Herman Kahn and co. (RAND Corp. 1950s, thermonuclear 'scenarios')'*... a hypothetical sequence of events constructed for the purpose of focusing attention on causal processes and decision points.*

A scenario describes a possible future. The real value of scenarios comes from the deeper understanding of the forces driving future change that emerges during the process of creating scenarios.

Scenario planning is a method for learning about the future by *understanding the nature and impact of the most uncertain and important driving forces affecting our future*. A group process which encourages knowledge exchange and development of mutual deeper understanding of central issues important to the future of an organization

As a methodology, scenario development has been used by the military since the 1940s, but only in the last 40 years, in the face of increasing uncertainty and complexity, have corporations and other large global organizations begun to apply sophisticated scenario processes. Scenario development is an exploratory tool, that has been used in a variety of contexts, e.g., Shell Group has housed a Scenarios research team for over thirty years, RA members along with others developed a set of `scenarios for the Northern Highlands Lake District` in Wisconsin to explore alternative visions for the future of the area, and more recently the Millenium Ecosystem Assessment explored `four scenarios` based on different approaches for managing ecosystem services under growing human demand. Scenario development is used in policy planning, system (organisational) development and generally, when systems wish to test strategies against uncertain future developments..

7.3 Process of scenario planning

7.3.1 Scenario planning steps

The Process of scenario planning goes through following steps:

- Gather background information
- Determine key driving forces
  - High level of uncertainty
  - High level of influence
- Identify a small number of scenarios
  - Inductive – “emblematic events” and “the official future
  - Deductive – building a scenario matrix
- Develop scenarios (beyond the two most important driving forces)
  - Include other driving forces
  - Systems thinking
  - Narrative development
  - Characters, catchy names, etc.

7.3.2 Criteria of usefulness for scenarios

Scenarios have to response to a set of criteria, to be classified as useful. They have to:

- clarify the future
- identify future problems
- be relevant to the system’s current scope of activities and interactions
- identify what needs to be changed
- be internally consistent and logical

7.4 PRIMA alternative scenarios

Scenario development is a process of elaboration and combination of complex possible future events (policies and their possible outcomes) by considering stakeholders behaviour. The scenario development is designed to allow

improved decision-making by allowing consideration of outcomes and their implications. PRIMA project aims to provide baselines for the design of scenarios on multifunctional land use. Scenarios derived from the review and assessment of EU policies in agriculture, forestry, tourism and environment. The scenarios are entirely qualitative in nature. They present a number of plausible, internally coherent, illustrations of the future of Europe to which no probability is attached. Scenarios are not, and cannot be, either a projection of the future, or a prediction of the likelihood of a certain outcome. Scenarios can allow the policy makers to accept and understand change, and so be able to shape the system on national and regional level. This approach may therefore help in seizing new opportunities ahead as well as avoiding undesirable effects of misconceived action. Scenarios will be used as a starting point in modeling in WP3, WP4 and WP5.

Scenario development follows next steps

- Trajectories of change of EU policies – identification of driving forces and assessment of their possible impact
- Time period – next EU planning period 2014-2020
- Combination of EU policies – on national and regional level different policies has impact. Depends on the strategic goals of the region it is possible one or two policies to be prioritized (i.e. environment, agriculture or combination of both of them)

7.4.1 Scenario A – Baseline scenario

The baseline scenario is defined to analyse a base situation without additional intervention and different alternative options for intervention, i.e. the introduction of new measures in agriculture, forestry, tourism, and environment. The baseline scenario is a projection of the status quo or "business as usual", including the existing framework in terms of agricultural and environmental policies, technological and market conditions, and the projection of technological trends and of decided policy changes to be implemented until the target year 2013. Baseline scenario is kind an autonomous trend (current policies, trend of economy and demography) observed at national and regional level. Assumptions are that no changes at policy level and policy implementation in the future. Existing priorities in agriculture, forestry, tourism and environment on multifunctional land use will not be change in the next planning period (2014- 2020). On regional level rural development policy will consist of variety of areas of possible intervention – construction of new and reconstruction of existing infrastructure; technological modernization of farms; farm enlargement through stimulation of farms with market potential; surmount land fragmentation (with special focus on former CEECs); stimulation of bio-agriculture; preservation of biodiversity; keeping agro-environmental measures/payments. Objectives of the environmental policy will continue to be water, air and soil preservation, biodiversity and NATURA 2000. Measures will be in the area of environmental infrastructure; environmental "clean-up", water management, energy/efficiency/renewable (CO_2 reduction); biodiversity/NATURA 2000; environmental capacity building, natural risk prevention. Cohesion policy will not be changed and for the next planning period priorities will be convergence, regional competitiveness, employment, territorial cooperation. Having in mind these assumptions two groups of driving forces are defined with impact on the sustainability–external and internal. Internal driving forces (IDF) are grouped in five groups: political,

economic, social, technological, environment. Each group consists of different number of driving forces:

