BOARD OF THE LODZKIE REGION

DEVELOPMENT STRATEGY FOR THE LODZKIE REGION 2020

LODZKIE

2020

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FOR THE LODZKIE REGION 2020

Lodzkie Region, Marshal's Office of the Lodzkie Region

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THE MARSHAL'S OFFICE OF THE LODZKIE REGION

Contents:

I. INTRODUCTION

The development strategy for the region is the local government's most important document defining the development vision, targets as well as main ways of their achievement from the point of view of the prevailing conditioning. In the development policy implementation system **it is the local government authorities' most important course of action.**

"Development Strategy for the Lodzkie Region for the years 2007-2020", adopted by the Regional Parliament of the Lodzkie Region in January 2006 intended focusing the pro-development actions in 14 priority areas grouped in 3 spheres:

- in the social sphere: knowledge and competence, quality of life, social policy, civil society,
- in the economic sphere: accessibility, economic base, information society, rural areas, labour market, image,
- in the functional and spatial sphere: settlement system, spatial order, regional identity, environment protection.

Thanks to implementing the available financial means, both national as well as foreign, it was possible e.g. to improve the situation in the area of communications and infrastructural accessibility of the region, development of a modern economic base as well as increasing the potential for creating, diffusion and innovation absorption. It has become a basis for creating an efficient labour market and preventing unemployment as well as has influenced the increase of competitiveness of the region at the national level.

Main actions aimed directly at the rural areas have been of a significant pro-development importance, e.g.: improving technical equipment of the countryside and farms, supporting development of agricultural production, agricultural-food industry as well stimulating non-agricultural activity and restructuring processes of rural areas. They have influenced decreasing the diversification and equalling development chances in the region as well as have enabled an effective inclusion of the rural areas in the regional development processes.

Actions undertaken in the social sphere, e.g. in the area of education, health care and social assistance, culture, sport, tourism and recreation as well as developing civil society and increasing social integration have contributed to a growth of education level of the region's inhabitants, increasing life quality as well as decreasing the scale of social exclusion and increasing the level of social activity.

In the functional and spatial sphere mainly actions concerning e.g. environment protection have been carried out. An improvement of the Lodzkie Region's situation has been noted most of all in the area of water-sewage and waste disposal management which has contributed to an improvement of the region inhabitants' life conditions.

In the "Development Strategy..." a significant role has been attributed to a regional identity. As a result of activities undertaken, e.g. in the area of historic urban systems and historic buildings restoration, supporting activity of institutions fulfilling cultural functions as well as institutions of science, various expressions of cultural life as well as organization and regionalist movements promoting regional cultural identity, the level of inhabitants' identification with the region has increased.

Since 2006 there has been a dynamization of changes in the social, economic and spatial sphere in the Lodzkie Region. At the same time, at the national and European level new formal-legal conditioning has appeared which has had a significant influence on strategic documents prepared at the regional level. Another period of programming

the cohesion policy (2014 – 2020) and new ways of financing require a new look at the region, basis of its competitiveness and appeal.

The Lodzkie Region is facing new development challenges and the coming years will be crucial for the future development of the area and its place in Poland and the EU. The main aim is a permanent and sustainable development of the region based on an optimum and effective use of internal development potential of the area in accordance with external conditioning. The main pillar of the development is advanced economy of knowledge and innovation. A strong, modern economy as well as an attractive labour market is necessary to stop and reverse unfavourable demographic trends. It has been assumed that by 2020 a technological restructuring of economy will have taken place in the Lodzkie Region: in the key development-wise industries of the area modern technologies will have been implemented, intelligent economic specializations enabling to build permanent competitive advantages will have taken place, development of cooperation networks will have taken place and a research-development sector will be responding to the needs of economy. At the same time an increase of importance of Lodz as a thriving academic centre aimed at strengthening regional potential will take place. Transformations in the economic sphere will be accompanied by changes in the social sphere. Development of social capital will take place as well as an increase of the regional identity, the inhabitants of the region will constitute an active civil society. The socio-economic changes taking place will influence reducing social inequalities. The area of Lodz will at the same time become a friendly and attractive living place. Development of the sphere of public services, improvement of the environment will take place, an efficient system of transport and infrastructural connections systems will be implemented. Processes of degraded areas rehabilitation will be continued, high-quality public spaces will be provided, bigger attention to spatial order will be noticeable. Transformations in the economic and social sphere will contribute to a flourishing development of urban centres and a multi-functional development of the rural areas. A prerequisite to achieve the aforementioned objectives is an efficient management in the public sector. It is assumed that the new programming period will be characterized by an effectively integrated strategic planning, both at the regional and local level as well as in functional systems enabling efficient use of public means.

The strategic development policy for the Lodzkie Region until 2020 indicated in the Development Strategy for the Lodzkie Region 2020 is an answer to challenges of the coming years and will enable to build a modern and economically attractive as well as resident-friendly region. It will influence turning to the advantage the regional development potential and will contribute to an increase of the importance and competitiveness of the region in the international area.

The Development Strategy for the Lodzkie Region 2020, indicating the vision and mission as well as objectives of the region's development acts as a **directional** for the local government authorities as well as district and communal governments, scientific and business circles, non-governmental organizations and other institutions as well as for all inhabitants of the region. It also serves an important **coordination function** for other programme and planning documents prepared at the regional level. At the diagnostic level it constitutes a compendium of knowledge about the area, therefore it serves an **informative and promotional function**.

The Development Strategy for the Lodzkie Region 2020 has been prepared with implementing the classic method of making the development strategy and includes:

- socio-economic analysis of the region's situation in the national and regional context, as well as European, completed with a SWOT analysis;
- trends and main development challenges for the region until 2020;
- objectives of the region's development policy;
- strategic directions of actions undertaken by the local government to achieve the objectives of the region's development policy;
- sources and financial instruments of implementing the strategy;
- implementation indicators constituting the basis of a monitoring system.

A crucial factor of strategic planning is ensuring cohesion of development objectives indicated in the strategic documents prepared at the national and EU level with the regional development objectives indicated by the local government. The Development Strategy for the Lodzkie Region 2020 inscribes into the assumptions of "Europe 2020" strategy adopted by the European Council in June 2010 and indicating three mutually correlated priorities:

1. Smart growth: developing an economy based on knowledge and innovation,
2. Sustainable growth: promoting a more resource efficient, greener and more competitive economy,
3. Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.

The objectives of the Lodzkie Region development are cohesive with objectives stipulated in the national strategic documents:

– The Long-Term National Development Strategy – Poland 2030. The third wave of modernity of 9th November 2012,
– The Medium-Term National Development Strategy 2020 adopted by the Council of Ministers on 25th September 2012,
– The National Strategy of Regional Development 2010–2020: Regions, Cities, Rural Areas adopted by the Council of Ministers on 13th July 2010,
– The National Spatial Development Concept 2030 adopted by the Council of Ministers on 13th December 2011,

and 8 integrated development strategies. It will allow integrating actions and achieving a synergy effect in the implementation process of specific development policies on the European, national and regional level.

The Development Strategy for the Lodzkie Region 2020 is cohesive with the region's development programme ("Spatial Development Plan of the Lodzkie Region. Update" adopted by the resolution no LX/1648/10 of the Regional Parliament of the Lodzkie Region of 21st September 2010).

Update of the "Development Strategy..." has taken place with taking into account socializing the strategy creation process. Numerous community consultations have been carried out, including units of local government, social and economic partners.

Fig. 1. Development Strategy for the Region and strategic documents at the European, national, regional and local level *(Source: own study of SPOoLR)*

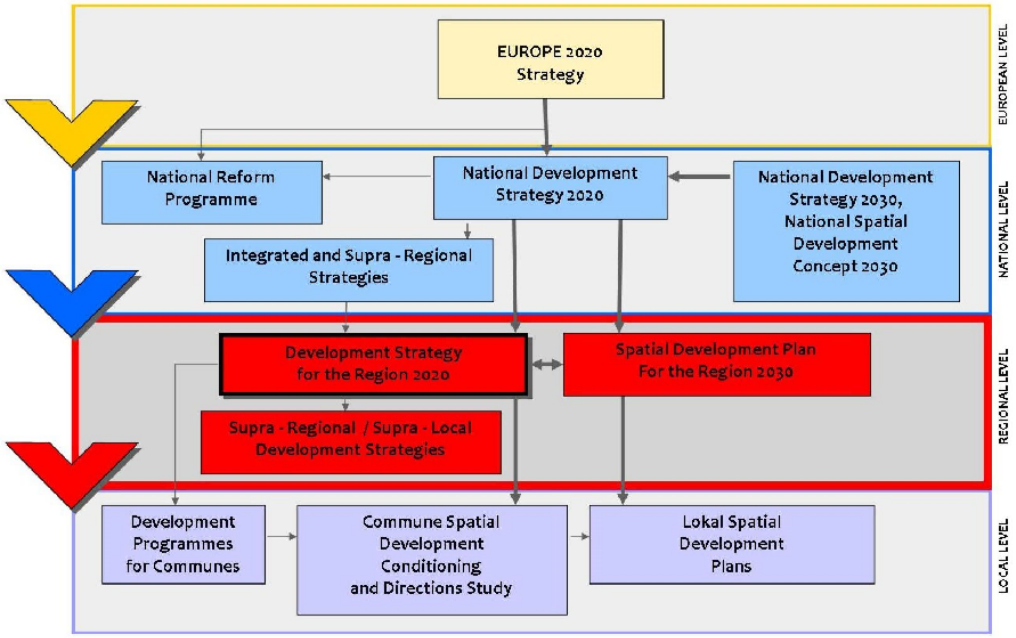
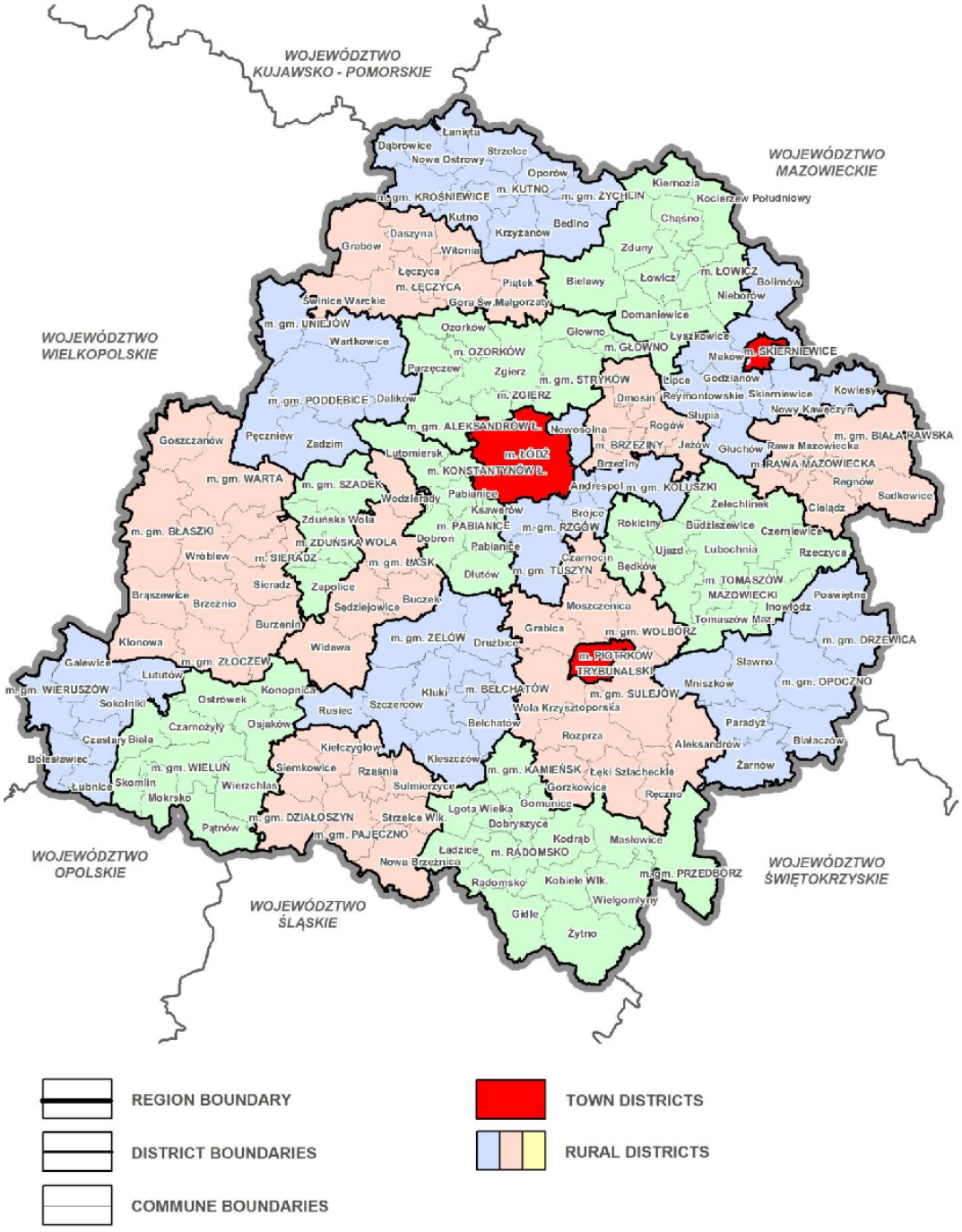


Fig. 2. Administrative division of the Lodzkie Region *(Source: own study of SPOoLR)*



II. STATE AND CONDITIONING OF DEVELPOMENT

A. ASSESSMENT OF THE STATE

1. The Lodzkie Region in the European perspective

Regional Policy of the EU, aimed at achieving economic, social and spatial cohesion by decreasing differences in development between the regions and states applies to 271 regions (NUTS 2) in 27 countries. At the beginning of 2010 the EU population was 501.1 million (since 1960 it has increased by 98.5 million people) and the average population density was 117 people/km^2 (the Lodzkie Region 139 people/km^2).

In 2009 the Lodzkie Region was one of the group of 68 EU regions with the lowest **economic development level** with GDP per capita, including the purchasing power standard, below 75% of the EU average, which entitles to benefit from the means from the Cohesion Policy (the Lodzkie Region 55.0%). It covers 23.3% of population living in the EU (only 19.0% is living in the regions where GDP per capita is higher than 125% of the average EU GDP). In this group there are as many as 48 regions belonging to new EU states. In 2000 – 2009 53 regions noted an increase of GDP per capita lower by over 10 percentage points than the average increase for the EU. During that time the Lodzkie Region noted anincrease of GDP per capita higher by 12 percentage points in relation to the average increase for the EU and is one of the highest developing EU regions. However, when it comes to disposable income per one inhabitant the region of Lodz is in the group of 28 poorest regions (below 50% of the EU average).

An analysis of **economic structure** of the EU regions places the Lodzkie Region among regions where the proportion of people working in industrial enterprises in the total number of the employed in 2009 exceeded 40% (the Lodzkie Region 40.5%, EU 24.9%). At the same time the area differs significantly from the EU average when it comes to the percentage of people employed in non-financial services market (the Lodzkie Region 50.4%, EU 64.8%) and is among the regions of the lowest value of this indicator. In comparison with European regions the Lodzkie Region economy is characterised by an exceptional percentage of agriculture in the gross added value which is 3.5% where the EU average is 1.2%. In 2010 the Lodzkie Region was the leader in the crop of potato (the Lodzkie Region 57.7 tonnes/km^2, EU 14 tonnes/km^2) and in the crop of corns, production of milk and headage of cattle it was it is was above the Union averages (the Lodzkie Region 114.8 tonnes/km^2, EU 63 tonnes/km^2; the Lodzkie Region 54.4 tonnes/km^2, EU 33.7 tonnes/km^2; the Lodzkie Region 12.1 pieces/km^2, EU 8.0 pieces/km^2, respectively).

When it comes to **expenditure on research and development** in 2009, the region was in the last group of regions where the expenditure constituted 1.0% or less of GDP, with the EU average of 2.0%. At the same time in 36 EU regions the expenditure exceeded 3.0% of GDP. Also when it comes to the number of patents submitted per 1 citizen in 2008 the region was among regions with the lowest number of applications (about 5, with the EU average of over 115).

In comparison with other EU regions **the labour market** in the Lodzkie Region is at the average level. The unemployment indicator of people at the age of 15 – 74 in the area, which in 2010 was 9.3%, was close to the EU average (9.7%) and numerous regions in France and Sweden. Also when it comes to the employment indicator of people at the age of 20 – 64 the region was in the group of regions which were close to the EU average (the Lodzkie Region 66.2%, EU 68.6%). The Lodzkie Region is among 63 regions in which in 2010, in comparison with 2007, there was

no increase of unemployment (EU average increase by 2.5 percentage points).

When it comes to **demography** the Lodzkie Region is in adverse condition. The region is one of the 81 areas with a negative population growth (the region – 2.9/1 000 inhabitants, EU 2.7/1 000 inhabitants), where the highest negative population growth which is -25.7/1 000 inhabitants was noted in Lithuania in 2010. A decrease of women's fertility indicator has been observed in the whole EU (from 2.5 in 1960 to 1.6 in 2009). The Lodzkie Region, with its fertility rate of 1.3 of live births is in one group with areas e.g. in Germany, Austria, Italy, Spain and Romania, distinguished by one of the lowest values of this indicator. The European society is an ageing society. The average life span in the EU in 2006 – 2008 was 82.2 years for women (the Lodzkie Region 79.4) and for men 76.1 years (the Lodzkie Region 70.1). During 2006 – 2008 one of the main reasons of deaths was civilization diseases: in 40% cardiovascular diseases, 25.7% cancer, 7.9% respiratory system diseases. In the Lodzkie Region the death indicator due to cardiovascular diseases was 402.5 people/100 000 inhabitants (EU 239), cancer 207/100 000 inhabitants (EU 176) and respiratory system diseases 48.3 people/100 000 inhabitants (EU 46).

Quite a diversified level access to **health service** is noted in the area of the EU. For many years the number of hospital beds has been decreasing in the EU states (in 2000 – 2009 by 10.7%). In 2009 the biggest number of beds in hospitals per 100 000 inhabitants was in the north-east region of Germany (1 247.7) whereas the lowest one was in Sweden (277.1). The Lodzkie Region with the indicator of 581 was slightly above the Union average (EU 551). Also the number of professionally active doctors indicates the society's accessibility of health care. In 2009 the biggest number of doctors per 100 000 citizens was recorded in the area of Italy (807), the Czech Republic and Austria and the smallest – in Romania (150). The Lodzkie Region with the number of 249 doctors/100 000 inhabitants was in the group of 91 areas of one of the lowest level of medical staff availability in the EU.

The region stands out positively in comparison with other EU regions when it comes to indicators of **education and schooling**. Young people at the age of 17 – 24, more often than in other EU regions, continue their education. In 2010 in 23 EU regions over 20% of 17-year-olds finished their education process. In the Lodzkie Region 84.2% of young people are studying at higher education institutions (EU 61.3%). Only when it comes to kindergarten education the Lodzkie Region differs visibly from other Union areas. The percentage of 4-year-olds attending preschools in this age group is on average in the EU 90.5%, whereas in the Lodzkie Region only 60.9%.

When it comes to **communication accessibility** the Lodzkie Region differs significantly from the Union standards. In 2009 the density of motorways in the area was 4.1 km/1 000km^2 with the EU average of 15.7 (the highest in the area of Lisbon 222.3). Despite the fact that in 2012 the motorways density in the Lodzkie Region increased to 10.6 km/1 000km^2, it still qualifies for the group of 119 regions with the lowest density of motorway network. Also, in 2008 the motorization indicator in the region was lower than the average Union one (the Lodzkie Region 412 cars/1 000 inhabitants, EU 473). In 2010 70% of European households were equipped with Internet-enabled computers. In the Lodzkie Region it was 52.3%.

In the EU about 40% of the population live in 323 cities and 36% live in the suburbs. Among European capital cities four of them (London, Paris, Berlin, Madrid) have over 3 million residents. In comparison with other EU countries Polish **settlement system** is characterised by a positive polycentric structure and even distribution of the biggest urban centres, still, Polish cities/towns, especially in the region of Lodz, are on a much weaker position in the scale of Europe and play a smaller role in the economic and social development of the EU. Lodz, according to ESPON classification was included in the poorly developed metropolises.

Fig. 3. Growth dynamics of GDP per capita in NUTS 2 regions compared to the average growth of GDP per capita in the EU (percentage points) in 2000 – 2009 *(Source: Eurostat)*

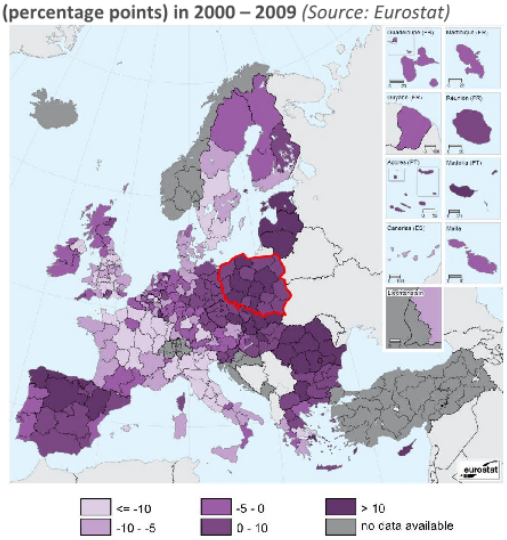


Fig. 4. Changes in the unemployment rate in NUTS 2 regions (percentage points) in 2007 – 2010 *(Source: Eurostat)*

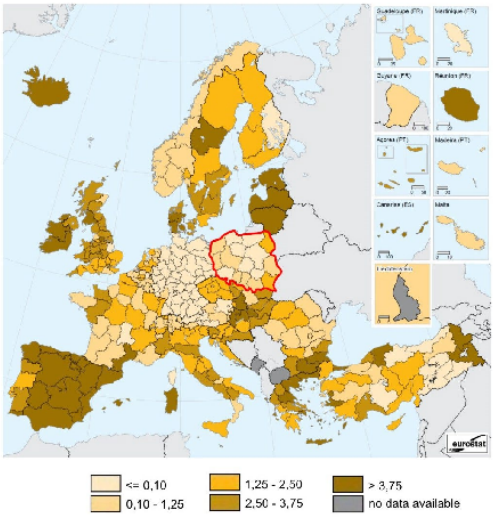


Fig. 5. GDP per capita in the Lodzkie Region compared to European regions in relation to the average GDP per capita in the EU (%) in 2009 *(Source: Eurostat)*

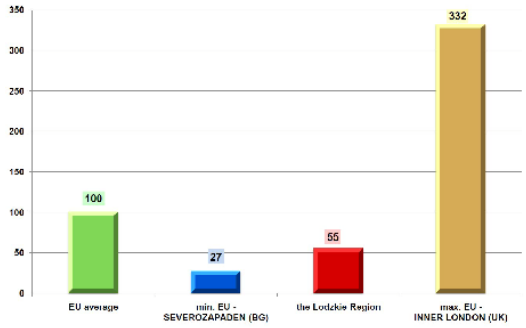


Fig. 6. Unemployment rate in the Lodzkie Region compared to European regions (%) in 2010 *(Source: Eurostat)*

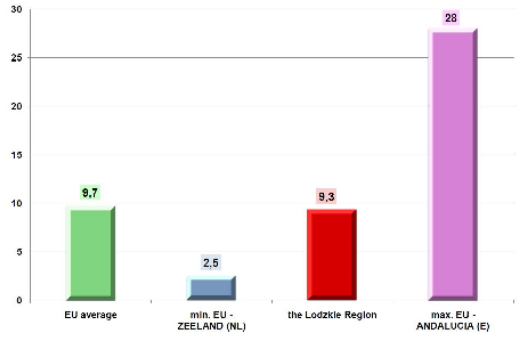


Fig. 7. Total share of industrial employment in NUTS 2 regions (%) in 2009 *(Source: Eurostat)*

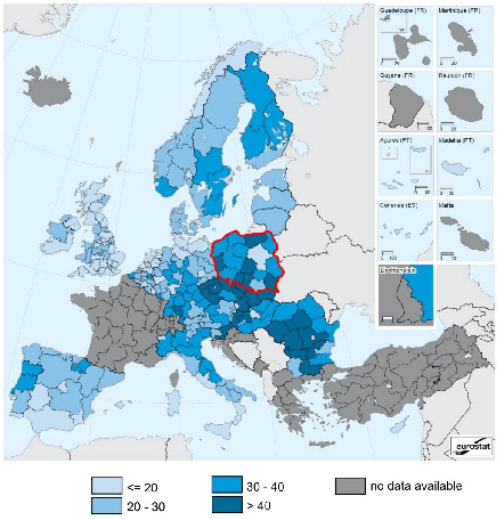


Fig. 8. Share of agriculture in GVA in NUTS 2 regions (%) in 2009 *(Source: Eurostat)*