- **Political** – EU literacy, Regional policies focused on multifunctionality
- **Economic** – Investments, Business climate/environment, Economy of scale (of individual beneficiaries - companies, firms, farms, etc.), Prices, Gross Value Added (GVA)
- **Technological** – Innovations and IT
- **Social** – Migration, Dependency ratio, Age structure, Implementation of participatory approach
- **Environment** – Status quo of air, Status quo of water, Status quo of soil, Biodiversity

Complex impact of IDF is given on Figure 63.

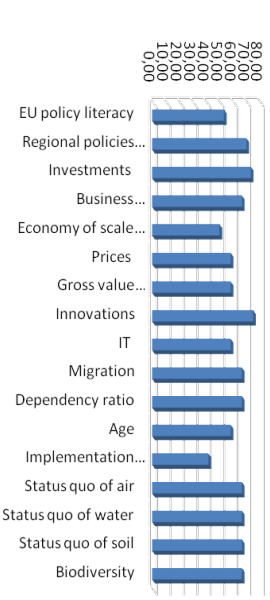


Figure 63 | Scenario A: Complex impact of IDF

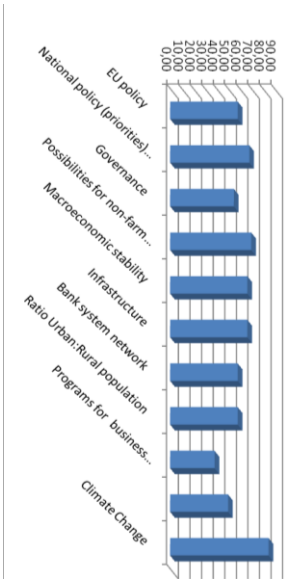


Figure 64 | Scenario A: Complex impact of EDF

External driving forces (EDF) are grouped in four groups:

- **Political** – EU policy, National policy (priorities) in agriculture, forestry, tourism and environment, Governance
- **Economic** - Possibilities for non-farm economic activities, Macroeconomic stability, Infrastructure, Bank system network
- **Social** - Ratio Urban:Rural population, Programs for business start-up for unemployed
- **Environment** - Shift to alternative energy sources, Climate changes

Complex impact of EDF is illustrated on Figure 64.

Combined impact of external and internal driving forces is given on Figure 65. The highest impacts have environment DFs and the lowest – technological. The impact of economic and political DFs is approximately similar.

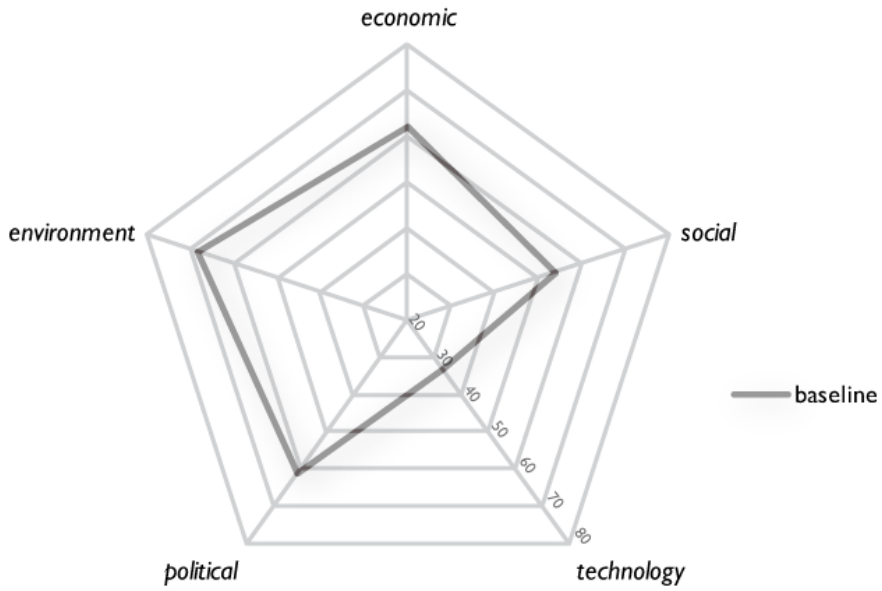


Figure 65 | Scenario A: Combined impact of driving forces

Scenario A assumes that the driving forces and their impact will remain unchanged during next planning period and all policies will have approximately equal implementation on regional level.