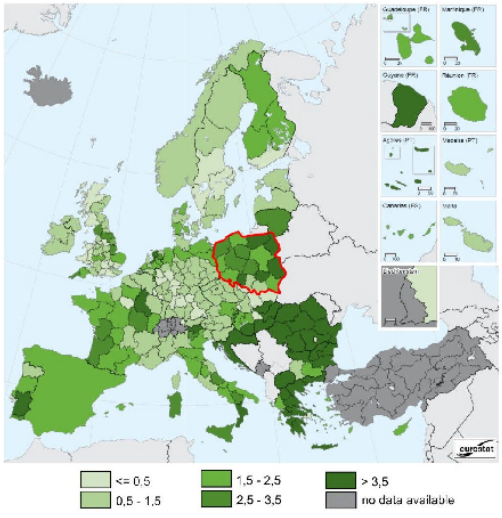


Fig. 9. Share of R&D expenditure in total GDP in NUTS 2 regions in 2009 *(Source: Eurostat)*

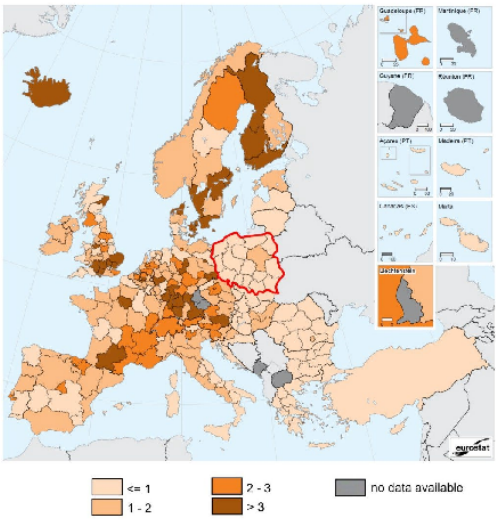


Fig. 10. Number of deaths due to vascular diseases/100 000 people in NUTS 2 regions in 2008 *(Source: Eurostat)*

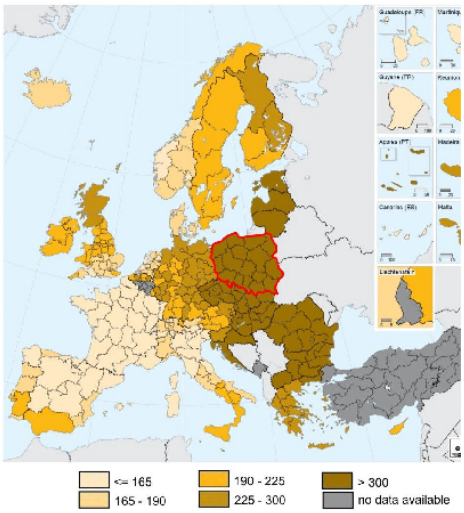


Fig. 11. Share of research employment in the total employment in NUTS 2 regions (%) in 2009 *(Source: Eurostat)*

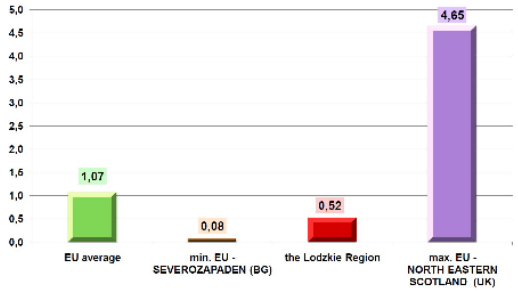


Fig. 12. Number of hospital beds/100 000 inhabitants in NUTS 2 regions in 2009 *(Source: Eurostat)*

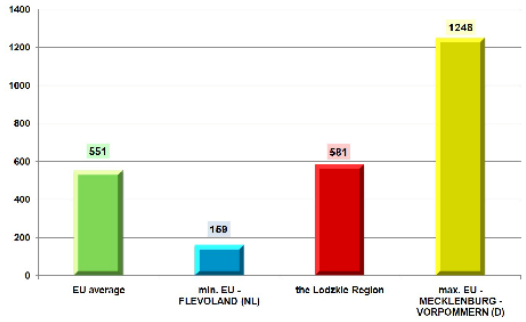


Fig. 13. Population in cities/towns in 2008 *(Source: Eurostat)*

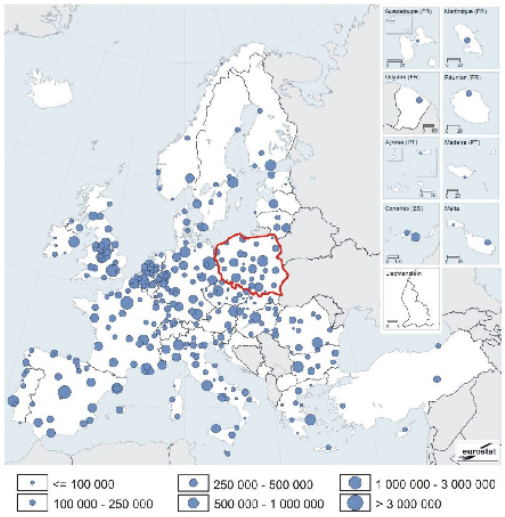
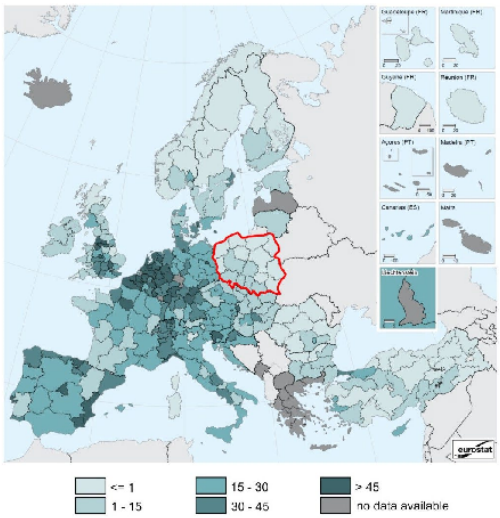


Fig. 14. Density of motorways (km/1 000km^2) in NUTS 2 regions in 2009 *(Source: Eurostat)*



2. The Lodzkie Region in the national and regional perspective

The Lodzkie Region is situated in the centre of Poland, in the borderland of Central-European Lowlands and Polish Uplands. At the end of 2011 the population of the region was 2 533 681 people which placed the region on the 6. place in Poland. When it comes to the total area (18 219 km^2) the region was on the 9. place in Poland. The average population density in the area was 139 people/km^2 (5.)[1] with 1 397 people/km^2 in the cities and 54 people/km^2 in rural areas. In 2011 the percentage of urban population was 63.75% (6.).

The region's administrative structure, according to the state as of 1st January 2011, consists of:

- 24 districts, including 3 town districts, clustering 34.1% of population and 21 rural districts,
- 177 communes, including 18 municipalities, 26 urban and rural and 133 rural.

Fig. 15. Population in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*

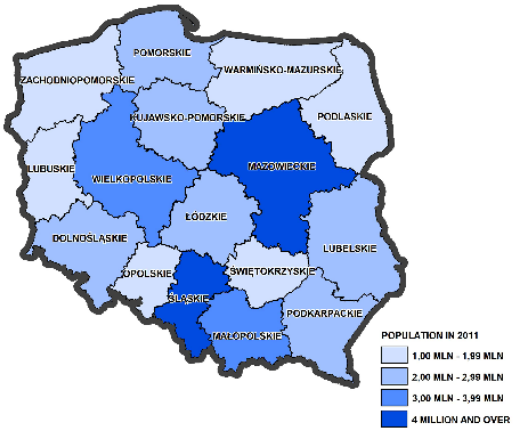


Fig. 16. Population in districts in 2011 *(Source: CSO)*

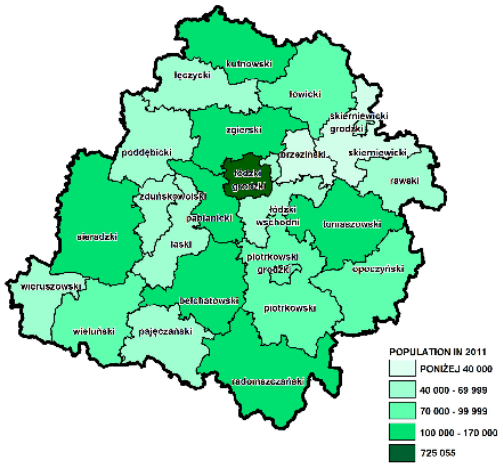


Fig. 17. Population density (people/km^2) in districts in 2011 *(Source: CSO)*

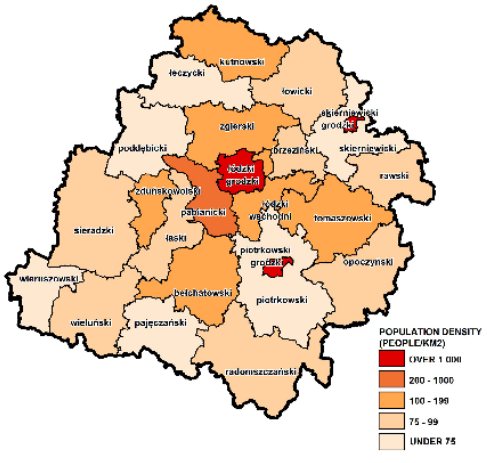
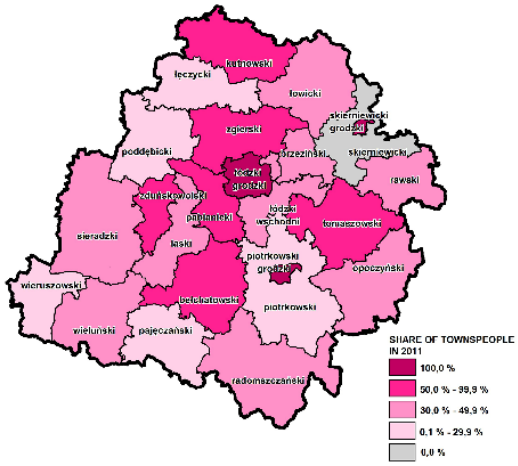


Fig. 18. Share of urban population in districts in 2011 *(Source: CSO)*



[1] Number in brackets shows the position of the Lodzkie Region in Poland.

2.1. ECONOMY AND LABOUR MARKET

The Lodzkie Region is characterised by a medium **level of economic development** and is on the 6. place in Poland when it comes to achieved indicators of GDP[2] and GVA[3] (2009). According to sub-regions the level of economic development measured by GDP per capita is largely diversified and only in the sub-region of the city of Lodz it exceeds the national average (121.3%). A positive phenomenon is a progressing external convergence of the region which is reflected by GDP per capita with taking into account the purchasing power standard, which in 2009 reached in the region the level of 55% of the average EU 27. On the other hand, the negative phenomena include:

- in 2004-2009 decrease of GDP per capita in the region in comparison with the national average of 91.9% in 2004 to 91.3% in 2009;
- low level of GVA of the region per 1 employed being in 2009 88.1% of the national average;
- deepening internal diversification of the level of economic development in sub-regions;
- low, in comparison with the national average, work output in all, apart from agriculture, sectors of regional economy.

On the basis of the structure of people working in the main sectors of economy in 2010 (agriculture, industry, services) it needs to be said that the region has an industrial-agricultural nature. The percentage of people employed in these sectors exceeds the national average (industry – Poland 27.3%, the Lodzkie Region 29.0%; agriculture – Poland 17.3%, the Lodzkie Region 19.0%).

The **economic potential of the region** comprises of:

- a high level of industrialization, tradition as well as specialization in the production of industrial products within specific branches of industry: textiles and clothing (cotton fabrics, towels, blankets, tights, clothing), chemical industry (rubber gaskets, plastic containers), construction materials industry (ceramic tiles, construction chemicals, building paper, architectural glass), electromechanical (domestic appliances, car trailers and semitrailers, engines, transformers), agricultural-food industry (dairy products, fruit-vegetable and meat products), power industry (production of conventional energy), pharmaceutical, furniture; a special role in the region is played by the textile and clothing industry, which comprises about 30% of companies from this branch Poland-wide and has a vast scientific and educational base;
- large resources of land and a significant agricultural potential with areas of intensive horticulture production (orchards, vegetables) and a relatively efficient agriculture despite a quite unfavourable quality of agricultural production space as well as an unfavourable agricultural structure with the majority of small farms of the area up to 5ha;
- a rich materials base from plant and animal production constituting a potential for development of agricultural-food industry; a significant position in Poland when it comes to production of soil-grown vegetables (4.), tree fruits (3.), milk (4.) and slaughter animals (3.);
- riches of mineral and natural resources enabling development of traditional branches of industry as well as new specializations such as geothermics and balaneutics;
- dynamic development of warehouse-logistics function;
- a progressing diversification of branch-trade structure and a growing importance of modern businesses: electronics, BPO and IT,
- a growing role of export in the economy of the region and a significant increase of the export level of products with a higher level of processing; the biggest share in the export structure is held by: electromechanical industry 34.2%, chemical industry 18.3%, light industry 16.0%, agricultural-food industry 13.5%.

[2]GDP – Gross Domestic Product
[3]GVA– Gross Value Added

Fig. 19. GDP/1 inhabitant in the Lodzkie Region compared to Poland in 2009 *(Source: CSO)*

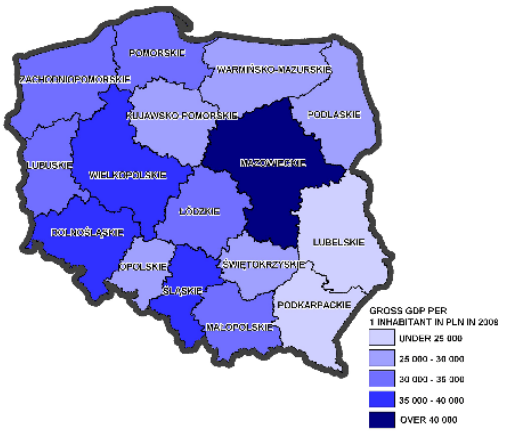


Fig. 20. GDP/1 inhabitant in subregions in 2009 *(Source: CSO)*

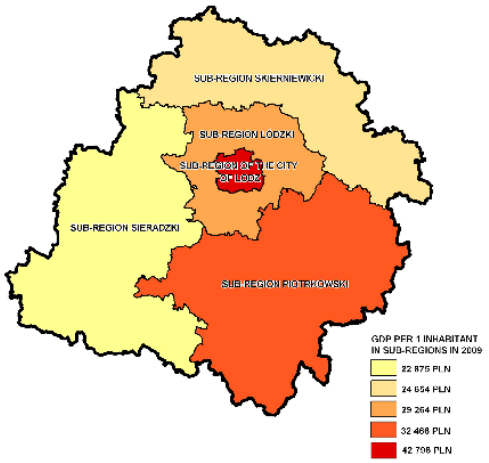


Fig. 21. GVA/1 person employed in Poland according to administrative regions in relation to the national average in 2009 *(Source: CSO)*

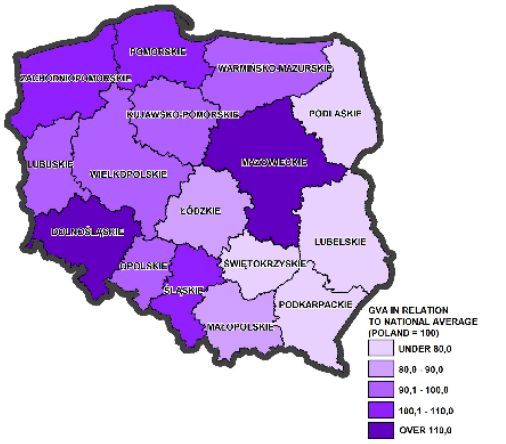


Fig. 22. Share of agricultural employment in the total employment in districts in 2010 *(Source: CSO)*

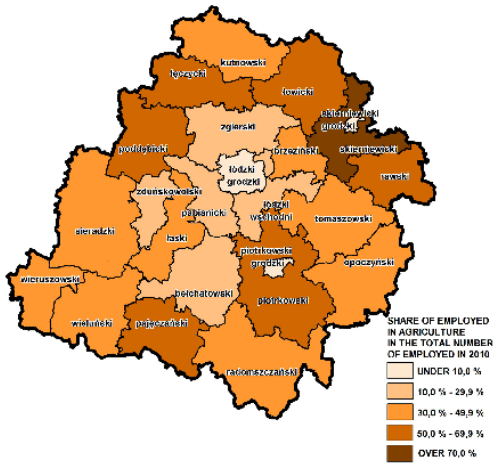


Fig. 23. Share of industrial and construction industry employment in the total employment in districts in 2010 *(Source: CSO)*

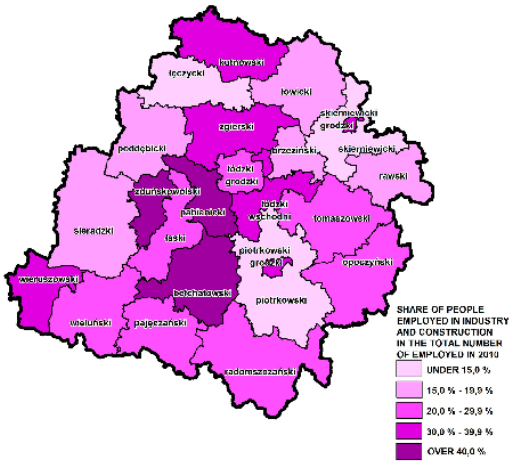
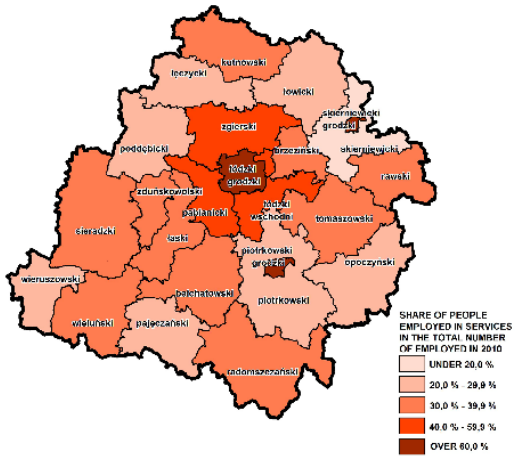


Fig. 24. Share of employment in services in the total employment in districts in 2010 *(Source: CSO)*



The **problems of regional economy** include most of all:

- low efficiency and competitiveness of industry caused by a relatively big share of industry of low and medium-low technology as well as industry of a low added value;
- polarization of economic development based on concentrating development in Lodz and central districts as well as in bełchatowski district, which contributes to widening of disproportions of the socio-economic development level between particular parts of the region;
- underdevelopment of the services sector apart from municipalities with district rights;
- poor dynamics of economy restructuring processes of numerous cities/towns of the region;
- no significant structural transformations in agriculture, including slow changes in the farm area structure.

Economic development and achieving competitive advantages by particular regions depends, to an increasingly large extent, on the speed of establishing new, innovative business entities and the key problem becomes the ability to acquire and commercialize scientific knowledge. The area is characterised by a low level of innovation and is included by the EU to poor innovation-wise diffusers (the source of technological progress is purchasing new machines and equipment and not creating innovative technologies). Apart from that a small scope of cooperation between the scientific and R&D sector and economy is observed in the region, and as a consequence – a limited level of creating and diffusion of innovation. The region has a significant and specialized scientific as well as research and development potential in the field of modern technologies (e.g. biotechnology, nanotechnology and mechatronics) and also in the fields such as: medicine, textiles, chemical business and horticulture but its influence on the innovation if economy in the region in limited. It results from cooperation barriers between these two spheres, specificity of scientific-research institutions connected with traditional branches of industry and misadjusting research directions to the needs of other regional specializations. Knowledge and technologies connected with businesses important to the regional economy are transferred mainly from outside the region. The low industry innovation is proven by one of the lowest percentages in Poland of industrial enterprises implementing innovations (in 2011 11.08%) as well as a low percentage of new and significantly improved products in total revenues from sale (in 2010 6.7%). Moreover, small and medium enterprises which are characterized by a small innovation potential and with no own research-development base are predominant in the region.

Development of entrepreneurship and transfer of modern technologies is supported by relatively numerous business environment institutions which are focused mainly in Lodz. However, the influence of these institutions on the increase of entrepreneurship and innovation level of the regional economy is still insignificant. The chance to improve competitiveness of enterprises can be development of competition based on endogenic development potential of the region connected with industrial tradition as well as natural resources, but also taking advantage of external impulses connected with an inflow of modern technologies. In the region there are or there are developing cooperation fields in the area of the following trades: textile-clothing, medical-pharmaceutical, agricultural-food, energy, construction, construction materials, furniture, electronical, electro-machine, mechatronics, biotechnology, waste management, BPO, domestic appliances, logistics, media, tourism and culture. However, despite the existing potential and centres of companies, cluster initiatives in particular trades are taken up to a limited extent.

The competitiveness of the regional economy is also defined by unit labour costs in 2010, which were 0.404 per production unit. Since 2000 they have decreased by 8.2% which is a positive phenomenon.

Economic activity and high enterprise of the inhabitants, as well as the speed of investments growth contribute to the increase and development of the regional economy.

Fig. 25. Number of sold industrial products/1 inhabitant in districts in 2009 *(Source: CSO)*

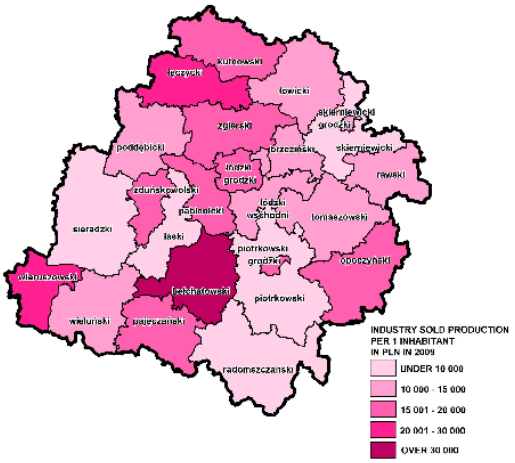


Fig. 26. Share of the Lodzkie Region in the agricultural goods production in Poland in 2010 *(Source: CSO)*

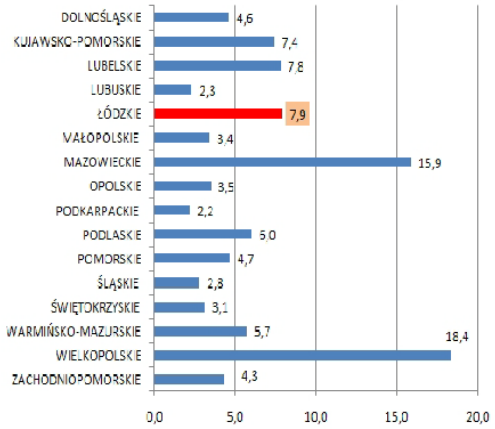


Fig. 27. Structure of export in the Lodzkie Region in 2010 *(Source: CSO)*

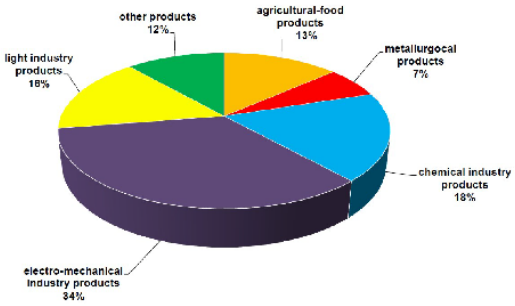


Fig. 28. R&D expenditure in relation to the regional GDP in the Lodzkie Region compared to Poland in 2009 *(Source: CSO)*

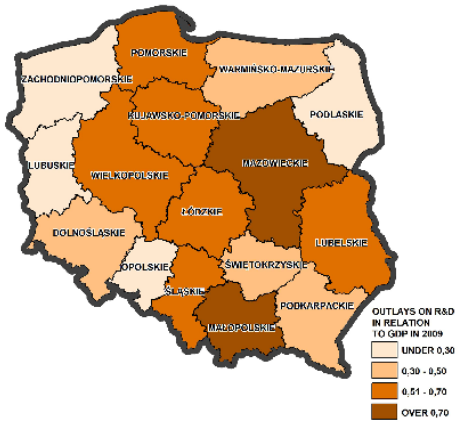


Fig. 29. Percentage of industrial innovative enterprises in the total number of industrial enterprises in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*

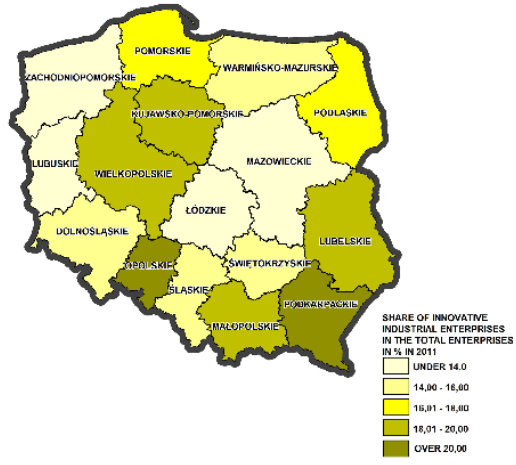
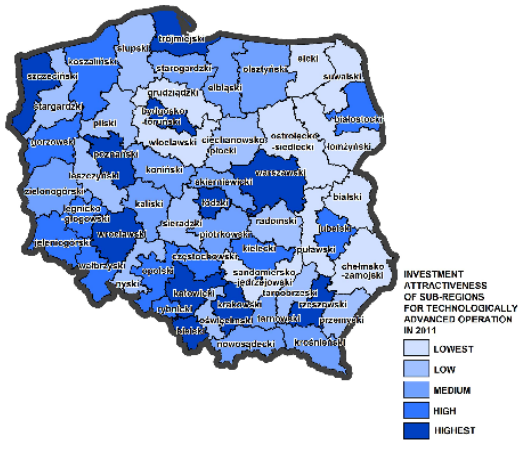


Fig. 30. Investment attractiveness for technologically advanced operations according to subregions in 2011 *(Source: Institute for Market Economics)*



The positive phenomena connected with enterprise include:

- high level of public sector investments together with their high dynamics during 2004 – 2011 (by 88.6%);
- high level of enterprise in Lodz and central districts (1 191 and 956 national economic entities in the REGON register per 10 000 people in 2010 respectively);
- high attractiveness for investors of Lodz Special Economic Zone which in the last years has become one of the most dynamically developing economic areas in Poland and in the world.