7.4.2 Scenario B – 'Environment' scenario

This scenario is built on the assumption that measures for landscape, natural and cultural heritage preservation will be leading. Having in mind importance of environment issue in global aspect, it is assumed that environment policy will be more closely linked to rural development and more specifically to multifunctional land use activities. Thus, changes in the policy priorities on EU level are expected. The expectations are that these changes will strengthen and widen priorities and measures of environment policy. This will result in strengthening the impact of internal and external driving forces. New measures will be introduced in the area of environmental infrastructure; environmental "clean-up", water management, energy/efficiency/renewable (CO_2 reduction); biodiversity/NATURA 2000; environmental capacity building, natural risk prevention. In this scenario the focus is environment policy, while the rest of the policies support its implementation. Objectives and measures in other EU policies (Cohesion, Rural Development) are subordinated directly or indirectly to the environment policy. This scenario is also developed on qualitative assessment of possible impact of driving forces (external and internal). Complex impact of EDfs and IDFs is given on figure 66 and figure 67.

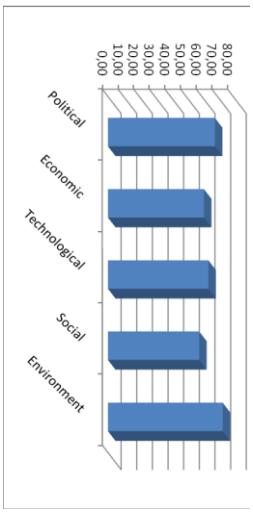


Figure 66 | Scenario B: Complex impact of IDF

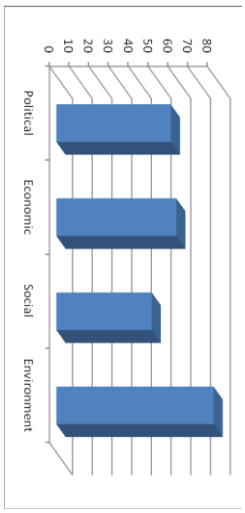


Figure 67 | Scenario B: Complex impact of EDFs

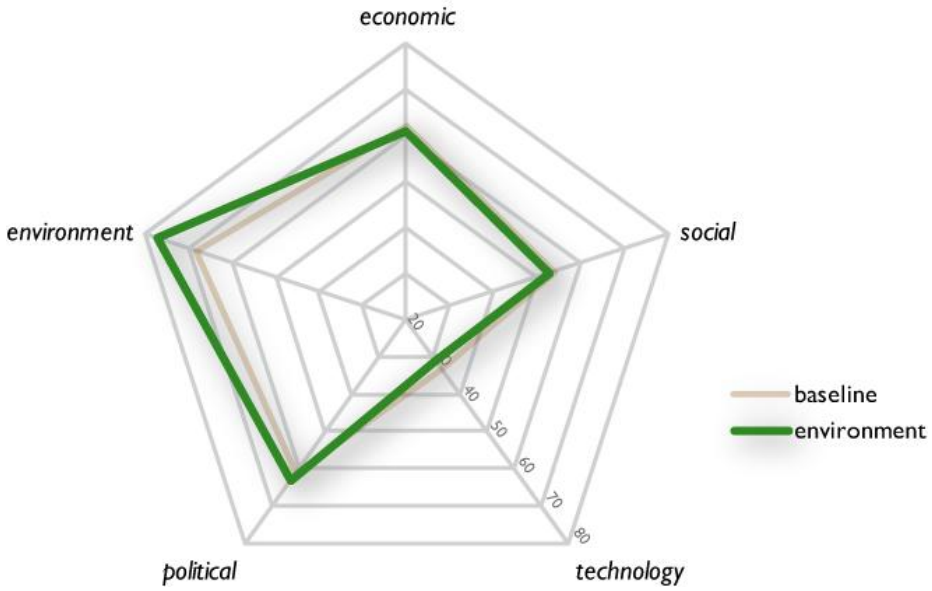


Figure 68 | Scenario B: Combined Impact of DFs

This scenario assumes that a major role will be given to environment driving forces (Figure 68).