Adverse phenomena are the following:

- susceptibility of regional economy to economic fluctuations which has been reflected by the decrease of number of entities in the REGON register during 2004-2011 (2004, Poland – 937 entities in the REGON register/10 000 inhabitants, the Lodzkie Region – 946 (7.); 2011, Poland – 1 004, the Lodzkie Region – 902 (10.);
- a relatively small number of headquarters of big business entities (employing over 250 people);
- decrease of enterprises' investment expenditure during 2008 – 2010 by 19.8%.

In 2010 gross disposable income gained by the inhabitants of the Lodzkie Region was close to the national average and placed the area on the 5. place in Poland. At the same time the level of gross remuneration was low (10.) and constituted only 89.3% of the national average. Remuneration in Lodz is the lowest in the group of the biggest cities in Poland. Changes of the average standard of living in households can be assessed e.g. on the basis of private consumption dynamics. In 2010 it was PLN 44 821 000 (in basic prices) in the region and was higher than in 2000 by 41%.

There are significant differences in the **wealth level of the region's communes** measured by own income of the communes' budgets per 1 inhabitant:

- the richest communes and cities/towns are mainly communes situated in the central part of the region and in the area of influence of "Bełchatów" Mining-Power Region as well as municipalities with district rights;
- the poorest communes in the region are agricultural communes situated peripherally and often characterised by a low level of enterprise.

Labour market of the region is characterized by a strong diversification. There are centres with a clearly services and industrial character, and at the same time in 2010 19% of the employed were working in the agriculture. During 2004 – 2011 the number of working people increased in the region (by 13%), and the speed of this growth was slightly higher than in Poland (12.7%). The tendency changed in 2011, when the number of the employed in the region decreased by 1.4%, whereas in Poland in increased by 0.3%. The structure of the employed is subject to slow changes. The percentage of people working in agriculture is decreasing slower than in Poland and so does the increase of percentage of people working in services. During 2000- 2011 the number of people professionally active in the area decreased by 0.8% (to 1 406 000 people) which was an opposite phenomenon than in Poland where in the analogous period there was an increase of the professionally active people by 3.13%. However, the region is still characterised by a high and ever-dynamically growing professional activity ratio in working age, which is 75.3% (2.).

Professionally active people are becoming better educated. A growth of percentage of people with higher education can be observed in the region with a simultaneous decrease of the percentage of people with junior high school and primary education. A favourable phenomenon is a relatively low unemployment level among people with higher education (in 2011 – 10.5%) as well as a low dynamics of this phenomenon's growth (10.).

Moreover, positive phenomena on the regional labour market are:

- fast decrease of proportion of the long-term unemployed by 19.7 percentage points during 2004 – 2011 (however, with an increase by 8.8 percentage points during 2009 - 2011);
- lower than in Poland proportion of unemployed women (in 2011 49.4% in the region, in Poland 51.5%);

Fig. 31. National economic entities registered in the REGON system/10 000 people in the Lodzkie Region compared to Poland in 2004 -2011 *(Source: CSO)*

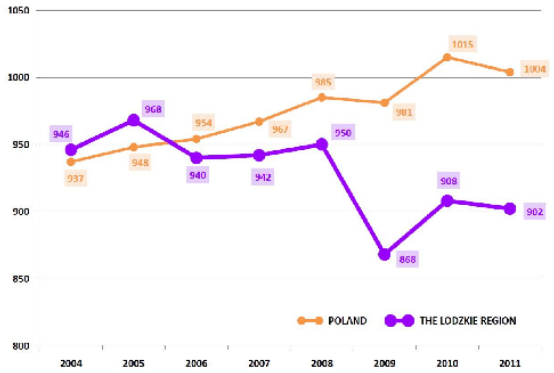


Fig. 32. National economic entities registered in the REGON system in districts in 2011 *(Source: CSO)*

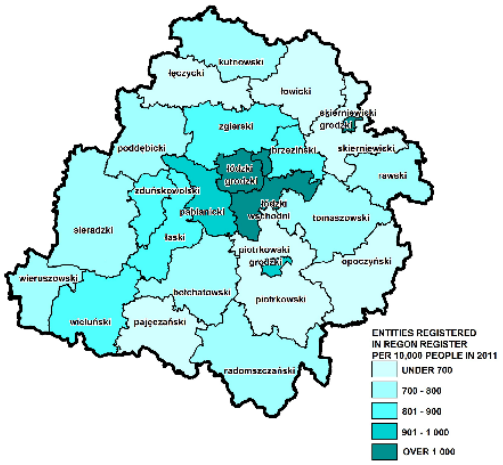


Fig. 33. Labour market participation rate of working age population in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*

Fig. 34. Level of employment/100 members of working age population in districts in 2010 *(Source: CSO)*

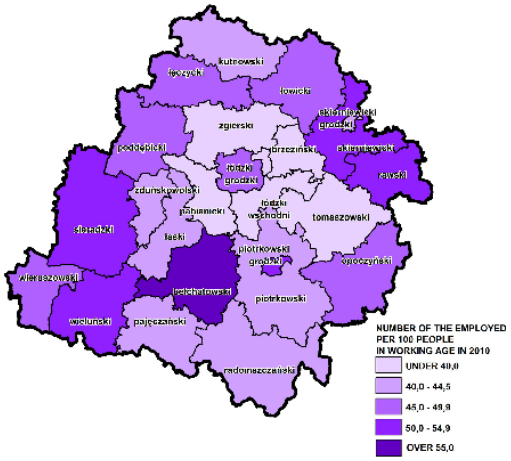
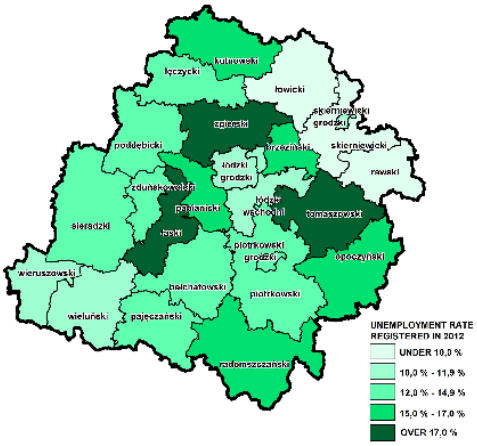


Fig. 35. Unemployment rate in the Lodzkie Region compared to Poland in 2004 – 2012 (%) *(Source: CSO)*

Fig. 36. Unemployment rate in districts in 2012 (%) *(Source: CSO)*



- keeping the unemployment indicator at the level similar to the national one (in 2011 12.7%, 12.5%, respectively); during 2004 – 2011 the region decreased the unemployment indicator by 6.8 percentage points (increase since 2008 from 9.2 to 12.7); the smallest fluctuations of the unemployment indicator were in agricultural districts, whereas cities and highly urbanized service-industrial districts were characterized by a bigger susceptibility of labour markets to changes of economic situation;
- favourable changes in employment structure – the region is characterised by a high proportion of people employed in services on the area of the Lodz Conurbation, a quite stable percentage of people employed in the industrial sector as well as a decreasing percentage of people working in the agricultural sector;
- a big number of job offers, especially in the area of the Lodz Conurbation (63.5% of job offers from the area of the Lodzkie Region at the end of 2011).

Problems of the labour market are the following:

- overstaffing in agriculture and too low a percentage of people employed in services and industry outside the Lodz Conurbation;
- too slow changes of the working people's structure;
- small demand for specialists from knowledge-based economy;
- high level of unemployment in Lodz in relation to other cities in Poland (about 5 – 7 percentage points);
- a strong downward trend of the unemployed percentage unregistered due to taking up employment;
- very high negative circular movements balance (- 14 983 people).

The region is characterised by the highest in Poland percentage of professionally passive population (39.4% with the Polish average 35.0%), which results mainly from the demographic structure of the area. Professional passiveness is increasing which caused by collecting retirement pension benefits (during 2004 – 2011 by 7.8 percentage points) as well as household chores, e.g taking care of the elderly (in 2004 – 2011 by 2.4 percentage points). In 2011 the percentage of professionally passive due to collecting the retirement pension benefit in the total population was 54.3% (Poland 47.3%), education and improving skills 21.1% (Poland 22.6%), disease and disability 13.3% (Poland 14.8%), household chores 8.7% (Poland 12%).

Summing up it needs to be said that the development potentials of the region which can become a basis for creating its competitive advantages, are e.g.:

- **good location in the centre of Poland, especially from the perspective of the target system of national roads and motorways, significantly increasing the area's accessibility both in the national as well as international system;**
- **research and development potential of the region connected with fields such as: textiles, medicine, chemical industry, horticulture;**
- **good climate for the development of enterprise and locating investments (the Lodz Special Economic Zone, industrial zones, industrial and technological parks);**
- **improving sector-trade structure of economy and a big number of companies with the share of foreign capital in Lodz and Lodz sub-region;**
- **significant supply of highly-qualified staff;**
- **efficient and specialist agriculture (supported by agricultural local government – Agricultural Chamber of the Lodzkie Region);**
- **industrial tradition of the region: textile-clothing industry, construction materials, chemical, agricultural-food, pharmaceutical, furniture, power and electro-mechnical industry;**
- **potential for the development of modern services: BPO and IT, logistics, media, balaneutics, health care and electronics;**
- **accessibility and variety of natural resources (brown coal, geothermal waters, glass and moulding sands, ceramics clays, construction materials).**

Fig. 37. Own income of communal budgets in districts in 2004 – 2011 (2004 = 100%) *(Source: CSO)*

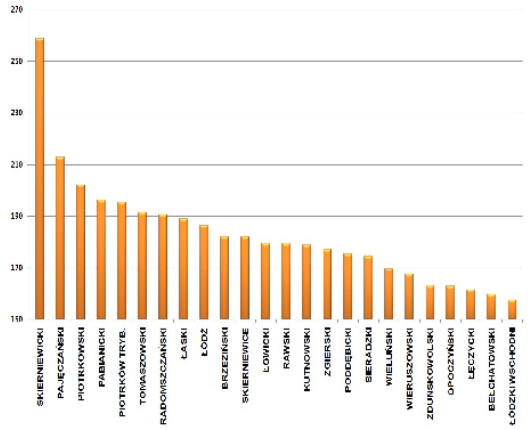


Fig. 38. Own income of communal budgets in districts in 2011 *(Source: CSO)*

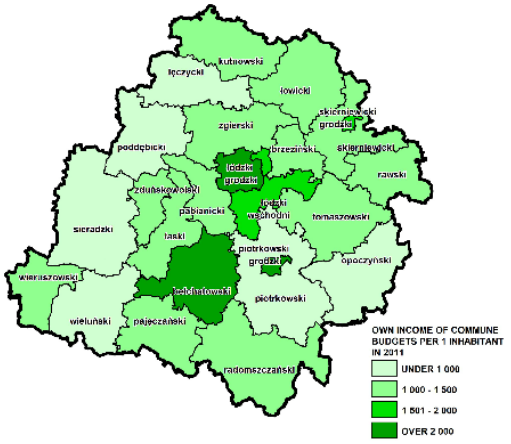


Fig. 39. Gross disposable income/1 inhabitant in the Lodzkie Region compared to Poland in relation to the national average (Poland = 100%) in 2007 – 2010
(Source: CSO)

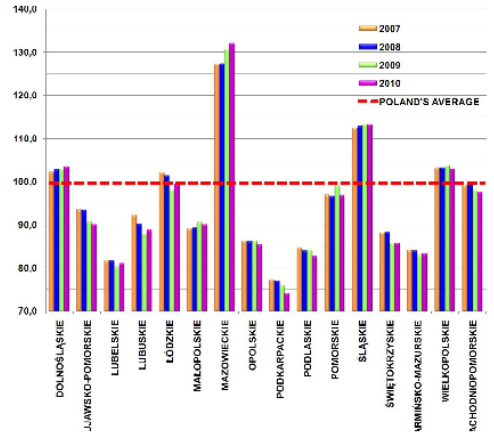


Fig. 40. Average gross monthly remuneration in the Lodzkie Region compared to Poland in relation to the national average (Poland = 100%) in 2004 – 2010 *(Source: CSO)*

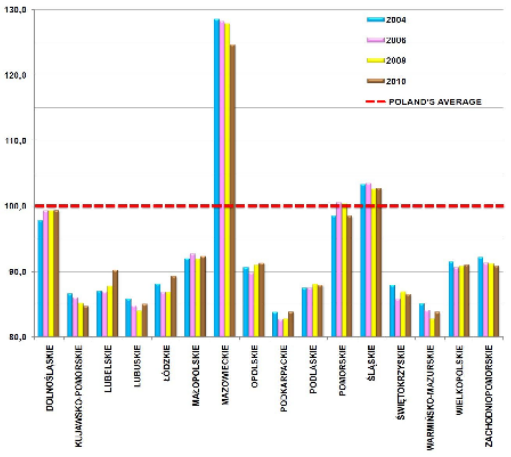


Fig. 41. Subzones of the Lodz Special Economic Zone in 2011
(Source: the Lodz Special Economic Zone)

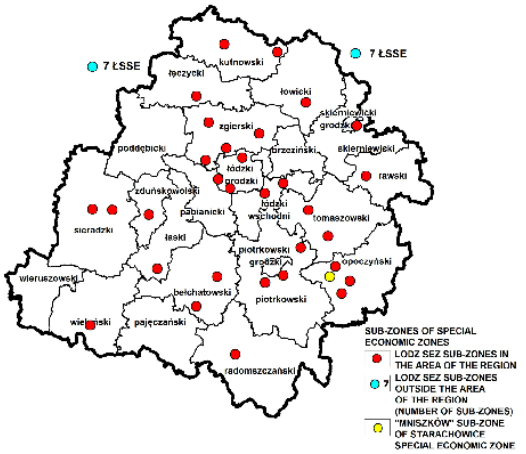
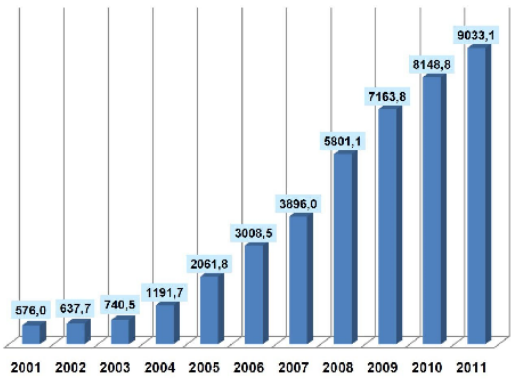


Fig. 42. Investments in the Lodz Special Economic Zone in 2001 – 2011 (PLN million) *(Source: Ministry of Economy)*



2.2. SOCIETY AND QUALITY OF LIFE

Demography

Demographic problems in the Lodzkie Region are one of the biggest in Poland. One can observe in the region one of the most intensive de-population processes of a stable trend and unfavourable forecast. It is predicted that the de-population process of the region will deepen and by 2035 the population of the region will have decreased by almost 306 000 people, from 88.5% of the figure from 2004. The region is characterised by:

- systematic decrease of the population – during 2004 - 2011 by 54 021 people;
- more intensive de-population process of the cities/towns (3.6% during 2004 – 2011; the Lodzkie Region 2.1%);
- very low birth rate (- 2,7‰ in 2011);
- high demographic load – 57.9 people in non-working age/100 people in working age;
- the biggest in Poland gender disproportion of the population – 110 women/100 men.

The situation of the region when it comes to the urbanization level is favourable. The percentage of urban population in 2011 was 63.8%. However, the urbanization is very uneven and concentrates in the area of the Lodz Conurbation.

Human resources

The region is characterised by the worst in Poland ratios concerning the level of society's general health which results e.g. from the adverse demographic structure. The negative phenomena include:

- the shortest in Poland average life-span of women and men – 79.5 and 70.4 respectively in 2011;
- the highest in Poland total death ratio (12.1/1 000 people in 2011);
- 2. place in Poland in 2010 due to death indicator caused by civilization diseases (cardiovascular diseases, cancer – 5.6/1 000 people, 2.7/1 000 people, respectively);
- high TB incidence indicator (2.9/10 000 people in 2011 (3.);
- low pro-health awareness and an unhealthy life style of inhabitants reflected e.g. by a small physical activity, faint interest in health prophylaxis and eco-food.

The only positive phenomenon is a lower than average in Poland infant death rate per 1 000 live births which in 2010 was 4.0.

An important element of society's intellectual capital is the level of education. The region of Lodz is characterised by an average proportion (8.) as well as a relatively low dynamics of increase of population with higher education (10.) and also by:

- systematic growth of proportion of children at the age of 3-5 attending preschools (by 31.9 percentage points in 2011 compared to 2004);
- favourable schooling indicators at the level of primary and junior high schools, 96.1% and 94.5%, respectively in 2011;
- popularization of secondary education and growth of the number of people with higher education (by 56.3% during 2004 – 2011);
- big number of students – 108 221 people in 2011 (6.).

An unfavourable phenomenon is a strong spatial polarization of the population when it comes to education. Population of the peripheral rural areas is characterised by the lowest level of education. Results of primary and junior high school completion exams prove the division into town areas where better results are achieved and rural areas where the exam results are poorer. What also seems to be the problem is a low kindergarten education attendance by children in rural areas. When it comes to level of human resources development during 2004 – 2009 the area was characterised by a decreasing level of social exclusion. However, in next years the tendency got reversed:

- during 2009 – 2011 there was an increase of long-term unemployment indicator (from 24.7% to 35.1%);
- during 2010 – 2011 there was an increase of the percentage of population living under the standard of living from 3.8% to 5.5%, as well as a relative poverty line from 12.2% to 13.1%.

Fig. 43. Real growth in districts in 2004 – 2011 *(Source: CSO)*

Fig. 44. Population forecast in districts in 2020 *(Source: CSO)*

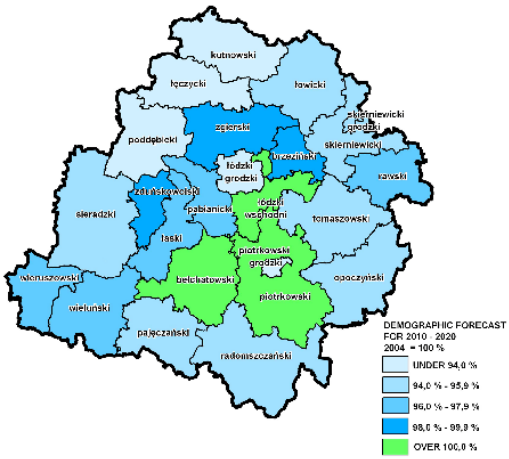
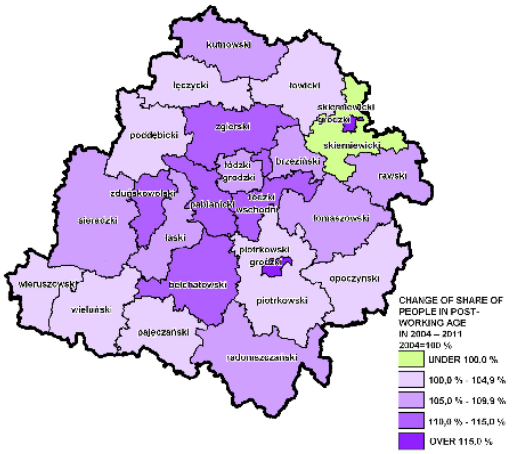


Fig. 45. Changes in the percentage of post-working age population in districts in 2004 – 2011 *(Source: CSO)*

Fig. 46. Average life expectancy of males in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*



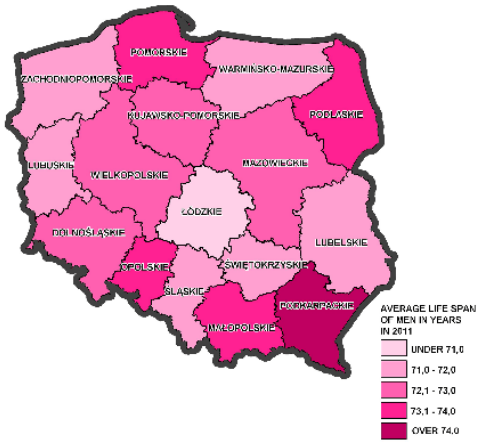
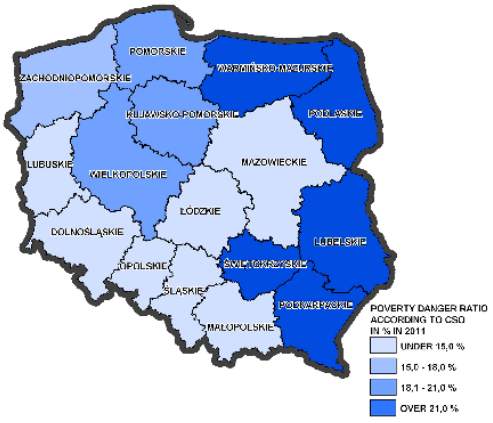
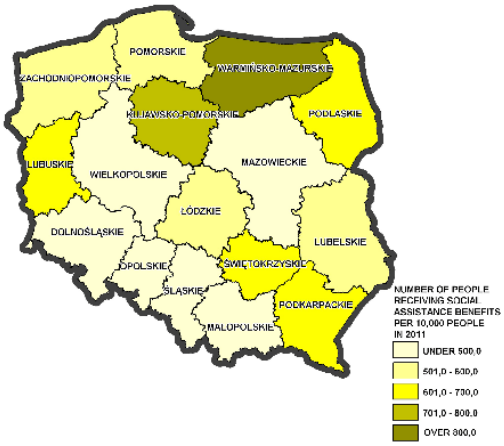


Fig. 47. Rate of the relative poverty line in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*

Fig. 48. Population using social welfare benefits/10 000 people in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*





North-western and south-eastern parts of the region are at risk of digital exclusion due to an insufficient level of being equipped with broad-band Internet. The total number of people addicted to psychoactive drugs is increasing in the region. A significant percentage of the region's population (about 13.1% in 2011) is grappling with disability. In the future these phenomena may result in an increase of the excluded.

Social capital

When it comes to social capital the region is under the national average. The inhabitants of the region are characterised by a low level of trust towards public institutions, political parties and co-citizens as well as by a low level of social self-organization, small willingness to cooperate and small responsibility for their surroundings. The lowest level of social capital is in Lodz and in cities of the region. In rural areas and in small rural centres the social trust level is much higher.

An extremely important factor for developing social cohesion and awareness is the level of civil society development. Compared to Poland the Lodzkie Region is characterised by a medium, but showing a growth tendency, civil involvement level of the society. Both the voter turnout as well as the number of non-governmental organizations is increasing. The voter turnout is on an average, all-Poland level, whereas the saturation of non-governmental organizations in 2010 was quite low (13.), it has however been growing systematically since 2004 and it was close to the national average per 1 000 inhabitants (the Lodzkie Region 2.6, Poland 2.7.). The weakness of the tertiary sector is its uneven development, a small number of people employed in non-governmental organizations and a small number of active volunteers as well as no cooperation between these two organizations. The region is characterised by a high diversity when it comes to civil involvement of the society, with the high level shown by districts in the western and south-western part of the area.

Regional identity is a very important element of social cohesion. When it comes to the cultural aspect the Lodzkie Region is not a homogenous area. This results in overlapping of cultural influences and creating regional identity on the basis of various tradition and values. The most precious areas and historic buildings include:

- unique buildings of Roman register: a Collegiate church in Tum, churches in Sulejów Podklasztorze, Inowłódź, Żarnów, Strońsk, Ruda near Wieluń, Krzyworzeka, Buczek as well as buildings with preserved Roman elements: churches in Jeżów and Saint Margaret's Mountain (Góra św. Małgorzaty) as well as in the so-called "rotunda" town settlement in Sieradz;
- complexes of post-industrial buildings, the biggest ones in Lodz;
- eclectic, historicism and Art Nouevau historical buildings in Lodz;
- wooden churches in the so-called "Wieluń type";
- artefacts of folk construction technology, e.g. windmills and mills.

There are about 100 historic towns in the area of the region, out of which about 60 have preserved some elements of old development plans. The total number of buildings of historical value entered in the register was 2 200 in 2010. During 2002 – 2010 it increased by 96 entries. Still, the majority of the region's historical buildings are in a bed technical condition.

The biggest problem from the area of protecting and developing cultural heritage is still the lack of comprehensive rehabilitation actions as well as a low social awareness in protecting historical buildings, especially the archaeological ones. A positive tendency is making the historical buildings available to the society which contributes to a growth of inhabitants' identification with the region's culture as well as an increase of activity in the area of propagating and cultivating regional traditions:

- a significant number of Local Activity Groups has been created which, through joint initiatives to cultivate tradition and folk customs, contribute to the development of regional identity (in 2011 there were 23 LAG which placed the region on the 7. place in Poland);

- the process of reactivation and enhancing ethnographic image of cultural sub-regions - łęczycki, łowicki, rawski, opoczyński, piotrkowski, siemkowicki, sieradzki is progressing – and the łowicki sub-region is recognized in Poland and acknowledged worldwide as Poland's folk custom's identification element;
- a growth of the number of active bands and folk artists has been noted.

North-eastern and south-western parts of the region are characterised by the most visible forms of inhabitants' identification with the region andmanifestations of strengthening regional identity.

Fig. 49. Human capital potential in districts in 2010 *(Source: dr hab. P. Starosta, prof. LU – Human and social capital resources in the Lodzkie Region)*

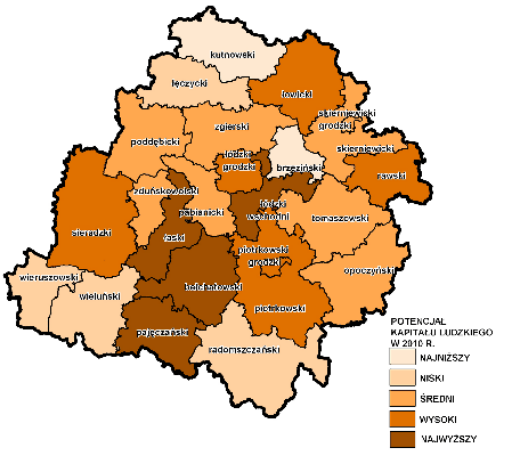


Fig. 50. Number of non-governmental organizations/10 000 people in districts in 2011 *(Source: Marshal's Office of the Lodzkie Region)*

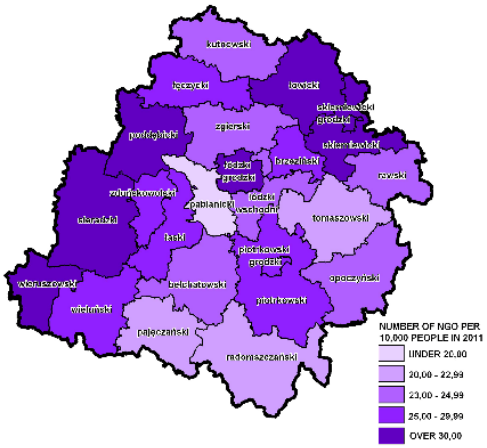


Fig. 51. Social capital potential in districts in 2010 *(Source: dr hab. P. Starosta, prof. LU – Human and social capital resources in the Lodzkie Region)*

Fig. 52. Number of Local Activity Groups in the Lodzkie Region compared to other regions in Poland in 2007 – 2011 *(Source: own study of SPOoLR on the basis of information of LAG Association Zielone Sąsiedztwo)*

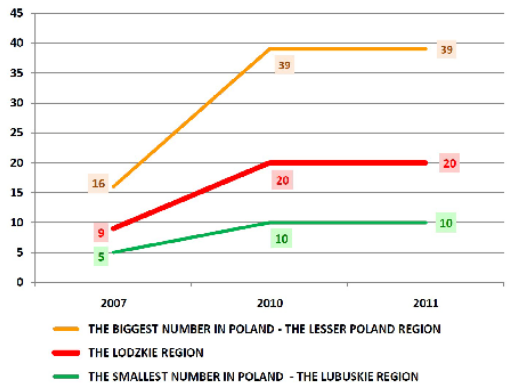
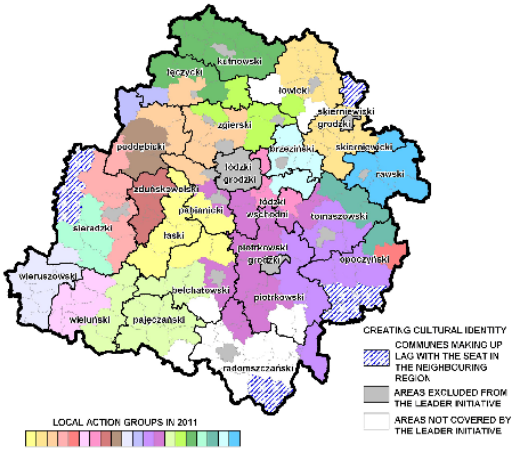


Fig. 53. Local Activity Groups active in the field of creating regional identity in 2011 *(Source: own study of SPOoLR on the basis of information from RDP of LR)*



An important factor determining the attractiveness of a region is **inhabitants' living conditions** expressed e.g. by housing conditions as well as being equipped with social infrastructure facilities.

The housing market of the region provides its inhabitants a relatively big number of flats with a high standard of equipment. What remains a problem are the still predominating old housing resources characterised by a bad and progressively worsening technical condition and an insufficient number of renovations (10.). When it comes to the number of flats per 1 000 inhabitants, in 2010 the region was on the 2. place in Poland with the ratio of 384.2. Still, the pace of commissioning new flats was very low and was only 2.7 flat per 1 000 people, with the national average of 4.5.

Moreover, the area is characterised by:

- small average floor surface of the flat (15.);
- low percentage of residential units owned by natural persons (64.0%).

In the context of demographic conditioning and inhabitants' health condition an important measure of life quality is accessibility of basic and specialist medical services. **Health care base** in the region is developed but it needs to be adapted to the inhabitants' health needs:

- when it comes to the number of hospitals in 2010 the region was on the 6. place in Poland, and when it comes to the number of beds in hospitals/10 000 people it occupied 2. position;
- when it comes to accessibility of health care institutions/10 000 inhabitants in 2011 the region occupied 1. place in Poland;
- there has been a systematic development of medical rescue system; in 2011 there were 16 emergency rooms in the region (in 2004 – 6) and 10 medical rescue teams (in 2004 – 53);
- during 2005 – 2010 the number of doctors / 10 000 people increased (by 7.3%) (1.);when it comes to the number of pharmacies/10 000 people in 2011 the region was on the 2. place in Poland with 3.5 ratio.

Fig. 54. Average usable housing area in districts in 2010 *(Source: CSO)*

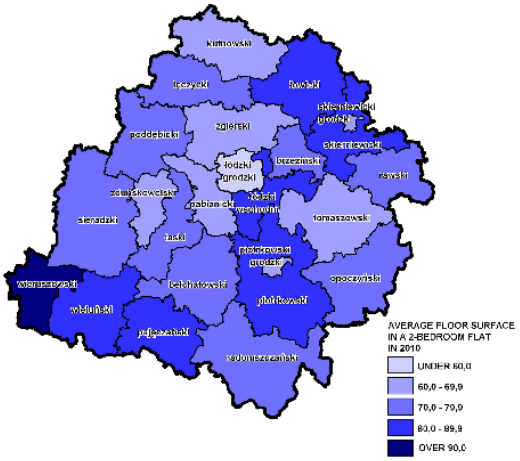


Fig. 55. Housing stock growth in districts in 2004 – 2010 *(Source: CSO)*

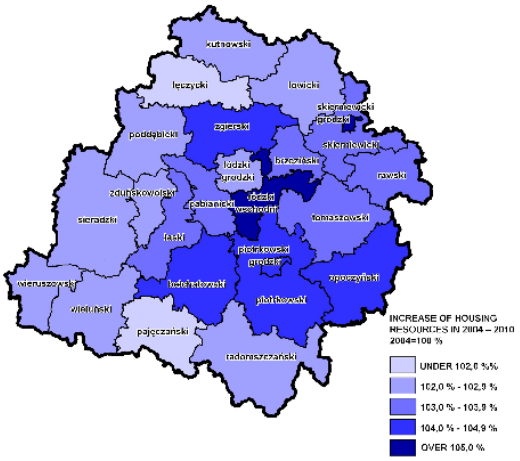
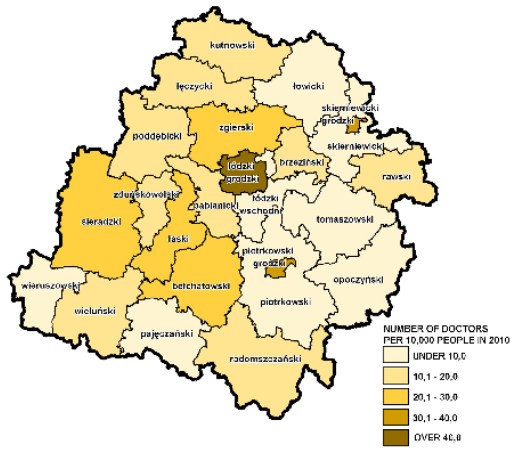


Fig. 56. Number of doctors/10 000 people in districts in 2010 *(Source: CSO)*



Concentration of health care facilities of supralocal and supraregional importance can be found in Lodz. It is necessary to adapt the network of hospitals and number of hospital beds to the population's needs since the accessibility of medical services is diversified and in some parts of the region – limited. There are not enough doctors from the following specialties: psychiatry, rheumatology, orthopaedics, oncology, geriatrics and neonatology, emergency and palliative medicine.

In the area of **social assistance base** in comparison with other regions in Poland, the Lodzkie Region is above average:

- when it comes to the number of places in residential care homes/10 000 inhabitants in 2011 the region was on the 5. position in Poland with the ratio of 29.8;
- 1.3 people/1 000 inhabitants in post-working age were waiting for places in the residential care homes in 2010 (7.).

Education and higher education in the region are most of all facing challenges connected with demographic situation as well as changes of regional economy towards creating knowledge-based economy. The region is characterised by incompatibility of the fields of study in secondary schools and universities with the needs of regional and local labour markets as well as too small a scale of educating in technical and natural fields of study. Despite progressing computerization in the education institutions one can observe a low level of implementing digital technology in the education process. Universities are insignificantly connected with external socio-economic environment, especially with the sphere of business. The universities are characterised by a relatively high number of academic workers. A growth of importance of Lodz as a strong academic centre as well as a progressing concentration of universities and students in the capital of the region can be observed (Lodz is the 4. academic centre in Poland). The majority of the total number of students (52.8% in 2011) is studying full-time.

Fig. 57. Number of places in social welfare establishments/1 000 people of post-working age population in districts in 2011 *(Source: CSO)*

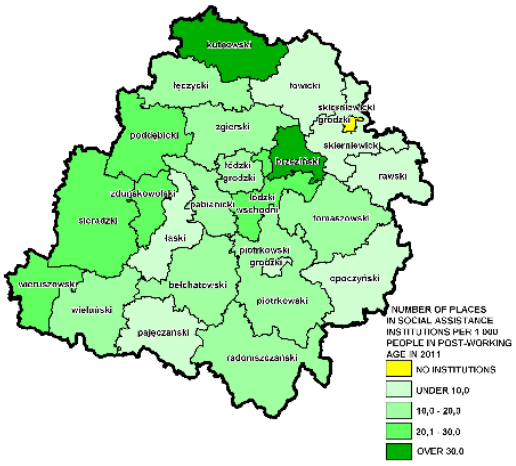


Fig. 58. Percentage of children at the age of 3 – 5 attending preschools in districts in 2011 *(Source: CSO)*

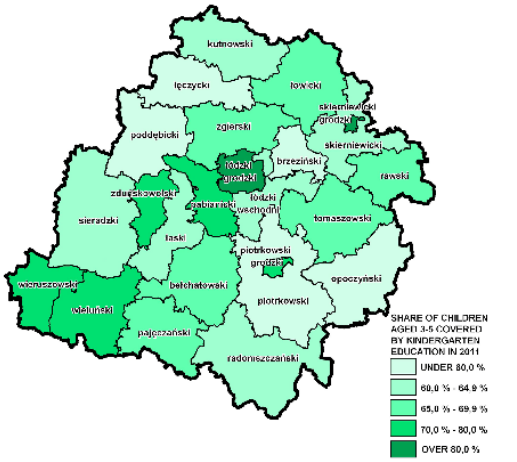
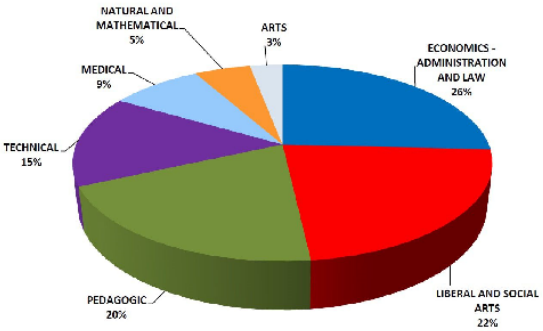


Fig. 59. Breakdown of university graduates according to majors in the Lodzkie Region in 2011 *(Source: CSO)*



In the smaller district centres the availability of education at post-secondary school level is limited. In 2011 there were no post-secondary schools in the following districts: łódzki wschodni, pajęczański and łaski. A weakness is a structural mismatch of the network of crèches and kindergartens to the local needs, especially in rural areas.

The region has a big potential in the area of **culture**, it does not however base its competitive advantage on it in the scale of Poland. There are numerous cultural institutions located in Lodz of national and international importance. One of the main elements of the cultural base of the region is cinematography whose development has been for years stimulated by the Lodz Film School. The one in Poland Museum of Cinematography is also connected with the cinema. A positive trend is a growing number of spectators and listeners in theatres and music institutions (the biggest concentration of theatre and music institutions was in Lodz – 11) as well as an increasing number of people visiting museums.

The worrying phenomena in the area include:

- insufficient number of culture centres in the rural areas (in 2011 64 communes did not have a culture centre) as well as a very poor cultural events attendance organized by these institutions (12.);
- small interest in galleries and art salons while increasing the number of these institutions to 47 in 2011 (3.);
- decrease of the number of libraries (from 572 in 2004 to 555 in 2011) and their active members;
- in 2004 – 2011 a decreasing number of performances in theatres and musical institutions (by 226);
- low level of using digital technologies in the modernization process of various forms of media (cinemas, museums, libraries).

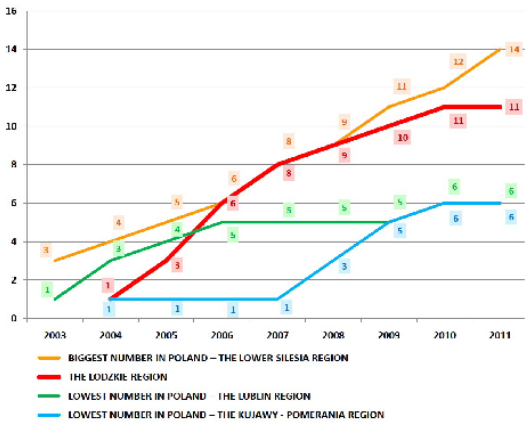
Availability of cultural services is a problem in the south-eastern part of the region.

Sports, recreational and tourist base is on the average development level, despite the fact that in the region there is a number of buildings of special importance in the scale of the country, e.g. The Olimpic Sports Centre in Spała, a mountain canoeing course in Drzewica or "Atlas-Arena" sports and entertainment venue in Lodz. Apart from that there are numerous high-quality accommodation places with conference rooms and recreational facilities in Lodz and in the region. These facilities are used for developing business, conference and congress tourism. Since 2004 there has been a growth of the number of sports facilities in the region, however their number is still insufficient (10. place in Poland when it comes to the number of total sports facilities, 13. place when it comes to the number of sports facilities/1 000 inhabitants). A small improvement in tourist infrastructure development can also be observed:

- the number of hotels, especially three-star hotels, has increased;
- agro-tourism was the most dynamically developing sector of accommodation whose number increased most in 2006 – 2008; in next years their number was close to the one in 2008.

The tourist attractiveness of the area is also influenced by tourist products, certified by the Polish Tourist Organization, whose number during 2004 – 2010 grew significantly (from 1 to 11). A limitation for the development of tourism is e.g. an insufficient promotion of places of tourist attraction as well as a poor marking of attractions and tourist routes.

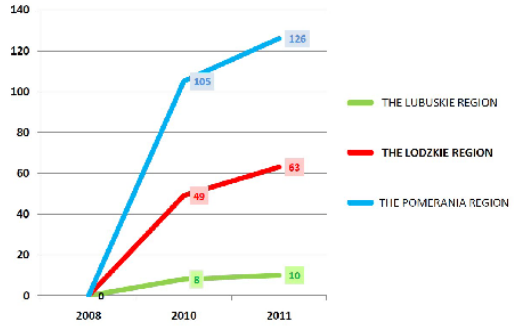
Fig. 60. Number of certified tourist products in the Lodzkie Region compared to other regions in Poland in 2003 – 2011 *(Source: own study of SPOoLR on the basis of information of RTOoLR)*



The most important problems in the social sphere which can hinder the development possibilities of the region include:

- constant decrease of population;
- depopulation process of urban centres;
- low level of human capital, including:
  - ageing process of the society,
  - adverse health situation of the inhabitants,
  - spatial polarization of the population education-wise;
- low level of social capital, especially in big urban centres with a significant diversification of the area when it comes to civil society development;
- low level of identification of the region's inhabitants with the Lodzkie Region;
- Insufficient, when it comes to the inhabitants' health needs, level of health care;
- regional diversification when it comes to availability and participation in preschool education;
- mismatching the education structure to the needs of the modern labour market;
- not using the cultural potential to create competitive advantages;
- unavailability of basic cultural services in many rural areas.

Fig. 61. Number of regional products in the Lodzkie Region compared to other regions in Poland in 2008 – 2011 *(Source: own study of SPOoLR on the basis of information of MAaRD)*



lowest number in Poland – Lubuskie Region
biggest number in Poland – Pomerania Region

Fig. 62. Number of participants of events organised by cultural centres/1 000 inhabitants according to districts in 2009 *(Source: CSO)*

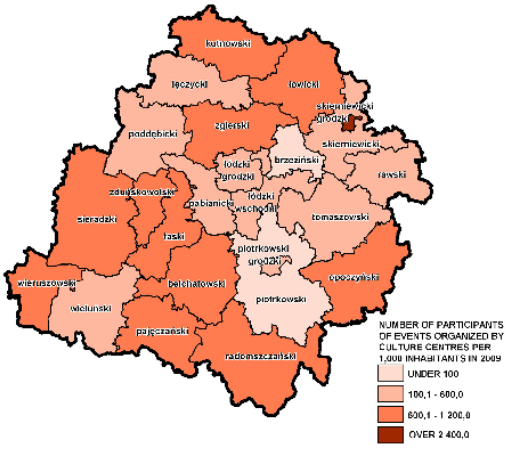


Fig. 63. Number of agro-tourism households in the Lodzkie Region in 2006 – 2012
(Source: own study of SPOoLR)

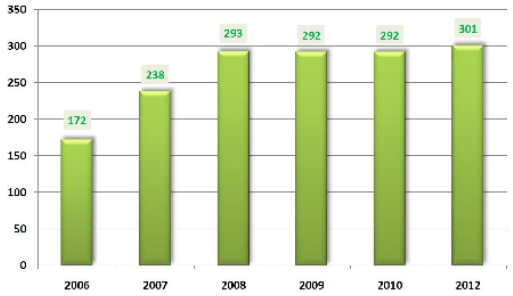
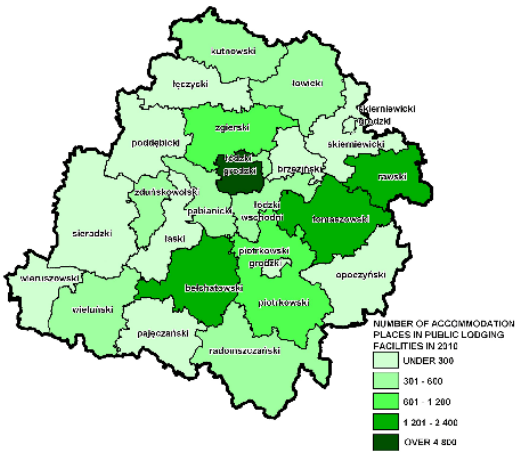


Fig. 64. Number of overnight lodgings in collective accommodation establishments in districts in 2010 *(Source: CSO)*



2.3. SPACE AND FUNCTIONAL AND SPATIAL CONNECTIONS

Central location of the region in the country, on the crossing of two out of four Pan-European transport corridors operating in the area of Poland as well as a planned construction of the Central Communications Hub create huge development opportunities for **transport infrastructure**.

The region is relatively well-equipped with hard surface public roads:

- hard surface road density ratio increased during 2004 – 2011 from 89.6 km/100 km^2 to 108.5 km/100 km^2 (4.);
- when it comes to the length of hard surface public roads (19 775.7 km) the area is on the 7. place in Poland;
- national roads network (1 348.8 km) is one of the longest in Poland (4.);
- the region is relatively well equipped with the district (8 302.0 km) and communal (8 946.3 km) (5.) roads network but in majority parameters of these roads are not adapted to serviced loads and traffic intensity;
- the regional roads network (1 178.6 km) is much worse in comparison to other regions (14.).

Technical condition of the existing road system is successively improving, however, the roads are still of a significant need of repairs. The indicator of the need of immediate repairs for national roads network was 17% in 2011 and was close to the country's indicator. During 2004 – 2011 over 750 km of regional roads were being gradually modernized. In 2012 a ring road of the town of Stryków, along regional road no 708 was commissioned. Since 2004 also an A-2 motorway, a section of A-1 motorway from Stryków to Kowal, a S-8 expressway Piotrków Trybunalski – Warsaw, a fragment of S-14 expressway as well as 5 town ring roads (Rawa Mazowiecka, Kutno, Krośniewice, Opoczno, Pabianice) have been commissioned along national roads on which transit and heavy traffic was directed. S-8 Lodz – Sieradz - Wrocław expressway and a section of A-1 Stryków - Tuszyn motorway are under construction. Implementation of the strategic road system made of motorways and expressways will enable to fully take advantage of the region's location in Poland and Europe. A challenge for the coming years is an implementation of an efficient system of access roads to motorways and expressways interchanges, especially in the area of Lodz.

The region is characterized by a relatively poorly developed railway network:

- low density of railway network (10) – there are only 5.8 km of railways per 100 km^2, with an average for Poland of 6.5 km;
- low technical parameters of the majority of railways.

What is a problem is the fact that there are no main railway lines of international significance in TEN-T network running through Lodz and no good connections with main cities in Poland.

The railway network in the area needs e.g. investments of reconstruction nature aimed at restoring regular timetable speeds as well as removing speed limits on the existing routes. A chance to solve problems with the region's railway service is a construction of Warsaw – Lodz – Wrocław/Poznań High Speed Rail as a part of TEN-T network with a tunnel passage under the centre of Lodz together with a construction of Lodz Fabryczna underground station, consolidated with modernization or construction of high-parameters conventional lines (e.g. Lodz Fabryczna – Lodz Kaliska cross-city tunnel) integrated with Lodz Metropolitan Rail.

There is a growing use of the potential of the Lodz Airport by the region. What seems to be the problem are too small a number of destinations and number of carriers. During 2004 – 2011 the number of passengers increased 62 times, to almost 391 000 passengers (8.) Opening in June 2012 the III passenger terminal with the target capacity of 3 million passengers per year gives a chance to increase air transport.