7.4.3 Scenario C – 'Rural development' scenario

Rural Development Policy will have a leading role in the next planning period (2014-2020). Sustainable rural development will be achieved through: increasing competitiveness of agriculture and forestry; improving land management; implementing complex measures for environment protection and preservation, wider rural economy through new agricultural and non-agricultural activities; increasing the role of local initiative groups in regional

and local decision making process. This scenario takes out rural development as a priority and assumes possible changes in RD Policy. In this scenario economic and environment driving forces will be stimulated for deeper impact. Complex impact of EDFs and IDFs in Rural development scenario is given on figures 69 -70.

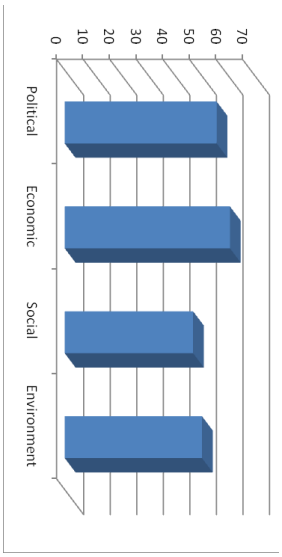


Figure 69 | Scenario C: Complex impact of EDFs

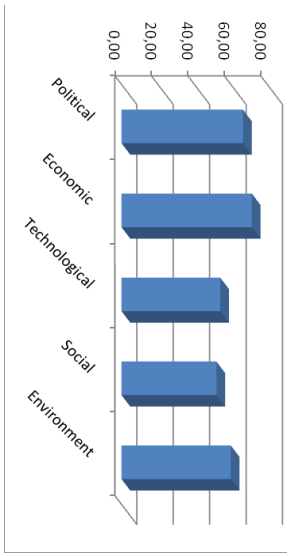


Figure 70 | Scenario C: Complex impact of IDFs

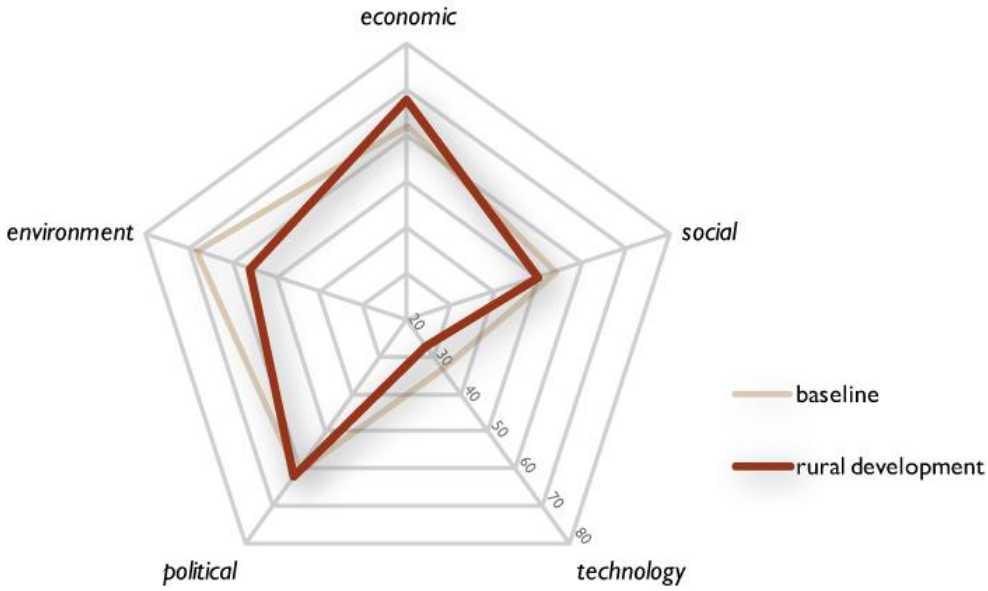


Figure 71 | Scenario C: Combined impact of DFs

7.4.4 Scenario D – 'Infrastructure & Competitiveness' scenario

This scenario assumes widened and enriched policy measures in Cohesion Policy. This scenario is developed on the assumption that Cohesion policy will

have leading role on national and regional level. New objectives and measures will be elaborated aiming increasing of competitiveness of SMEs, development of favorable business conditions, improving quality of human resources, increasing capacity of local/regional branch organizations, construction of relevant new infrastructure and restoration of the existing. Thus, the Scenario D focuses on improvement of business environment, establishment of business opportunities and favorable environment for business initiatives linked to multifunctional land use on regional level. Assessment of impact of internal and external driving forces is given on figures 72-74.