Fig. 65. Road network in 2012 *(Source: own study of SPOoLR)*

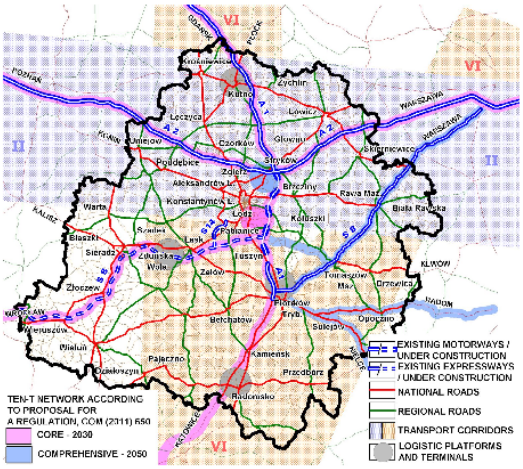


Fig. 66. Total road traffic in 2010 (average daily road traffic) *(Source: own study of SPOoLR on the basis of information of Transprojekt-Warszawa)*

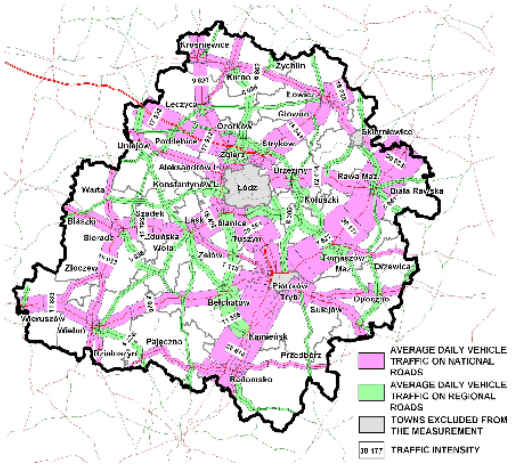


Fig. 67. Railway network and airports in 2012 *(Source: own study of SPOoLR)*

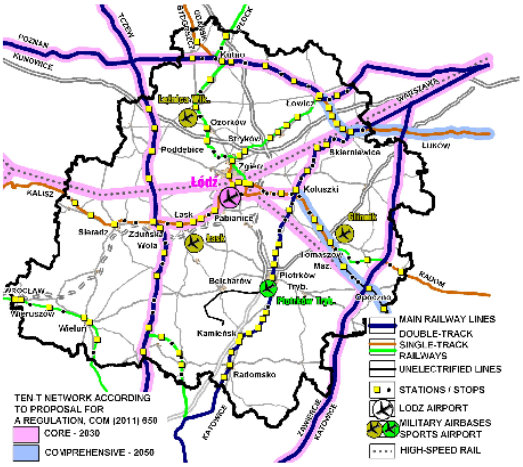


Fig. 68. Cities/towns with collective transport services in 2011 *(Source: CSO)*

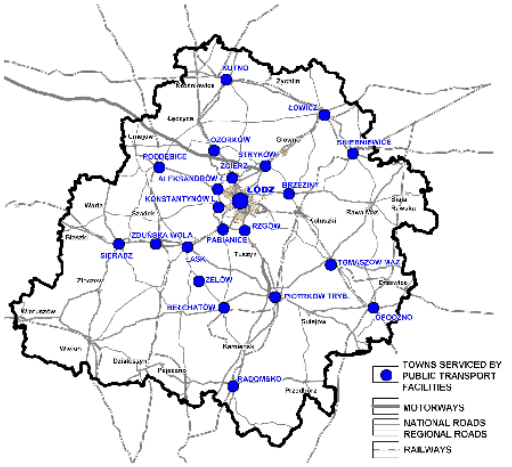


Fig. 69. Goods transport (thousand tonnes) by road in the Lodzkie Region in 2004 – 2011 *(Source: CSO)*

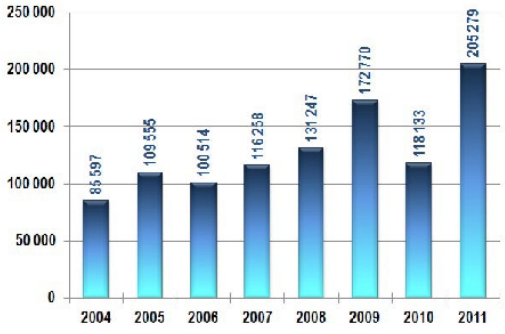
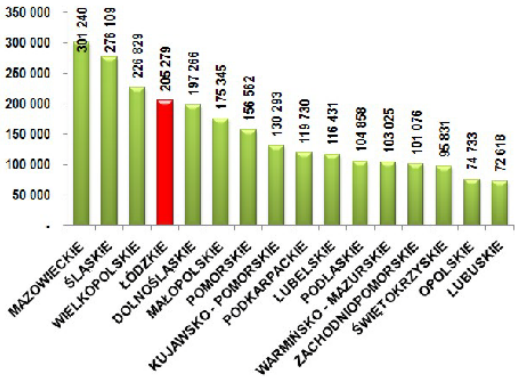


Fig. 70. Goods transport (thousand tonnes) by road in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*



The region has good bus connections both from the intra-regional as well as national and international perspective. Regular railway connections within the region are of a definitely smaller territorial scope than passenger bus communications.

The majority of cities in the region have city communications and both the number of passengers as well as the length of communications lines is satisfactory. What needs to be improved is communications of urban centres with Lodz as a part of the Conurbation of Lodz as well as improvement of the condition of infrastructure and fleet.

One of the most thriving branches of transport in 2004 – 2011 was goods road transport. The amount of goods to be transported in the region by cars increased, from 2004 to 2011, by almost 138.6% (to 101 900 000 tonnes) and the amount of accepted goods by 141.0% (to 103 400 000 tonnes). There is a big marshalling – freight yard in the region – Lodz Olechów, located in the area of commuter rail as well as Zduńska Wola – Karsznice station, located on coal main railway line – Silesia – Tricity. Moreover, in 2011 a modern rail multimodal terminal was commissioned in Kutno which is to ultimately clear 200 000 containers per year. Since 2009 Cargo Terminal has been operating at the Lodz airport used to a growing extent (in 2009 goods transport was 2.7 tonnes, whereas in 2011 290 tonnes). A gradual development of terminals integrating transport systems can be observed which will influence enhancing the region's position in international supply chains. A threat to the development of transport facilities is an insufficient technical condition of railways. Apart from that, there are no fully developed logistic centres but merely areas of logistic operation in the region. Warehouse – distribution facilities of the biggest surface are located mainly in the so-called "golden triangle" Stryków – Lodz – Piotrków Trybunalski and constitute the basis to set up a strategic European logistic centre.

During 2004 – 2010 the number of electric energy consumers in the region was constantly increasing and in 2010 was by about 100 000 higher from the national average which is about 900 000 people. In 2011 the region was on the 2. place in Poland when it comes to installed power in power plants as well as when it comes to generating electric energy (33 006.2 GWh). Energy security in the area of **power engineering** is ensured by energy generated by the Bełchatów Power Plant, Lodz heat and power stations as well as utility heat and power stations in Zgierz and Zduńska Wola. Additionally, the electricity generation system is supplemented by energy acquired from renewable energy sources. The region has a significant potential of biomass, geothermal water and wind, still, it occupies only 10. place in Poland when it comes to energy generation from these sources. The biggest wind power plant in the region of the power of 30 MW is located on Kamiensk Mountain (Góra Kamieńsk) in radomszczański district. Research and works of using the geothermal waters resources have been completed in Skierniewice and are still carried out in Lodz, Poddębice, Zduńska Wola, Wieluń, Rogóźno, Kleszczów, Ozorków and Radomsko. At present geothermal water in Uniejów is used for the purposes of heat engineering.

The region is characterised by an insufficiently developed **gas network** system, especially high-pressure gas network. Gas-supply services concentrate mainly in the cities/towns and their neighbouring rural areas. Low profitability of gas-supply to villages and stagnation of gas systems development in towns remain a problem. At present construction and modernization of high-pressure gas network is taking place in the region which should ensure security and growth of gas supply. Energy security in the area of oil products is ensured by a liquid fuels distribution base in Koluszki.

Fig. 71. Electricity generation in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*

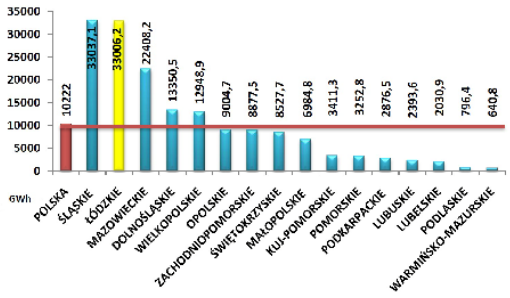


Fig. 72. Power engineering system in 2011 *(Source: own study of SPOoLR)*

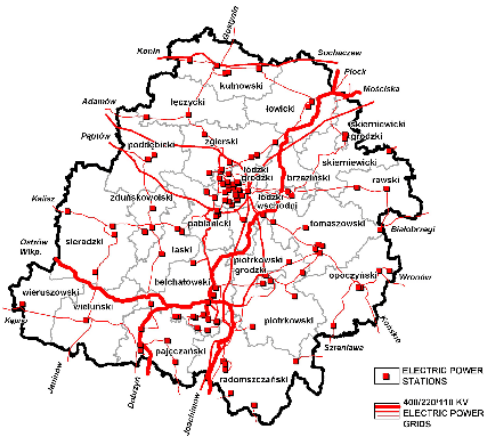


Fig. 73. Electricity generation from renewable energy sources in the Lodzkie Region in 2005 – 2011 *(Source: CSO)*

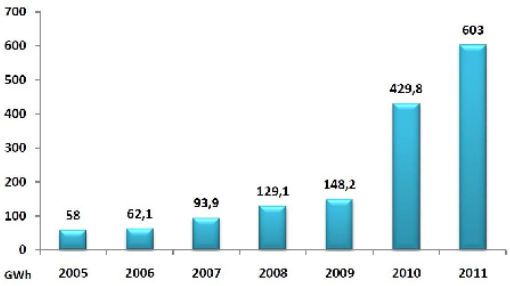


Fig. 74. Renewable energy sources in 2011 *(Source: own study of SPOoLR)*

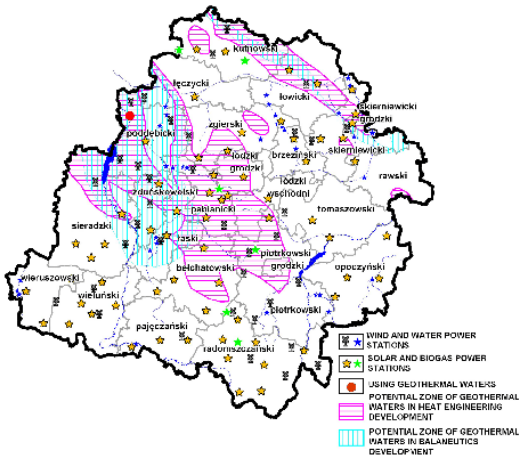


Fig. 75. Gas distribution system in 2011
(Source: own study of SPOoLR)

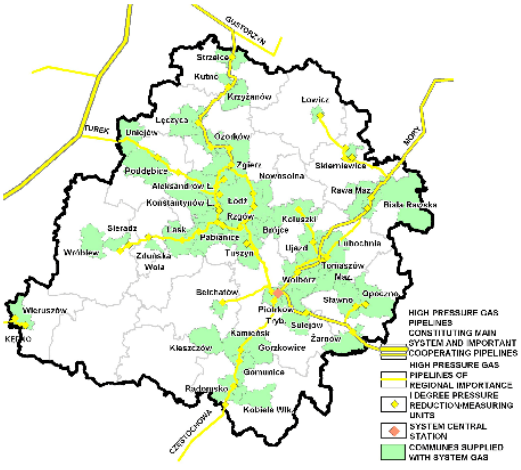
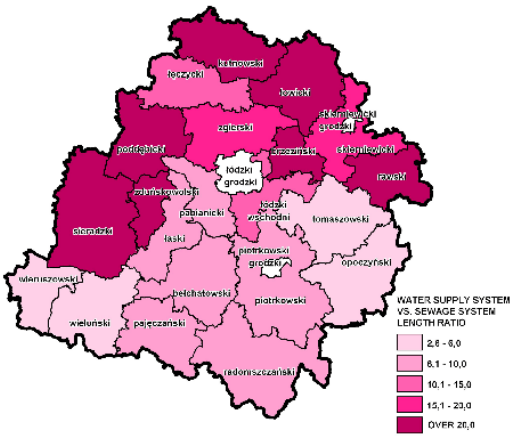


Fig. 76. Disproportions in the water supply and waste water network in rural communes according to districts in 2011 *(Source: CSO)*



In the area of **water management**, despite a gradual extension of water supply network systems, during 2004 – 2011 a positive downward trend of water consumption for consumer purposes was observed. A percentage of population using water supply system increased, especially in rural communes where the average ratio of water supply system provision was 81.7% in 2010 and was higher than the national average (74.9%).

When it comes to **sewage management** the region is characterised by an insufficiently developed network system of sewage disposal in rural communes (15.1% of sewage system provision). Despite an intensive development of the sewage system in villages during 2004 – 2011, what still remains a problem are significant disproportions between the developed water supply system and poorly developed sewage system. All cities/towns in the region have a sewage system (on average 83.8%) channelling the sewage to mechanical-biological sewage treatment plants, out of which 69% has extra increased removal of nutrients.

The region is relatively poorly equipped with **ICT infrastructure**. This applies most of to all households and enterprises despite the fact that during 2004 – 2011 the proportion of households with Internet-enabled computers increased from 14.4% to 54.9% in 2011. Also, the accessibility of broadband Internet is limited which results in digital exclusion of some parts of the area. During last years, a number of actions for creating an information society were undertaken, e.g.:

- implementation of "Lodman" – Regional Infohighway of the Lodzkie Region was initiated;
- a project of "Metropolitan Network of Broadband Internet Access" is being implemented;
- implementation of the "Infrastructure of the Lodzkie Region Regional System of Spatial Information" project was launched;
- implementation of the "Regional System of Medical Information" project was launched;
- implementation of the "Gates of the Region" project of the Lodzkie Region public e-services was launched;

What needs to be done is to undertake broader actions in the area of public administration informatization (e-government).

Generally, development of technical infrastructure should result in the development of enterprise and creating new workplaces.

Fig. 77. Percentage of enterprises with their own website compared to the total number of enterprises in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*

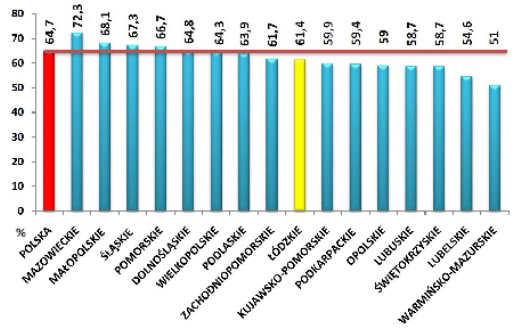
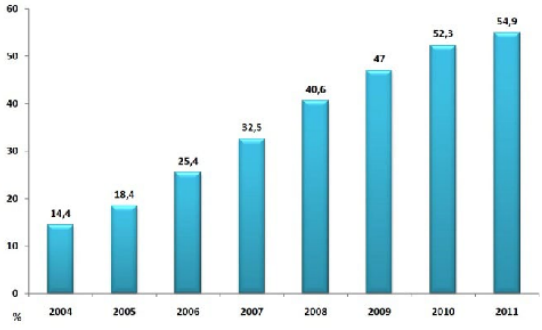


Fig. 78. Percentage of households with Internet-enabled computers compared to the total number of households in the Lodzkie Region in 2004 – 2011 *(Source: CSO)*



Natural resources and values of the region substantially condition the possibilities of development, influence the quality of life and can constitute a basis for increasing the area's attractiveness.

The region's lie of the land is characterised by merging lowlands' with highlands' features. It does not constitute any significant barriers for economic development and its diversity can have a positive influence on the development of tourism.

When it comes to **climate** an unfavourable phenomenon is precipitation deficit recorded especially in the northern part of the region as well as an increase of extreme weather conditions (floods, hurricanes).

Ore deposits, constituting material base for various branches of economy, are a value. In 2011 there were 961 ore deposits in the area of the region and since 2004 their number has increased by 288 deposits. The most important ones include: brown coal deposits in the area of Bełchatów and Złoczew, glass and moulding sands (Tomaszów Mazowiecki, Grudzeń-Las), construction ceramics argillaceous materials (Chełsty, Mokrsko), limestone (in the towns of Działoszyn and Owadów-Brzezinki), pottery clays, chalcedony and sandstones. The most numerous are natural aggregates deposits.

The exploitation of raw materials poses a significant threat to the environment, and most of all to the surface of the land, soils and waters. The biggest transformations of environment connected with opencast exploitation of brown coal deposits concentrate in the area of Bełchatów; they are being gradually eliminated in a reclamation process carried out mainly towards wooded areas.

The region is one of the five richest areas in Poland when it comes to **good quality underground waters resources**. They constitute about 8.3% of Poland's total resources and their amount is increasing. In 2011 the purity of underground waters can be defined as good, very good and satisfying. They constitute significant potential for council purposes.

Fig. 79. Soil pH values according to districts in 2010 *(Source: District Chemical-Agricultural Station in Lodz)*

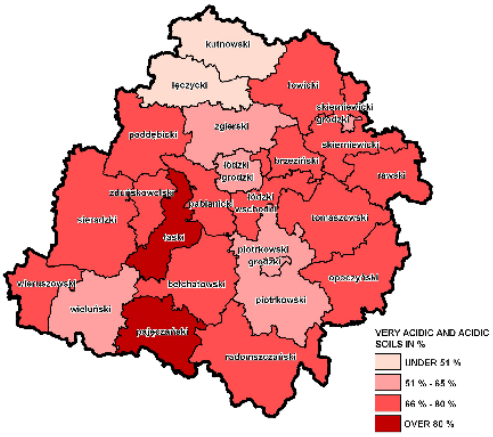


Fig. 80. Mineral deposits in 2011 *(Source: Polish Geological Institute)*

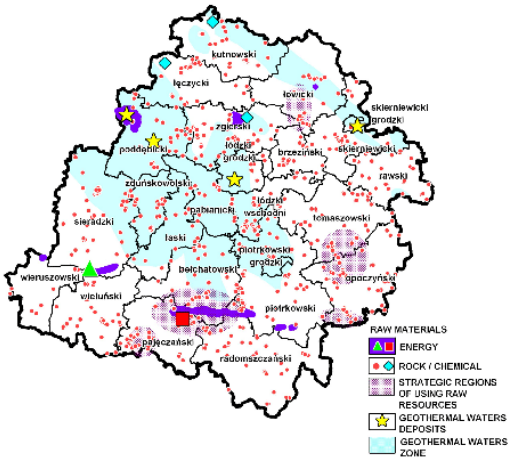
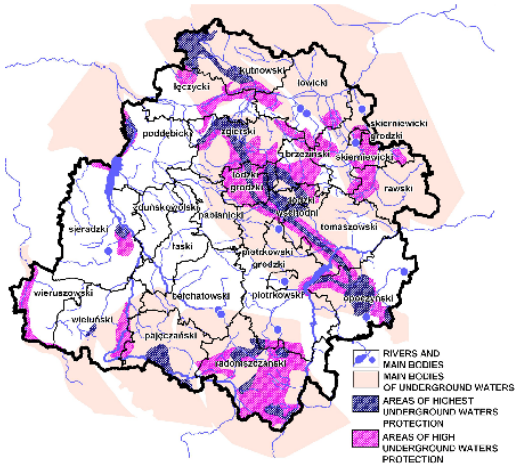


Fig. 81. Underground and surface waters in 2011 *(Source: own study of SPOoLR)*



The region does not have a significant amount of **rivers and water flows**. There are not enough water bodies and dams in the region. In 2010 there were 673 small retention facilities, including 139 typical retention bodies (two big ones Jeziorsko and Sulejów). Since 2004 only 3 bigger retention bodies and 20 dams have been built. The condition and ecological potential of surface waters is in general moderate and good, whereas chemical state has been generally defined as good; still, in 2011 the overall condition of UPSW[4] was to a major extent assessed as bad; 48% of the examined waters were eutrophicated. Due to small resources of surface waters and periodically appearing problem of drought and water deficit there is a huge demand for implementing irrigation of farmlands and woodlands. Compared to Poland the region has a small area of irrigated lands.

Commencing in the future brown coal exploitation in the area of Złoczew, can contribute to some significant changes of hydrogeologic conditions in the western part of the region.

Natural-soil conditions are much diversified. Soils are average and their usefulness for agriculture is decreased by high level of acidity (in 2010 the percentage of acidic and very acidic soils was 70%), caused mainly by natural factors. At present, also human impact factors in the agricultural and non-agricultural sphere have a significant influence on soil acidity. The best conditions for crop production are in the northern part of the region (in łęczycki, kutnowski and łowicki districts).

The area of **devastated and degraded land** in the region is on a level similar to the national average (the Lodzkie Region 0.25%, Poland 0.20%). A continuous growth of the percentage of rehabilitated areas can be observed (from 0.85% in 2004 to 1.28% in 2011 compared to the area of devastated and degraded land).

Wooded areas rate of the region is the lowest in Poland (21.1%) and intra-regionally diversified from the least afforested northern part to the most afforested south-eastern part. The problem is a significant fragmentation of forest complexes, domination of pine monocultures in the tree stand structure as well as an insignificant level of private forests development.

Compared to the country the region has a relatively small amount of areas with especially high natural values, and part of them still needs to be covered by legal protection. In 2012 the region was on the 15. position in Poland when it comes to the percentage of **protected areas** (19.8%) which, since 2004, has increased by only 4.5 percentage points. There have been all forms of legal protection in the area of the region: national park enclave – European Bison Breeding Farm, 7 landscape parks, 89 reserves, 17 areas of protected landscape, 5 NATURA 2000 areas of Special Conservation of Birds and 35 NATURA 2000 areas adopted by the decision of the European Commission, 36 natural-landscape complexes, 4 documentation sites, 850 ecological lands. The total area of legally protected lands was 361 259.8 ha.

What is still a problem is fragmentation and lack of a cohesive system of protected areas which has a negative influence on the whole natural environment and leads to degradation of areas of great natural interest. The problem is especially visible in the area of the Conurbation of Lodz and in landscape parks where a strong human impact on landscape and naturally highly valuable areas can be observed. Setting up a target comprehensive system of protected areas would enable to reach an indicator at the level of about 33% and would have a significant influence on improving the condition of environment in the region.

[4] UPSW – uniform parts of surface waters

Fig. 82. Wooded areas in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*

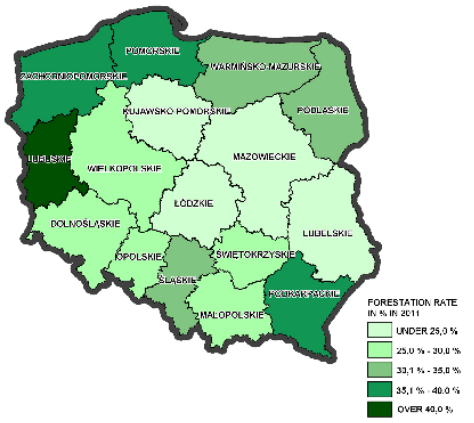


Fig. 83. Wooded areas according to districts in 2011 *(Source: CSO)*

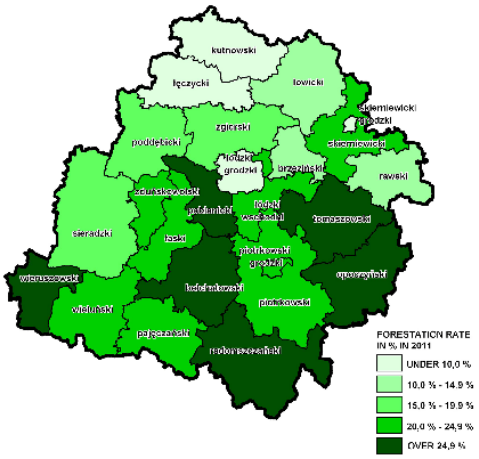


Fig. 84. Percentage of protected areas in the Lodzkie Region compared to Poland in 2011 *(Source: CSO)*

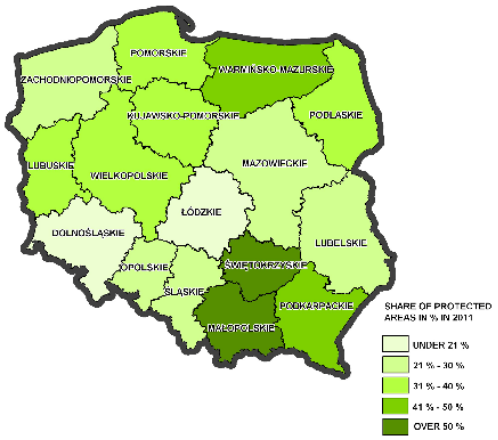


Fig. 85. Percentage of protected areas compared to the total area according to districts in 2012
(Source: own study of SPOoLR)

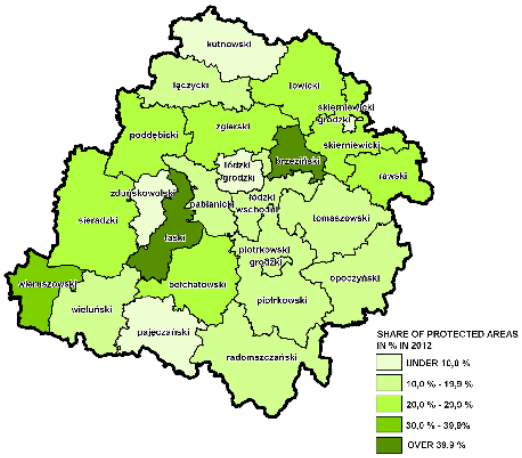


Fig. 86. Existing elements of the system of protected areas in 2012 *(Source: own study of SPOoLR)*

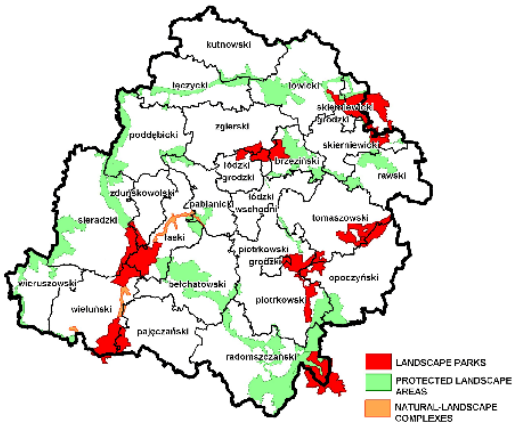
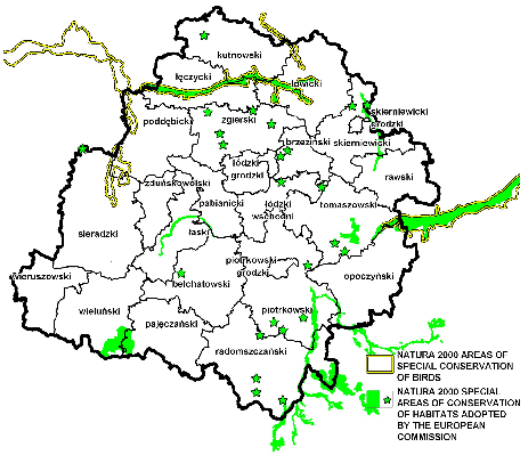


Fig. 87. NATURA 2000 areas in 2012 *(Source: own study of SPOoLR on the basis of information of General Directorate of Environmental Protection)*



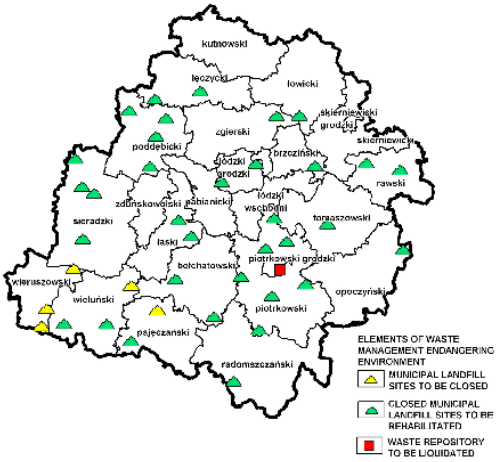
In the area of the region there are a number of **threats** that can influence comfort and quality of life. The most important of them include:

- **water pollution**: the main source of surface waters pollution is municipal sewage, run-offs from urbanized, agricultural and forest areas as well as line facilities; complete implementation of GOŚ – ŁAM system has caused a significant improvement of surface waters quality in the north-western part of the region (the Warta River watershed), however, their condition is still unsatisfactory due to existence of other sources of pollution;
- **flood hazard** which takes place on over 20 rivers of the area; the region has about 60% of the length of all rivers and flows regulated, it is on the 15. position in Poland when it comes to the length of floodbanks; an additional problem is locating the building development in river valleys and on floodlands;
- problems connected with **waste management:** too small a number of installations to process municipal waste, significant amounts of total produced waste and waste directed to landfill sites, a big number of not yet rehabilitated landfill sites excluded from exploitation as well as a low efficiency of selective collection of municipal waste;
- **air pollution**, which has its source in surface emission concentrated in cities and communications emission, especially in the areas of communications hubs as well as along main road routes; the amount of emission collected from point emission sources during 2004 – 2008 showed a decreasing tendency, still in 2010 and 2011 its increase was observed by 11% compared to 2008 and 2.6% compared to 2010, respectively;
- **communications noise risk**: exceeding the acceptable noise levels in environment in 2011 was noted in all measurement points of the cities in the region; industrial noise is not a big problem due to very restrictive legal regulations connected with its emission.

Electromagnetic radiation as well as operations connected with **storage and transport of hazardous materials and substances** were also included in potential dangers. The values of electromagnetic radiation strength do not pose a threat to people and living organisms, whereas troubles connected with storing and transport of hazardous goods occurred occasionally and were of local nature.

Fig. 88. Flood hazard areas in 2010 *(Source: own study of SPOoLR on the basis of information from Regional Water Management Authority in Warsaw, Regional Water Management Authority in Poznań)*

Fig. 89. Waste management in 2012 *(Source: own study of SPOoLR of the basis of information of Regional Environmental Protection Inspector)*



Settlement system of the region is characterised most of all by a huge domination of Lodz and a disproportion between Lodz and other urban centres. There are no cities with over 100 000 inhabitants. Also the size structure of towns with fewer than 15 000 inhabitants is disturbed. The spatial structure is also poorly balanced and is characterised by:

- decreasing the size of cities/towns together with the distance from a central town;
- uneven distribution of big urban centres;
- lack of bigger urban centres in the south-western and south-eastern part of the region,
- no regular network of cities/towns in the south-western strip from Lodz.

Cities/towns of the region create a network of centres with relatively small, spatial-wise influence areas. Their functional and spatial relationships are generally limited to relationships of particular centres with Lodz, including commuting (work and schools). Economic bonds are extremely impermanent and do not constitute a basis to develop a network of relationships. A characteristic feature is also a lack of horizontal connections between specific urban centres, including competition and cooperation relationships.

Cities/towns of the region are characterised by a significant diversification of socio-economic potential.

Lodz is a concentration centre of scientific-research potential, creative sector and other institutions generating metropolitan functions. However, these functions, in comparison with other cities in Poland are poorly developed and their influence level is often limited only to the area of the region. Moreover, there are almost 50% of industrial enterprises in the city, 50% entities of high and medium-high technology as well as over 50% of entities of business environment based in the cities/towns of the region. What is more, business entities located in Lodz generate about 70% of revenues from CIT generated by business entities of all urban centres. At present, the city economy is characterised by lack of clear specialization and main barriers in the development of modern economy of Lodz are most of all the following:

- no relationships between industry and R&D sector;
- low level of social capital;
- insignificant concentration of capital and control functions of international corporations;
- insufficient system of communications connections (especially railways) with metropolitan centres in Poland;
- strong influence of Warsaw.

Apart from Lodz, 16 cities/towns of the area are included into centres of high development potential, out of which only 4 are cities (80 000 – 40 000 inhabitants). These are: Piotrków Trybunalski, Bełchatów, Skierniewice and Kutno. Other centres are medium-size towns (40 000 – 15 000 inhabitants – Łowicz, Wieluń, Aleksandrów Łódzki, Konstantynów Łódzki, Rawa Mazowiecka, Łęczyca) and small towns (15 000 – 5 000 inhabitants – Poddębice, Tuszyn, Sulejów) and very small towns (under 5 000 inhabitants – Stryków, Rzgów, Uniejów). The majority of these centres is characterised by:

- high enterprise level of their inhabitants;
- concentration of business environment entities, which is an important factor of locating new economic investments;
- relatively high revenues from CIT.

A worrying phenomenon is losing socio-economic functions by some of the district cities/towns which are in this group. They include: Łęczyca, Łowicz, Poddębice and Wieluń. During 2006 – 2010 a process of socio-economic decrease of importance of these centres was noticeable, which can have a negative influence on the development of vast areas of the region and contribute to their peripherality.

Another group of the region's towns is made up of 26 centres with poor development potential. It includes:

- 6 big towns (Zgierz, Pabianice, Tomaszów Mazowiecki, Zduńska Wola, Sieradz, Radomsko);
- 3 medium-size towns (Ozorków, Łask, Opoczno);
- 12 small towns (including district centres of Brzeziny, Wieruszów, Pajęczno);
- 5 very small towns (Błaszki, Szadek, Zelów, Złoczew, Warta).

Economic structure of these towns is not very competitive and susceptible to crisis impulses, therefore it constitutes a very poor development basis in long-term perspective and hinders fulfilling a role of sub-regional and supralocal growth poles by the cities/towns. Cities/towns located in the zone of Lodz's direct influence – within the potential Lodz Metropolitan Area – have poorly developed complementary functions in relation to metropolitan functions of the central city. This applies mainly to the so-called "creative industries" and services for enterprises. Also disappearance of public services, in particular specialised, but also the basic ones can be noticed in these centres. Lack of complementary functions in relations to one another as well as in relation to metropolitan functions of Lodz can also be observed in the majority of cities/towns which are to fulfil the role of growth poles. In the group of centres with low development potential there are as many as 11 district cities/towns. Moreover, 6 of them (Zgierz, Pabianice, Tomaszów Mazowiecki, Zduńska Wola, Łask and Wieruszów) are centres which have recently been losing their socio-economic functions. Such a situation has an influence on the small competitiveness of the region's settlement system in the national and European system.

Small and very small towns, especially ones situated at the boundaries of the region have an even poorer development potential. Their poor development potentials, no functional and spatial relationships with the closest centres fulfilling the role of growth poles and with Lodz, as well as poor communications accessibility with the region's capital result in a deepening peripherality of vast near-boundary areas. Also functional inclinations towards neighbouring regions can be observed in these areas.

In relation to the whole settlement network, the most important issues are the following:

- no cities of a regional scope of influence as well as losing functions and development bases by cities which are to fulfil the role of sub-regional growth poles;
- weakness, insufficient potential and losing socio-economic functions by some of the district cities/towns;
- poor functional relationships between specific cities/towns;
- peripherality processes of boundary areas of the region;
- decreasing human and social capital resources in the cities/towns.

A serious challenge to developing a sustainable settlement system is lack of spatial order in cities/towns and in suburban areas. Post-industrial and residential-services areas, especially in city centres, are functionally, technically, economically and socially degraded. The problem applies most to Lodz. At present, actions undertaken under implementing the existing Local Rehabilitation Programmes in particular urban centres generally lack an integrated nature. In suburban areas one can observe processes of uncontrolled suburbanization resulting in increasing spatial chaos and losing natural and landscape beauty. This is a result of population's migration process between cities and **rural areas**. As a result of people's migration also the age structure of rural areas located in the vicinity of cities is changing (the percentage of people in pre- and post-working age is increasing and an increased birth rate is observed). The most favourable demographic processes can be observed in 34 such communes.

Fig. 90. Size and spatial structure of urban centres in 2010 *(Source: own study of SPOoLR)*

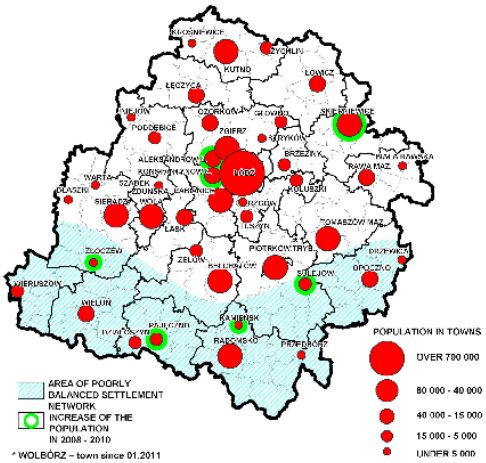


Fig. 91. Administrative hierarchy of urban centres in 2010 *(Source: own study of SPOoLR)*

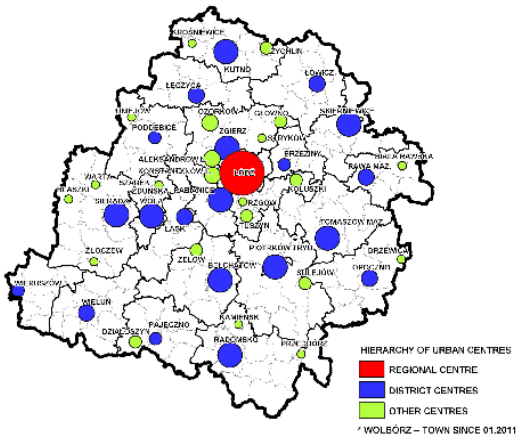


Fig. 92. Functional structure of cities/towns in 2010 *(Source: own studv of SPOoLR)*

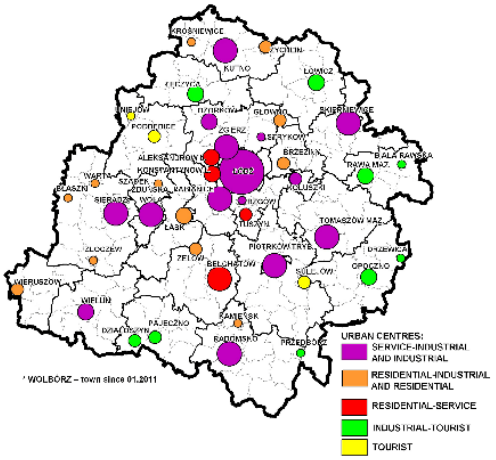


Fig. 93. National economic entities registered in the REGON system/10 000 people in cities/towns in 2010 *(Source: CSO)*

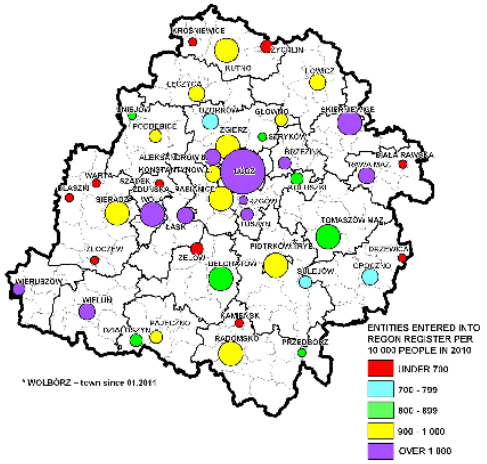


Fig. 94. Socio-economic potential of cities/towns in 2010 – centres with high development potential *(Source: own study of SPOoLR on the basis of information of CSO)*

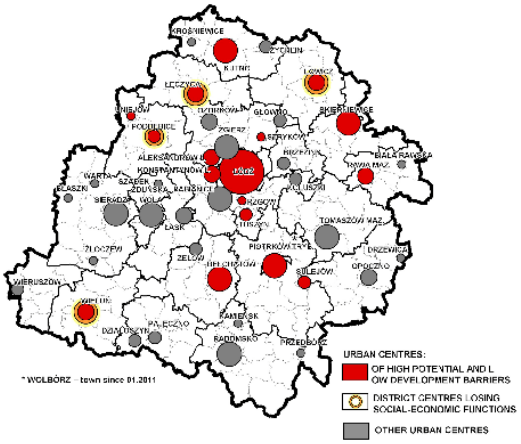
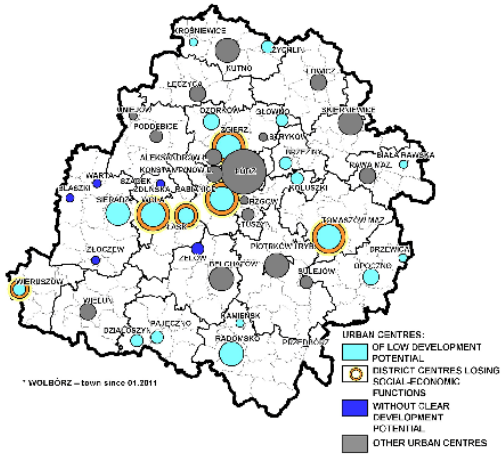


Fig. 95. Socio-economic potential of cities/towns in 2010 – centres with low development potential *(Source: own study of SPOoLR on the basis of information of CSO)*



A process of depopulation takes place in rural communes situated on the periphery. This applies to 76 rural communes (over 56% of the total number of rural communes), where in 24 communes the process has been mainly caused by migration, whereas in 52 communes by a negative birth rate. One of the factors mitigating negative demographic phenomena in some rural peripheral areas can be transformations of economic structure, including establishing non-agricultural work places.

An important element directly influencing the quality of life of rural areas inhabitants' is access to basic services of social infrastructure.

The main problem in the area of education in the rural areas is lack or poor availability of preschool institutions. In 2010 as many as 26 communes (about 20%) did not have a kindergarten education institution for children at the age of 3-5, and in other 42 communes the proportion of children attending kindergarten was below the regional average for rural areas.

In 2011, in the sphere of culture, in 64 rural communes (48%) there were no cultural institutions or centres. Paradyż was the commune that did not have a single public cultural institution.

When it comes to health care the areas of hindered accessibility to services in 2010 were rural areas which did not have doctors employed on full-time basis (28 communes, i.e. 21%). At the same time in 12 of these communes there were no generally-accessible pharmacies.

When it comes to economic development potential, the rural areas in the region are quite diversified. These potentials are both big resources of farmable lands with regions of horticulture, vegetable and animal productions distinguished in the scale of the country as well as a rich base of natural resources, natural and landscape beauty constituting a basis for tourism development as well as operating services and industrial enterprises.

Rural communes characterised by a high level of enterprise include most of all communes located in the vicinity of Lodz Agglomeration urban centres as well as Kutno, Skierniewice, Rawa Mazowiecka, Tomaszów Mazowiecki, Radomsko, Zduńska Wola, Wieluń and Wieruszów. In the scale of the region the commune of Kleszczów stands out, in the area of which there is the biggest number of operating big companies, with the heading Belchatow Brown Coal Mine and Belchatow Power Plant.

The most favourable conditions for agricultural production, measured by the agricultural production area valorisation index, which is 62.4 points for the region, are in the northern part of the region in łęczycki, kutnowski and łowicki districts as well as in the area of Piotrków Trybunalski, Sieradz and Wieluń.

In 2010 rural areas had many barriers resulting from infrastructural backwardness which significantly hindered their development and had a bad influence on the environment:

- 25 communes (18.7%) had a poor level of water supply coverage (below the national average for rural areas (74.9%);
- 37 communes (27.6%) had no water supply coverage at all or had it to a very low extent (below 1%); moreover only 19 communes (14.2%) had the water supply coverage above the national average (26.7%);
- in 2011 87 rural communes (65%) were characterised by very big disproportions between the length of water supply system and sewage system (10.3 : 1).

In general, infrastructural problems, connected most of all with unsettled sewage management, were present in the area of 112 rural communes in the region.

Fig. 96. Changes in the population of rural areas in the Lodzkie Region in 2004 – 2010 *(Source: CSO)*

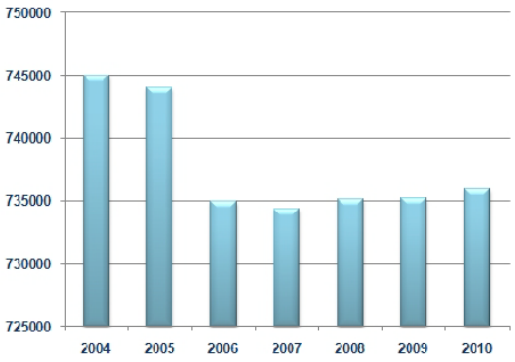


Fig. 97. Demographic processes in rural areas in 2004 – 2010 *(Source: own study of SPOoLR on the basis of information of CSO)*

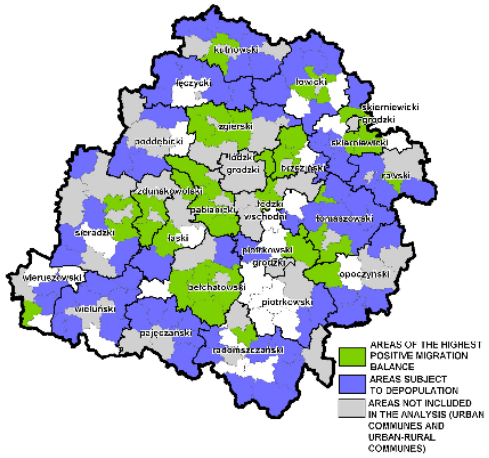


Fig. 98. Areas of concentration of adverse demographic processes in rural areas in 2010 *(Source: own study of SPOoLR)*

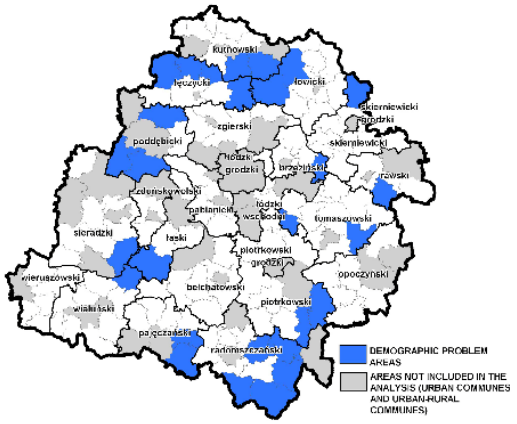


Fig. 99. Economic potential of rural areas in 2010 *(Source: own study of SPOoLR)*

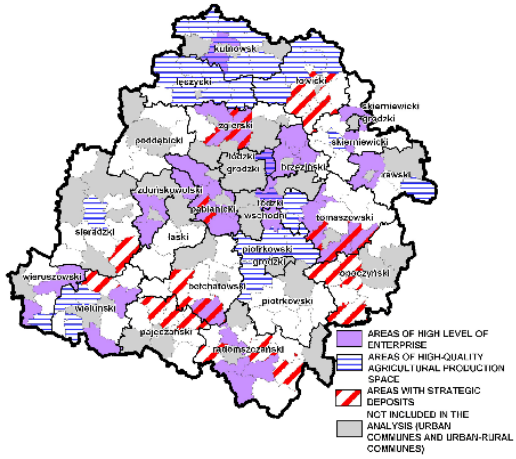
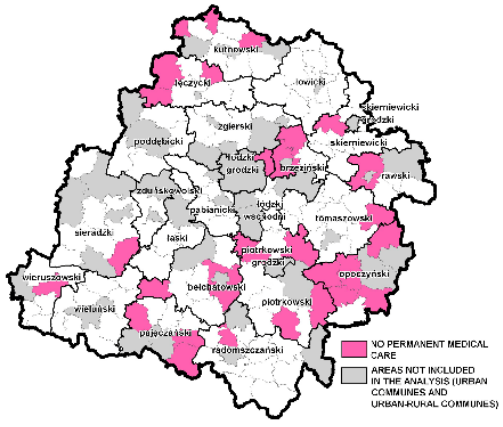


Fig. 100. Accessibility of social infrastructure in rural areas in 2010 – education *(Source: CSO)*

Fig. 101. Accessibility of social infrastructure in rural areas in 2010 – health care *(Source: CSO)*



2.4. MANAGEMENT IN PUBLIC SECTOR

Regional and local development is significantly connected with institutional efficiency and institutional base. The ability of local authorities (especially at the level of the commune), both to inscribe into the process of implementing and realization of the development strategy for the region as well as to undertake actions to fulfil the needs of local communities is of fundamental importance. The ability of local authorities' cooperation with non-governmental and private institutions acting for regional development is important as well.

The most important issues concerning the institutional efficiency in the Lodzkie Region include:

- inadaptability of organizational structures of numerous communes to planning development and management;
- no modern human resources management systems in communal offices;
- no local area development plans in many communes as well as lack of understanding of significance and importance as well as the ability to compile strategic documents;
- low level of finance and investments planning in a long-term perspective, especially in smaller communes;
- poor institutional base in the sphere of non-governmental organizations which proves low civil activity;
- limited ability of local authorities to co-operate with non-governmental organizations;
- no cooperation of local government authorities in compiling integrated projects of supralocal importance;
- inability to co-operate of local government authorities on partner conditions.

Institutional efficiency of the public sector is also represented by projects implemented with the support of external financial means under operational programmes.

At the end of 2011, in the area of the Lodzkie Region, 9 213 projects were implemented and financed under: The Operational Programme Infrastructure and Environment (OPI&E), The Operational Programme Innovative Economy (OPIE), The Operational Programme Human Capital (OPHC), The Regional Operational Programme for Lodzkie Voivodship (ROPLV) as well as The Rural Development Programme (RDP). The value of all projects in the area is over PLN 21 billion (over 53% of total costs). Until the end of 2011, under all five programmes, in total 7 685 projects[5] were implemented (over 83% of the total number of projects) of the total value of about PLN 6.2 billion:

- the biggest number (over 95%) from RDP as well as OPHC (almost 75%) and ROPLV (over 70%);
- the lowest number from OPI&E (almost 45%) and OPIE (almost 54%).

By the end of 2013 there is over PLN 7.5 billion to be used in the region from EU subsidies, including over 40% under OPI&E and over 25% from ROPLV.

An important element of the development policy is international as well as inter-regional cooperation implemented at many levels through: cooperation with partner regions from abroad, participation in international projects (e.g. in "Rail Baltica Growth Corridor" project), taking part in projects with regions from the country.