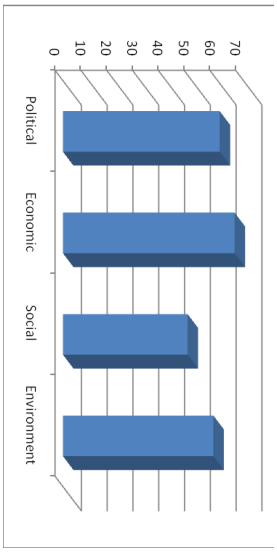


Figure 72 | Scenario D: Complex impact of EDFs

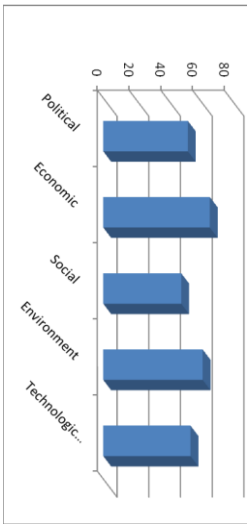


Figure 73 | Scenario D: Complex impact of IDFs

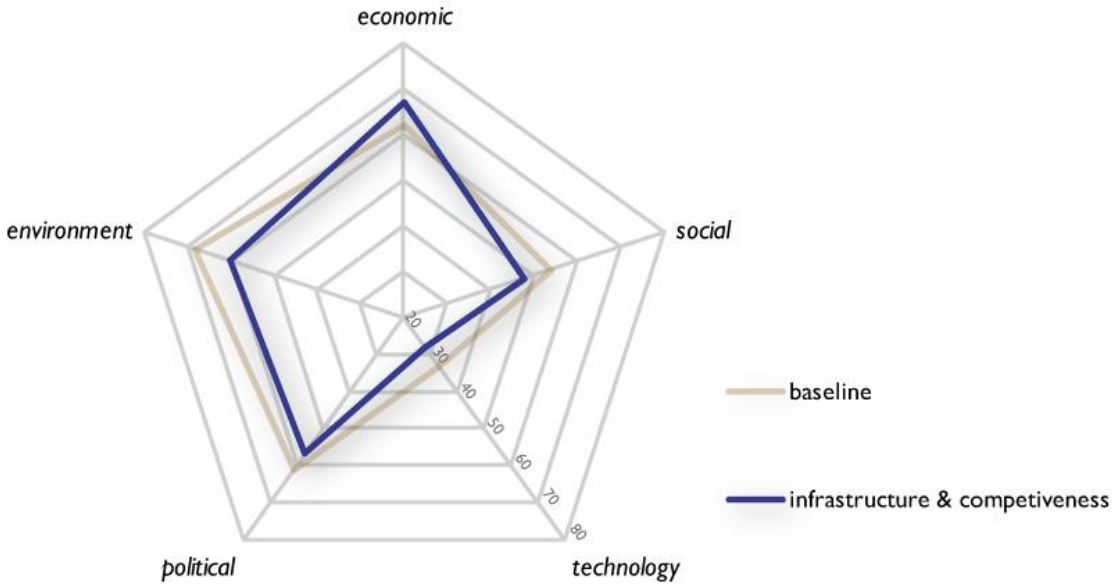


Figure 74 | Scenario D: Combined impact of DFs

7.5 References

1. Eriksson, T. and Ritchey, T. Scenario Development using Computerised Morphological Analysis. Adapted from Papers Presented at the Cornwallis and Winchester International OR Conferences. England, 2002.
2. Exploring Sustainable Development. WBCSD Global Scenarios 2000 - 2050 Summary Brochure.
3. Harris, G., Schwartz, P. The Effective Use of Scenario Analysis to Support R&D. GBN. 2002
4. Osterburg, B., Runge, T., Schmidt, T. Report on impact scenarios: Definition of scenarios for the economic analysis. Deliverable7.2 Water Resources Management in Cooperation with Agriculture (WAgriCo) LIFE05 ENV/D000182
5. "Scenarios and Acceptance of Forecasts," W. Larry Gregory and Anne Duran, Department of Psychology, New Mexico State University, pp. 519-541
   http://www.forecastingprinciples.com/abstracts/scenario.html
6. Rajalahti, R. , Kees van der Heijden, Janssen, W., Pehu, E. Scenario Planning to Guide Long-Term Investments in Agricultural Science and Technology Theory and Practice from a Case Study on India.The World Bank. Agriculture and Rural Development Discussion Paper No 29. 2006.
7. Bertrand, Gilles (coord.), Anna Michalski, Lucio R. Pench. Scenarios Europe 2010. Five possible futures for Europe. European Commission, Forward Studies Unit, 1999.