The most important actions under international cooperation of the Local Government of the Lodzkie Region are: benefiting from the advantages resulting from European integration, deepening the region's economic integration as well as promotion of the Lodzkie Region in the international arena.

Local Government of the Lodzkie Region has established and is reinforcing an extensive contact network with 19 regions from 12 European countries, both EU (Austria, the Czech Republic, France, Spain, Germany, Sweden, Hungary, Great Britain, Italy) and also non-EU(Belarus, Russia, Ukraine).

[5]Deadlines of projects' implemention, resulting from applications for financial aid, have been adopted as the projects completion criteria.

Operations implemented under cooperation take place on the basis of cooperation agreements (11 regions), letters of intent (3 regions) as well as a non-formalized cooperation (5 regions).

An important element of foreign cooperation is also cooperation in international projects with regions that are not partners of the Lodzkie Region. These are project that are implemented by INTERREG (interregional cooperation programme) and URBACT (cities cooperation programme) Community Initiatives. The region takes part in 6 projects implemented under INTERREG IVC and the Marshal's Office, as the institution managing EU's funds, has a function supporting the participation of Lodz in the URBACT programme.

Among projects implemented by the Lodzkie Region with Polish regions there are projects connected e.g. with funds management, biotechnologies and transport.

Local Government of the Lodzkie Region is also a member of network projects, implemented under the state's governmental programmes. These are the following:

- "INTREGRISNET" partnership network of cooperation and exchange of experience on interventions supporting implementing Regional Innovation Strategies;
- Interregional cooperation network for the labour market and education;
- Cooperation network of Intermediate Bodies of OPHC of the regions: pomorskie, lodzkie, warminsko-mazurskie, kujawsko-pomorskie and śląskie in the area of compiling regional strategies of implementing OPHC means.

Moreover, the interregional cooperation in Poland has a strong factual support by the Council of Marshals which is a forum for exchanging experience between Polish regions.

Apart from that the Lodzkie Region cooperates with regions in Poland and abroad as a part of:

- Polish Consortium of Bioregions;
- Central European Consortium of Bioregions;
- Association of Polish Regions of the Baltic Sea and the Adriatic Transport Corridor.

Fig. 102. Percentage of projects implemented under specific operational programmes compared to the total number of projects in the Lodzkie Region at the end of 2011 *(Source: wn study of SPOoLR on the basis of information of MRD, the Marshal's Office of the Lodzkie Region, ARMA)*

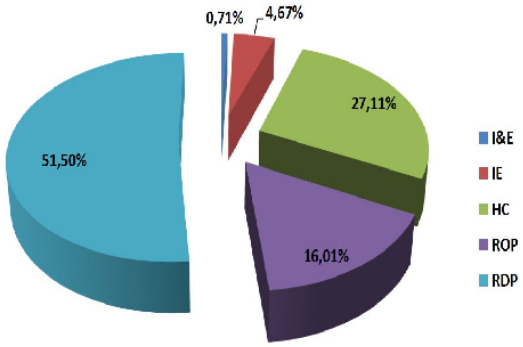


Fig. 103. Value of projects implemented under specific operational programmes in the Lodzkie Region at the end of 2011 *(Source: own study of SPOoLR on the basis of information of MRD, the Marshal's Office of the Lodzkie Region, ARMA)*

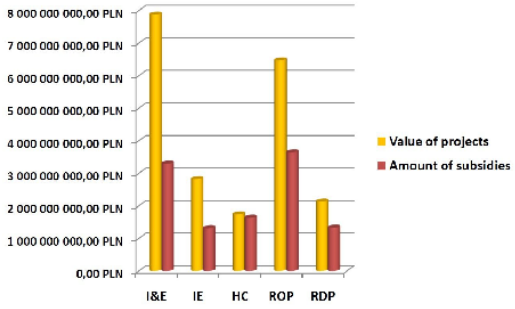
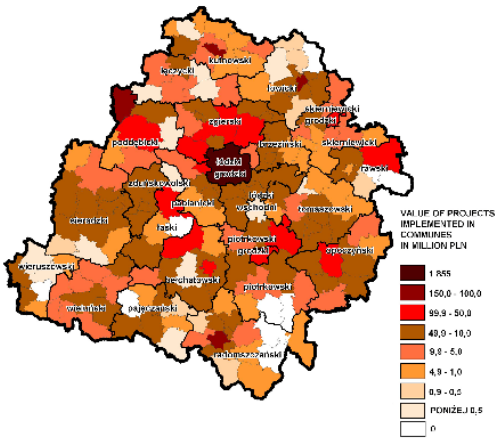


Fig. 104. Value of projects implemented in communes under the Regional Operational Programme for the Lodzkie Region 2007 – 2013 in communes at the end of 2011 *(Source: own study of SPOoLR on the basis of information of the Marshal's Office of the Lodzkie Region)*



3. Functional areas

Five unique areas can be distinguished in the Lodzkie Region, which due to their spatial features, endogenous potential, concentration and development of specialist economic functions as well as the existing and developing functional relationships can constitute a base for establishing the region's strong competitive position.

3.1. LODZ METROPOLITAN AREA

Lodz Metropolitan Area is an area of the biggest concentration of economic, social and spatial processes influencing the development of metropolitan functions of Lodz in the region and its functional relationships with other cities/towns. Situated in the central part of Poland it has a chance to act as an important hub in communications system and network structure of planned metropolises in Poland. Proximity of the capital and developing functional relationships between Lodz and Warsaw favour developing a bipolar system. However, it needs to be emphasised that the proximity of Warsaw can be both a chance as well as a barrier for LMA development.

The main principles of LMA delimitation have been the following:

- good communications connections with the central city, enabling transport accessibility of Lodz in 30 minutes,
- existence of cities with strong socio-economic potential, enabling to develop specialized functions or complementing metropolitan functions of Lodz;
- existence of investment areas enabling creating an attractive suburban residential zone as well as leisure-recreation areas.

Delimitation criteria include:

- quantitive socio-economic features of communes,
- qualitative functional and spatial features,

Fig. 105. Transport accessibility of Lodz in 2011
(Source: own study of SPOoLR)

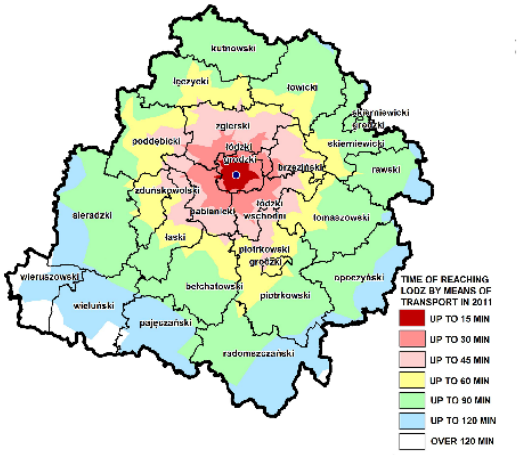


Fig. 106. Area of creation of functional and spatial relationships in the Agglomeration of Lodz
(Source: own study of SPOoLR)

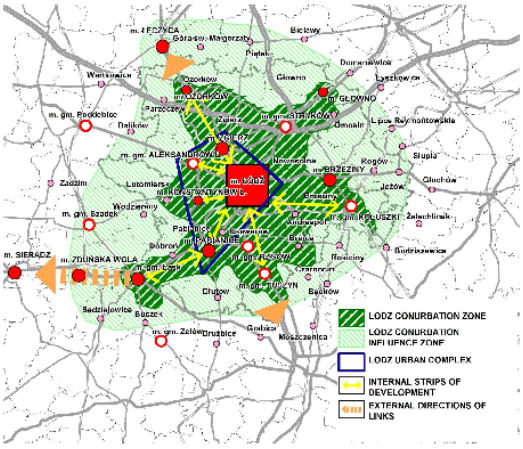
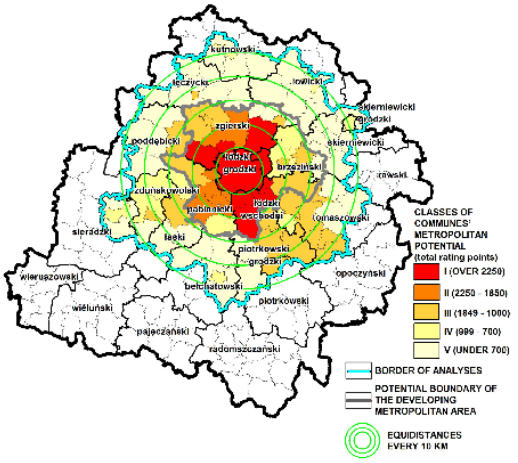


Fig. 107. Delimitation of Lodz Metropolitan Area
(Source: own study of SPOoLR)



The area of LMA is about 2 500 km^2, which is 13.7% of the region's territory, out of which over 680 km^2 are already invested areas as well areas for investments. Population of the region (1 116 660 people in 2010) constitutes 44% of the region's inhabitants. Population density in LMA is almost 447 people/km^2, with the regional average of 139 people/km^2, whereas the percentage of urban population in the area is at the level of 87% with the area's average of about 64%. The core of LMA is Lodz Conurbation where the level of urbanization is the highest and where areas constituting a potential for developing metropolitan functions are concentrated.

The dominating role in LMA is played by Lodz whose position results from a huge majority of population potential as well as the most developed specialist functions of metropolitan nature. Academic, culture-forming and scientific-research functions focus in Lodz. Academic potential is based on Medical University of Lodz, University of Lodz and Lodz University of Technology as well as art institutions of higher education: Academy of Fine Arts, Academy of Music and the National Film School which have prestigious, the only-in-Poland fields of study. Lodz research and development units carry out their operation e.g. in the area of clothing-textiles, occupational medicine and molecular research. The key role in the development of cultural functions of Lodz is played by theatre institutions, unique in the international scale museums, including a museum of modern art as well as national and international events and festivals. Lodz is also an important centre in Poland of specialist medical services and services of enterprises from BPO and IT business. This potential is supplemented by development of specialized branches of industry in the business of domestic appliances, construction materials, clothing and textiles.

The most important elements of the endogenous potential of the city are also traditions of multi-cultural development as well as XIX century textile industry. It is reflected e.g. by spatial layout of the city as well as unique factory-residential complexes. Still, the big number of post-industrial areas and years of neglect of historic city buildings result in significant needs in the area of comprehensive, system rehabilitation. Structural transformations already done and anticipated in the nearest future in Lodz will enable to use the historic heritage of the city and at the same time will contribute to a change of its image from a XIX century industrial city to a modern and creative city of culture, science, art and innovative economy.

A serious threat to the future development of Lodz and at the same of the metropolitan area is a bad and worsening demographic situation. Lodz is characterised by indicators worse from the average regional ones and in this respect the Lodzkie Region is one of the worst in Poland. Development barriers of the city as a metropolitan centre are also: an insignificant level of capital concentration and control functions of trans-international corporations in comparison with other metropolises in Poland, a small number of attractive work places using the potential of university graduates, disintegration of circles operating in the creative sector, which results in e.g. human capital outflow.

The biggest, apart from Lodz, cities of LMA are Pabianice and Zgierz. Economic specialization of these centres is based on the development of pharmaceutical, clothing, food, chemical and construction materials industry. These cities have also a culture-forming potential connected with XIX century functional and spatial layouts as well as industrial-housing development. A barrier in the development of metropolitan functions is most of all poorly developed services for enterprises as well as a low development of high- and medium-high technology industries.

Other urban centres of LMA fulfil trade and logistic functions (Stryków, Rzgów, Tuszyn), industrial functions (Stryków, Rzgów, Aleksandrów Łódzki, Konstantynów Łódzki, Ozorków), and medical ones (Tuszyn).

One of the most significant problems of rural communes of the metropolitan area is a spontaneous and uncontrolled development of urbanized areas, including new housing development. These processes often constitute a threat to natural-cultural potential of LMA, they contribute to degradation of natural

environment, cultural landscape and increase of spatial chaos.

An area of LMA open lands has outstanding natural and landscape and cultural beauty constituting a potential for development of tourist – recreational functions of supraregional scope of influence. The most valuable areas are the Landscape Park of Lodz Hills, garden cities (Tuszyn Las, Sokolniki Las, Grotniki Las, Kolumna, Wiskitno, Wiśniowa Góra), residential-holiday towns (e.g. Rochna with Rochna-Lisowice Reservoir, which is a tourist base for Lodz, Tworzyjanki) as well as towns with rich stores of cultural heritage. Also tourist routes, including the "1914 Battle of Lodz Trail", are an important element. Resources of geothermal waters which can be found in the region of Rogóźno as well as unique climate values enable development of spa-recreational functions.

Despite a convenient, central location the LMA has insufficient communications relationships with the rest of the country, including with other metropolises. This is mostly a consequence of a small number of connecting flights and a lack of fast rail connections. In the future, after implementing the HSR, the situation should change which will result in e.g. inflow of new inhabitants as well as investors, especially in the cities.

The presently implemented strategic road system will include Lodz and the metropolitan area in the system of efficient national and international connections. A barrier in the development of LMA is lack of integrated collective transport systems in the metropolitan area, still some important hubs constituting a potential for development of multimodal transport are located in the region (Lodz, Koluszki, Stryków).

The most important development challenges resulting from the assessment of the condition of Lodz Metropolitan Area are:

- **enhancing the role and importance of Lodz among other metropolitan centres in Poland, e.g. by development of university education and increasing the significance of Lodz as an academic centre, development of R&D, enhancing creative economy, development of cultural functions of national and international importance, development of leading services and industrial specializations,**
- **system rehabilitation operations in the cities/towns of LMA,**
- **comprehensive actions for developing spatial order and maintaining landscape and natural beauty of the area,**
- **increasing transport accessibility, both external as well as internal,**
- **taking up system cooperation between units of local government.**

Fig. 108. Lodz Metropolitan Area
(Source: own study of SPOoLR)

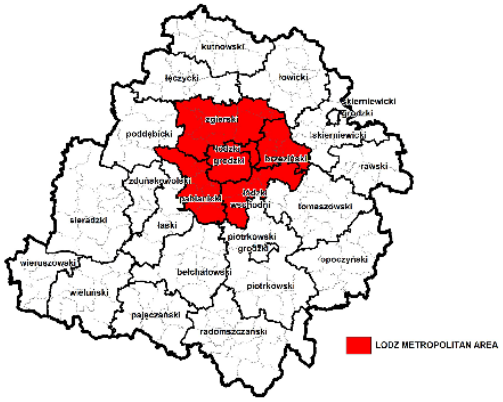


Fig. 109. Environmental and cultural heritage resources
(Source: own study of SPOoLR)

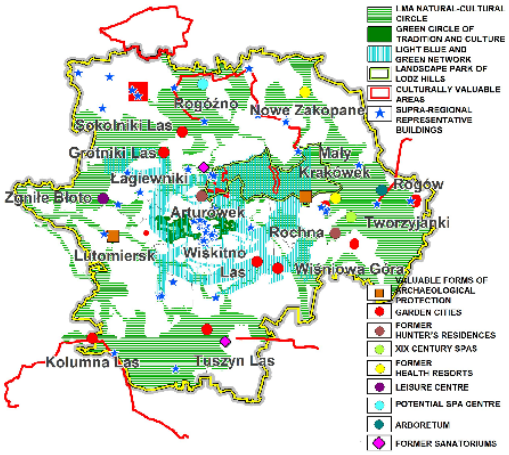


Fig. 110. Population density (people/km^2) in the communes in 2011 *(Source: CSO)*

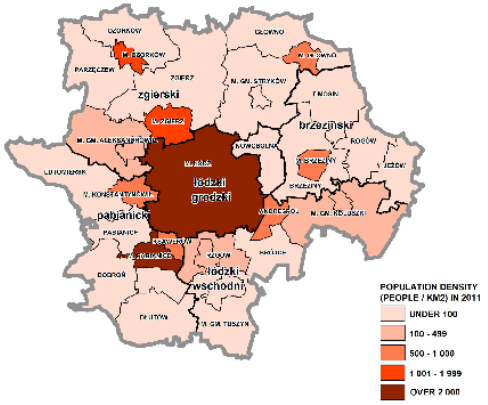


Fig. 111. Migration balance in 2011
(Source: CSO)

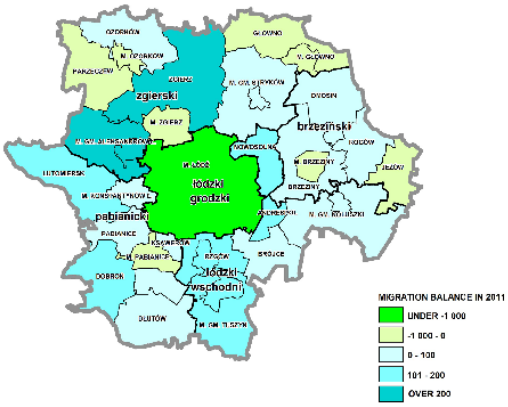


Fig. 112. National economic entities registered in the REGON system/10 000 people in the communes in 2011
(Source: CSO)

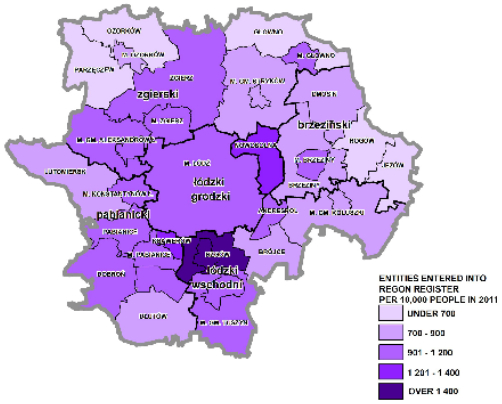
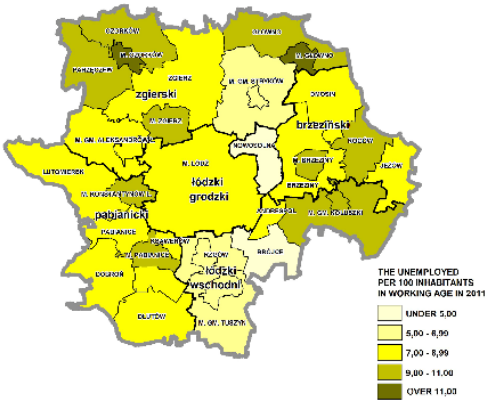


Fig. 113. Unemployed population/100 people of working age population in 2011
(Source: CSO)



3.2. BEŁCHATÓW – SZCZERCÓW – ZŁOCZEW MINING AND ENERGY GENERATION CENTRE

The functional area of Belchatow – Szczercow – Zloczew Mining and Energy Generation Centre is a region of raw materials economy predominance based on vast resources of brown coal and production of electric energy and heat. As a part of Polska Grupa Energetyczna Górnictwo i Energetyka Konwencjonalna S.A. Belchatow Power Plant and Belchatow Brown Coal Mine operate in this area. The Belchatow Power Plant is one of the biggest combined heat and power plants in the world and the biggest producer of power in Poland, generating 20% of the country's electric energy. Recently the Belchatow Power Plant has started a new power unit of the power of 858 MW. Belchatow BCM is the biggest opencast mine in Poland and one of the biggest in Europe. Average annual coal output is about 35 million tonnes which constitutes 50% of the national output. At present the mine is exploiting "Bełchatów" and "Szczerców" field, and implementing the directions of the state power policy it is at the same time carrying out preparatory works to begin exploitation of "Złoczew" deposit. The beginning of mining is scheduled for 2018. Bełchatów BCM also deals with recycling ores which accompany the brown coal deposit. Extracted ores are used as a raw material base in e.g. construction, road- constructions as well as in the production of pure mineral fertilizers necessary for eco food production.

The area is characterised by positive demographic processes, a stable labour market and focuses highly-qualified workforce employed in power-mining industry. However, the weakness is lack of specialist scientific-research units from the field of power industry as well as poor adjusting of education profiles on the secondary and higher level to the needs of regional economy.

Operation of the mines has a positive influence on financial situation of local governments which is directly reflected by a growth of the level of communes' technical and social infrastructure as well as supporting enterprise. The commune which has the best financial situation and offers most favourable conditions for a dynamic development of industrial and economic zones and has vast land resources for investment purposes is Kleszczów.

Specialization of the area in conventional energy generation is connected with environmental changes. As a result of the operation of mines a change of the lie of the land and decrease of the surface waters level have taken place, which has worsened the conditions for development of agriculture. Also the constantly increasing surface waters deficit constitutes a problem. What is more, the power plant operation is connected with gaseous and dust pollution emission. Undertaken actions, connected with the requirements of EU legislation result in a gradual decrease of the pressure on environment. As a result of adopting the climate package by Poland, works on an innovative technology of capturing, transport and storage of carbon dioxide in geological structures (CCS) have begun.

Renewable energy sources: biomass in the cogeneration process as well as wind power from the power plant on Kamieńsk mountain in radomszczański district have been included into the system of electricity generation. Also using the resources of geothermal waters in the commune of Kleszczów are planned to be used for power generation. Degradation of the lie of the land, soils and waters is being gradually eliminated in the rehabilitation processes. The main aim of rehabilitation is restoring forest areas on lands degraded by mining activity. As a result of a comprehensive rehabilitation of post-exploitation areas Kamieńsk mountain was created which is becoming important in popularisation of active leisure (a ski route, bicycle trails, an alpine slide). Growing demand for electric energy and natural resources for industry guarantees further development of the area. Presently, works are being done connected with the scheduled start of "Złoczew" opencast. Once it is started other communes will be included in the functional zone of the Centre.

At the same time industries developing in Piotrków Trybunalski (engineering, precise and

paper industry) which are functioning with the use of modern technologies can have an influence on the local labour market as well as future investment areas located in the vicinity of A-1 motorway and S-8 expressway.

The most important development challenges resulting from the assessment of the condition of Belchatow – Szczercow – Zloczew Mining and Energy Generation Centre are:

- **setting up a strong scientific-research base from the field of power and mining industry,**
- **development of green industries and services for using RES,**
- **adapting to the requirements of EU climate policy, e.g. by implementing low-emission coal technologies,**
- **rehabilitation process of post-exploitation areas,**
- **protecting areas in the vicinity of the scheduled Złoczew opencast from the influence of the forecasted depression cone,**
- **improving the internal and external transport accessibility.**

Fig. 114. Bełchatów – Szczerców – Złoczew Mining and Energy Generation Centre *(Source: own study SPOoLR)*

Fig. 115. Brown coal output in Bełchatów Mine compared to major mines in Poland in 2010 *(Source: ERO)*

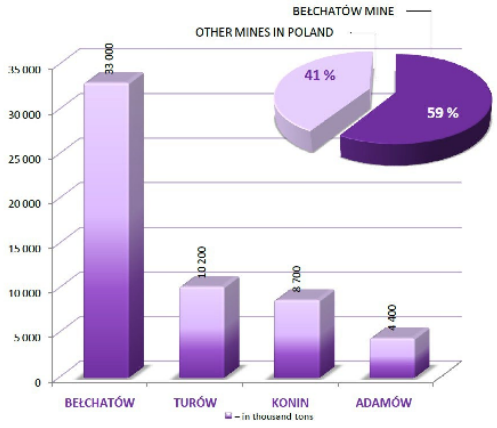


Fig. 116. Natural resources in 2011
(*Source: own study of SPOoLR)*

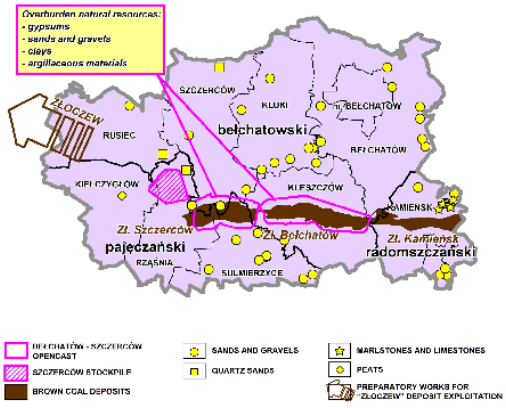
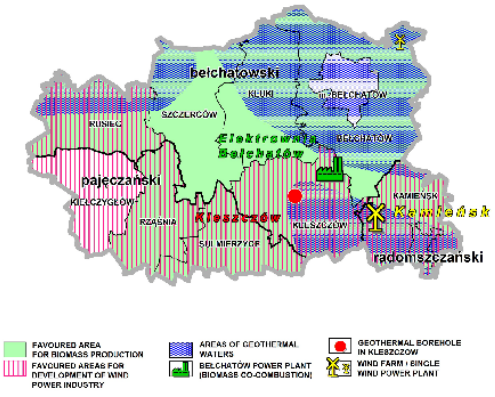


Fig. 117. Areas preferred for RSE-based energy generation
(*Source: own study of SPOoLR)*



3.3. OPOCZNO – TOMASZOW MAZOWIECKI CENTRE FOR CERAMIC AND CONSTRUCTION MATERIALS

The area is characterised by the biggest concentration of construction materials in the region. The basis of the industry is local resources of rock raw materials, e.g.:

- glass and moulding sands deposits (biggest In Poland),
- filter and specialist sands used in construction chemicals,
- kaolinite, which is a raw material for ceramic industry,
- quartz sands deposits.

In the area of the communes of Tomaszów Mazowiecki and Sławno operate two biggest quartz sands mines in Poland - "Biała Góra" and "Grudzeń – Las" with a branch in Syski in the commune of Mniszków. In the town of Stok in the commune of Mniszków there is a limestone mine and a processing plant, on the basis of which Atlas Group is planning to set up a cement plant. A limestone deposit is also exploited by Nordkalk in the town of Owadów – Brzezinki in the commune of Sławno. The mine is a place of discovering a world-wide unique complex of sea and terrestrial fossils dating back 148 million years (late Jurassic period). On the basis of raw rock materials ceramic and glass industries have developed on the area of the Centre. Leading producers of ceramic tiles in Poland have their plants here: Opoczno SA and Grupa Paradyż (Opoczno, Tomaszów Mazowiecki, Paradyż) as well as a mine and processing plant of glass and moulding sands in Syski, in the commune of Mniszków, as well as some smaller plants producing, apart from tiles, also decorative bands and ceramic products: CER-ART, CER-ROL and Nova-Ceramica in Mniszków and Cerkolor in Parczówek (the commune of Białaczów). An important plant operating in the area of Mniszków commune is Owczary construction ceramic plant. Then, since 2009 in Osiedle Niewiadów, near Ujazd, Euroglass glassworks has been operating which manufactures glass mainly for the purposes of construction and motor industry. Wholesale companies in Tomaszów Mazowiecki (construction materials) and Opoczno (ceramic tiles) complement the industrial activity.

A weakness of the region is insufficiently developed education in fields connected with the existing industry. There are no secondary vocational and technical schools connected with opencast mining or ceramic and glass industry. Specialist university education is represented only by Opoczno Branch Teaching Institution of the Faculty of Material Engineering and Ceramics of AGH University of Science and Technology.

Development of the area will be still taking place thanks to existing resources and ceramic industry. Enhancing the position of local producers on the national and international market should take place by setting up a ceramic cluster including also companies from wholesale as well as producers from the neighbouring districts of the Świętokrzyskie Region. In total, in opoczyński and konecki districts there are as many as 11 producers of ceramic tiles (out of 20 in the whole country). What is also important is extending cooperation with scientific-research and business environment institutions as well as with plastic arts circles (industrial design).

The most important development challenges resulting from the assessment of the condition of Opoczno – Tomaszow Mazowiecki Centre for Ceramic and Construction Materials are:

- **establishing in the region a strong scientific-research base from ceramic and glass industry,**
- **development of specialist vocational education at the secondary and higher level,**
- **development of industrial design,**
- **development of cooperation between enterprises, business environment institutions and local government units as well as scientific-research circles,**
- **improving internal and external transport accessibility.**

Fig. 118. Opoczno – Tomaszow Mazowiecki Centre for Ceramic and Construction Materials *(Source: own study of SPOoLR)*

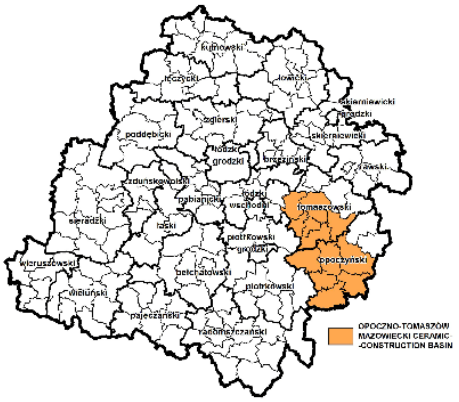


Fig. 119. Output of main resources in the functional area and contribution of the Lodzkie Region to the production of ceramic tiles at the national level in 2010 *(Source: CSO)*

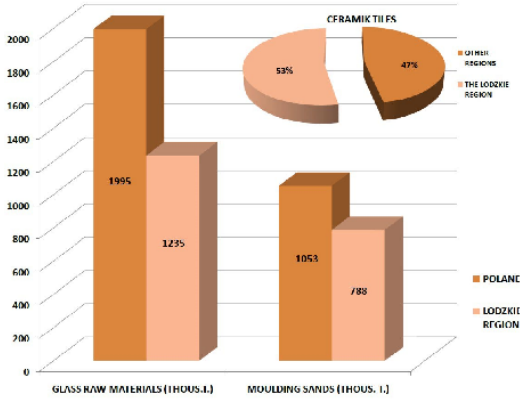


Fig. 120. Raw materials, production and institutional facilities in 2011 *(Source: own study of SPOoLR on the basis of information of the NMI)*

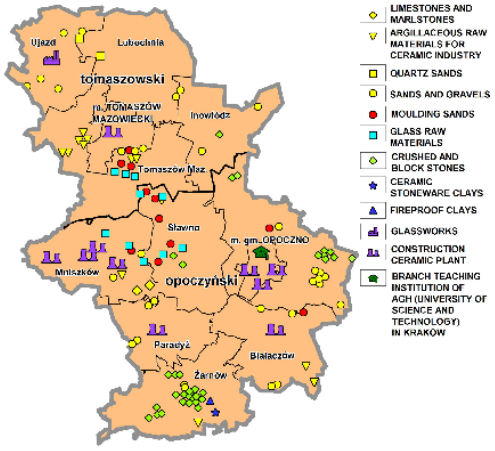


Fig. 121. Mineral deposits in the areas of outstanding natural and landscape beauty under legal protection since 2011 *(Source: own study of SPOoLR)*

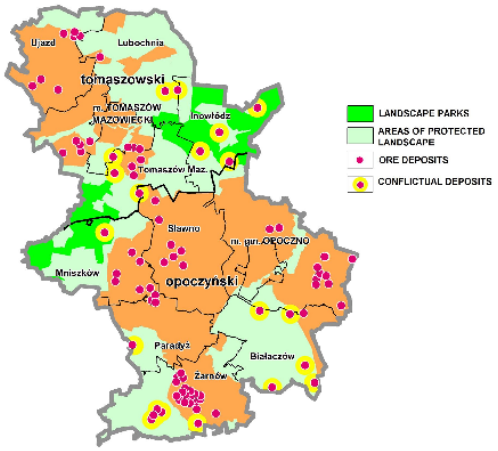


Fig. 122. National business entities registered in the REGON system/1 000 inhabitants in the communes in 2011 *(Source: CSO)*

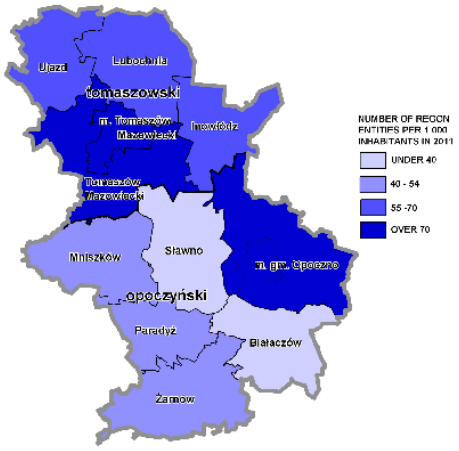
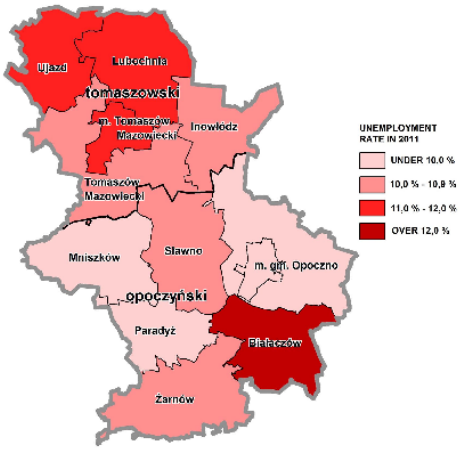


Fig. 123. Unemployment rate in the communes in 2011 *(Source: CSO)*



3.4. AREA OF INTENSIVE AGRICULTURE DEVELOPMENT

The main role in the economy of the area is played by a thriving agriculture, able to provide food and ensure food safety. The quality of agriculture production area of the majority of communes is one the highest in the region. The area is also characterized by a high farming culture and well-developed commercial agriculture. All these factors allow achieving high output figures on the national scale. A strong support for the development of large-scale agriculture in the area is the science-research base, mainly Research Institute of Horticulture in Skierniewice and agricultural research centres from the area of fruit farming, floriculture, plant nursery, forestry, soil science and zootechnics. In Skierniewice there is also State Higher Vocational School which educates specialised personnel for horticulture as well as Prof. S. Pieniążek Higher School and Economy and Arts offering the faculty of horticulture. There is however no possibility of higher education connected with agriculture.

The weakness of the region is an unfavourable agricultural structure and slow changes in this respect, even though compared to the Lodzkie Region this area is characterised by a significant percentage of big farms (over 15 ha). A limitation for effective use of farmlands is also a high dispersal of farmland plots.

Also water conditions, including water deficit resulting indirectly from a very low level of the area's wooded areas indicator, is a significant development barrier for the agricultural production. Due to small resources of surface waters and the occurring problem of drought, natural retention possibilities are much limited. The consequence is the occurrence of turning into steppe, exceeding the region of Lodz and including significant areas of Central Poland. Also increasing extreme weather conditions are a threat.

An important asset of the area is:

- large-scale fruit farming specialization in the communes of skierniewicki and rawski districts;
- vegetables production in the communes of: kutnowski, łęczycki and sieradzki districts;
- specialist potato farming in the district of Sieradz;
- cattle and pigs breeding in numerous communes of the region.

A diversified supply area of both crop as well as animal production constitutes a basis of processing industry development: fruit-vegetables, meat, dairy and grains. The weakness of the region however is no agricultural products wholesale markets. Increase of demand for high-quality food results in an increase of interest of group forms of management. At present in the region there are groups of agricultural producers, including in the area of fruit and vegetables, milk and grain production.

The area has good transport connections with the rest of the region and an additional asset for the development is a modern multimodal terminal built in Kutno in 2011.

The most important development challenges resulting from the assessment of the condition of the Area of Intensive Agriculture Development are:

- **development of higher education of agricultural major with integration of academic circles of Lodz, Skierniewice and Warsaw,**
- **development of cooperation network between R&D sphere and agricultural producers,**
- **process of establishing groups of producers,**
- **creating agricultural products wholesale markets,**
- **development of regional and local markets promoting regional products and eco food,**
- **increasing retention as well as development of agricultural lands irrigation systems,**
- **merging agricultural and wooded lands,**
- **improving internal and external transport accessibility.**

Fig. 124. Area of intensive agriculture development *(Source: own study of SPOoLR)*

Fig. 125. Total use of land in farms located in the area of intensive agriculture development in the context of the region in 2010 *(Source: CSO)*

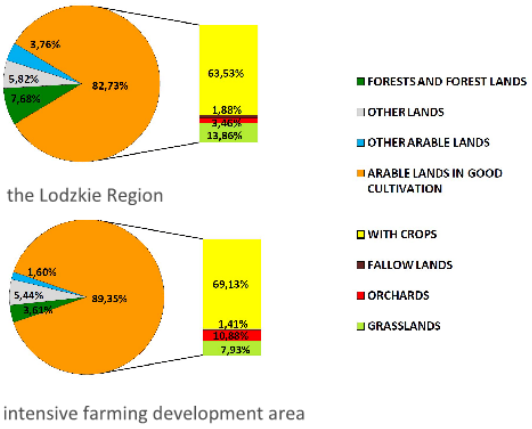


Fig. 126. Potentials for intensive agriculture development in 2010 *(Source: own study of SPOoLR on the basis of information of CSO)*

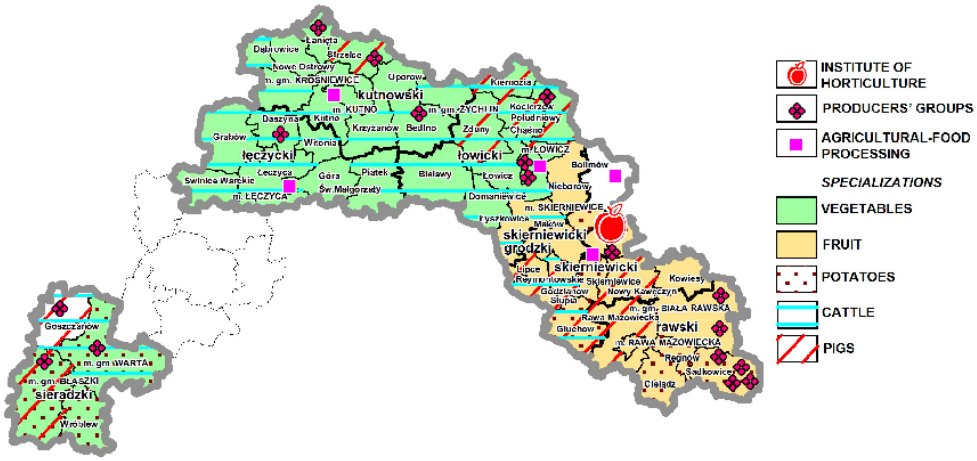
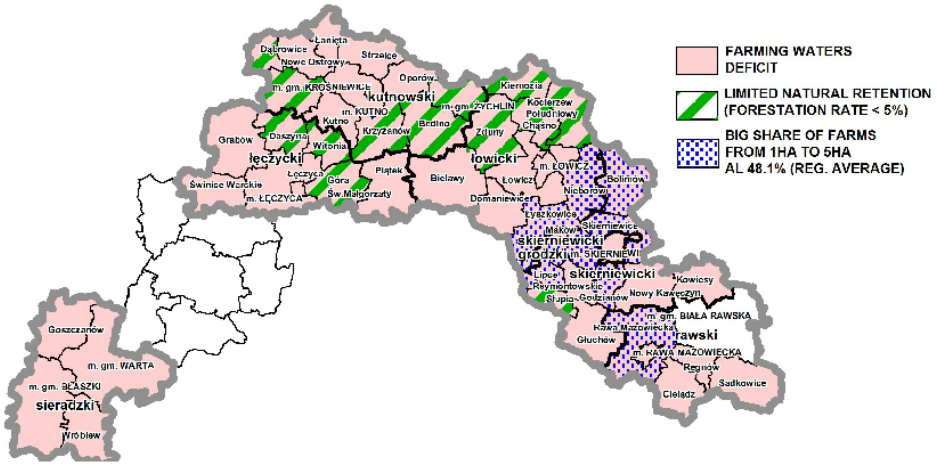


Fig. 127. Barriers to intensive agriculture development in 2010 *(Source: own study of SPOoLR on the basis of information of CSO)*



3.5. TOURIST AREAS IN THE RIVER VALLEYS OF THE PILICA, WARTA AND BZURA

The area spreading along **the valley of the Pilica River** is distinguished by outstanding natural and cultural beauty and gives a special opportunity for different kinds of tourism to develop. The biggest advantages of the area are:

- Sulejowski Reservoir which enables many kinds of active tourism, e.g. sailing, canoeing and windsurfing, conference and business tourism (conference and leisure facilities located e.g. in Bronisławów, Smardzewice and Swolszewice), and also leisure tourism, weekend tourism and agritourism to develop (accommodation facilities e.g. in Zarzęcin, Tresta and Barkowice); the area around the reservoir as well as tomaszowski district are the centre of tourism and are the most visited places in the valley of the Pilica River,
- the valley of the Pilica River creating perfect conditions for various kinds of leisure and recreation: canoeing, bicycle tourism based on an extensive trail system in the central and northern part of the area, horsemanship tourism using the Lodz Horse Trail as well as horsemanship centres including the leading one in Bogusławice, leisure and weekend tourism (e.g. Spała, Sulejów, Przygłów and Włodzimierzów), health tourism (centres that offer SPA and Wellness treatments),
- Spała as a congress, conference and business centre, accommodation, food and beverage as well as sports facilities (The Olympic Sports Centre in Spała),
- a worldwide unique set of sea and terrestrial fossils dating back 148 million years in the commune of Sławno.

There are also other centres as well as recreational and sports facilities in the area which are significant on the national scale, e.g. mountain canoeing trail in Drzewica, Dojo Japanese Sports and Martial Arts Centre in Stara Wieś, Aero Club's Airport of Piotrkowska Land where e.g. Airdrop Zone PeTeSkydive in Piotrkow Trybunalski operates. The area is also characterised by great virtues of cultural and natural heritage. Unique at the national level monuments of the Romanesque architecture are located here – a church of St. Idzi in Inowłódź and Cistercians Abbey Complex in Sulejów-Podklasztorze which is a historic monument, numerous religious buildings including sanctuaries in Studzianna-Poświętne, Smardzewice, Witów and Piotrków Trybunalski. In the area there are vast complexes of the former Pilica Forest which are characterised by a unique microclimate. A major part of the territory is covered by legal protection in forms of landscape parks – Spalski, Sulejowski and Przedborski as well as areas of Natura 2000. The most important problems are mainly: poorly developed tourist infrastructure (lack of car parks and canoe marinas), poorly developed public spaces, decapitalized base of leisure centres, systematic degradation and pollution of Sulejowski Reservoir's waters, uncontrolled urbanization processes and lack of comprehensive solutions in the field of water and wastewater management, difficult accessibility of the area.

The tourist area of the Warta River valley is distinguished by attractive natural and cultural beauty which are the basis of the development of active, cultural and spa tourism. Most part of the area is included in a protected area system which comprises: landscape parks – the land between the Warta and Widawka River as well as Załęcze Landscape Park, the areas of protected landscape, landscape-nature complexes, the areas of Natura 2000 and nature reserves, with a special emphasis of "Jeziorsko" Nature Reserve.

The Warta River valley is an area predisposed to the development of active tourism: canoeing on the Warta, the Grabia, the Widawka River and on Jeziorsko Reservoir (regatta sailing), horse-riding using horse riding centres and horse trails, including the longest one in Europe – the Lodz Horse Trail, bicycle tourism, hiking and geotourism (based on unique geological values of Jura Krakowsko-Wieluńska dating back 150 million years).

An extremely important advantage is geothermal waters which can be found in the northern part of the area, in the communes of

Uniejów and Poddębice, but also therapeutic climate properties. These resources are used not only for communal needs but also for health resort needs (therapeutic, prophylactic and rehabilitation), including also balaneutics. These form the basis for the development of leisure, business and conference tourism. Uniejów is the only spa region in Poland which bases on thermal waters with healing properties. It has also got a functioning sanatorium and health resort facility and constitutes a perfect basis for carrying out scientific research for the regional universities. What is more, a cross-regional tourist product "Centralny Łuk Turystyczny" is currently the most interesting initiative in the region. Also some communes of radomszczański district have a geothermal potential.

The most valuable monuments of the area are for instance: religious buildings in Strońsk, Ruda and a belfry in Krzyworzeka (which are unique examples of Romanesque architecture at the country's level), the Castle of Archbishops of Gniezno and the Assumption of the Blessed Virgin Mary's Collegiate Church, churches of Wieluń type, e.g. in Łaszewo, Grębień, Popowice, Kadłub, Gaszyn, Skomlin as well as a larch manor house in Ożarów (which are characteristic examples of timber construction industry in the region), numerous archaeological sites, for ex ample kurgans in Lesisko, Przywóz, Konopnica and a castle hill in Sieradz, connected with the oldest settlement.

Historic buildings and cultural attractions are linked by a tourist route system of cross-regional importance (Romański Route, Amber Route – a part the European Cultural Routes), predisposed to the development of cultural tourism.

The most important problems identified in the area are mainly poorly developed accommodation facilities, tourist infrastructure and a low standard of offered tourist services. When it comes to accommodation facilities, Konopnica and Załęcze Wielkie with big leisure centres as well as Osjaków with hotel base on the Warsaw-Wroclaw national road 8 are worth mentioning. The weakness is an insufficient promotion of the cultural heritage and of the serial cultural events as well as a lack of a coherent image of the area as a tourist attraction.

Tourist area of the river valley of the Bzura is to a large extent covered by a protected area system which includes e.g. Bolimow Landscape Park, nature reserves, areas of protected landscape, areas of Natura 2000 with unique on the European scale abundance of bird species.

The most precious heritage assets of the area, on which cultural tourism is based, are e.g. Łowicz folklore – recognized in Poland and in the world, an arch-collegiate church in Tum as well as elements of the church in Góra Świętej Małgorzaty which are unique on the country's scale examples of Romanesque architecture, a castle in Łęczyca, a castle and park complex Arkadia – Nieborów and Walewice, numerous religious buildings in Łowicz (including the Cathedral Basilica of the Assumption of the Blessed Virgin Mary – former Primate College – which is a historic monument), a church of St. Jacob in Skierniewice, heritage parks in Maurzyce, Łowicz and Sromów as well as numerous memorials connected with warfare of the I and II World War (e.g. in Łęczyca, Tum, Piątek, Bolimów, Ziemiary, Joachimów – Mogiły). The most interesting archaeological buildings are e.g. a settlement in Tum and ruins of a castle in Łowicz connected with the oldest settlement.

Historic buildings and cultural attractions are connected by a tourist route system, including some routes of cross-regional importance (Romański Route, Amber Route, Dukes of Masovia Route, Grunwald Route) which constitute a part of the European Cultural Routes.

The Bzura River valley is an area predisposed to the development of active tourism – biking and hiking, horse riding using the horse riding centres (Walewice Horse Stud Farm) and horse trails including the longest one in Europe – the Lodz Horse Trail.

An extremely important advantage of the region is the geothermal waters which can be found in its eastern part, in the vicinity of Skierniewice, which is applying to become an official health resort. These resources are the basis of development for spa

and recreation tourism, including balaneutics. They can also be used for communal needs.

One of the most interesting initiatives undertaken recently in the tourist area of the Bzura River valley are: a cross-regional tourist product "Centralny Łuk Turystyczny", "Piast Cultural Park" (under construction) and "Tum – Kwiatkówek" heritage park whose main attractions are Łęczyca and Tum.

The most important issues identified in the area are most of all poorly developed accommodation facilities, food and beverage facilities as well as tourist infrastructure and low standard of offered tourist services. Good quality accommodation facilities are offered by Łowicz, Łęczyce, Skierniewice, Nieborów, Maurzyce and Walewice. Another problem is urbanization pressure on naturally valuable territories as well as investments in flooded areas.

The most important development challenges resulting from the assessment of the condition of tourist areas of the river valleys or the Pilica, Warta and Bzura are:

- **creating a coherent image of the areas as tourist attractive,**
- **preparing and implementation of integrated tourist products based on cultural and natural beauty, including geological (e.g. setting up a geopark in the commune of Sławno, establishing an educational centre on Jura Krakowsko-Częstochowska's environment),**
- **development of active tourism as well as tourist, recreation and sports facilities,**
- **stopping the degradation and improving water purity of Sulejowski Reservoir and Jeziorsko Reservoir as well as forest areas,**
- **creating a brand and demand for balaneutics and spa services,**
- **introducing systemic solutions in the area of water-wastewater management,**
- **improving internal and external transport accessibility.**

Fig. 128. Tourist areas in the river valleys of the Pilica, Warta and Bzura *(Source: own study of SPOoLR)*

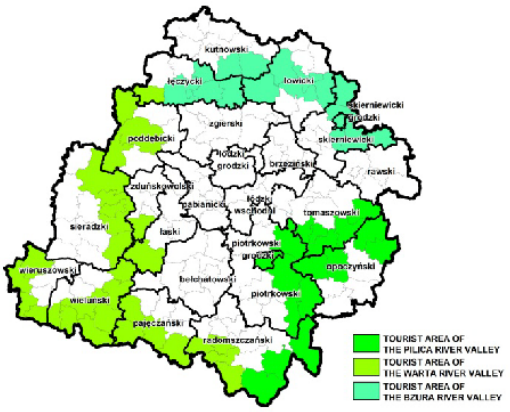


Fig. 129. Tourist traffic according to the communes in 2011 *(Source: own study of SPOoLR on the basis of information of RTO)*

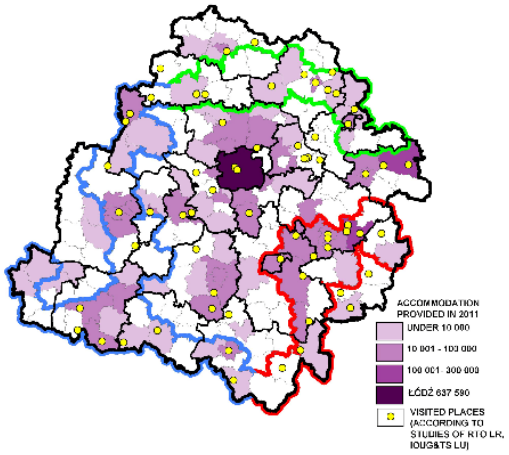
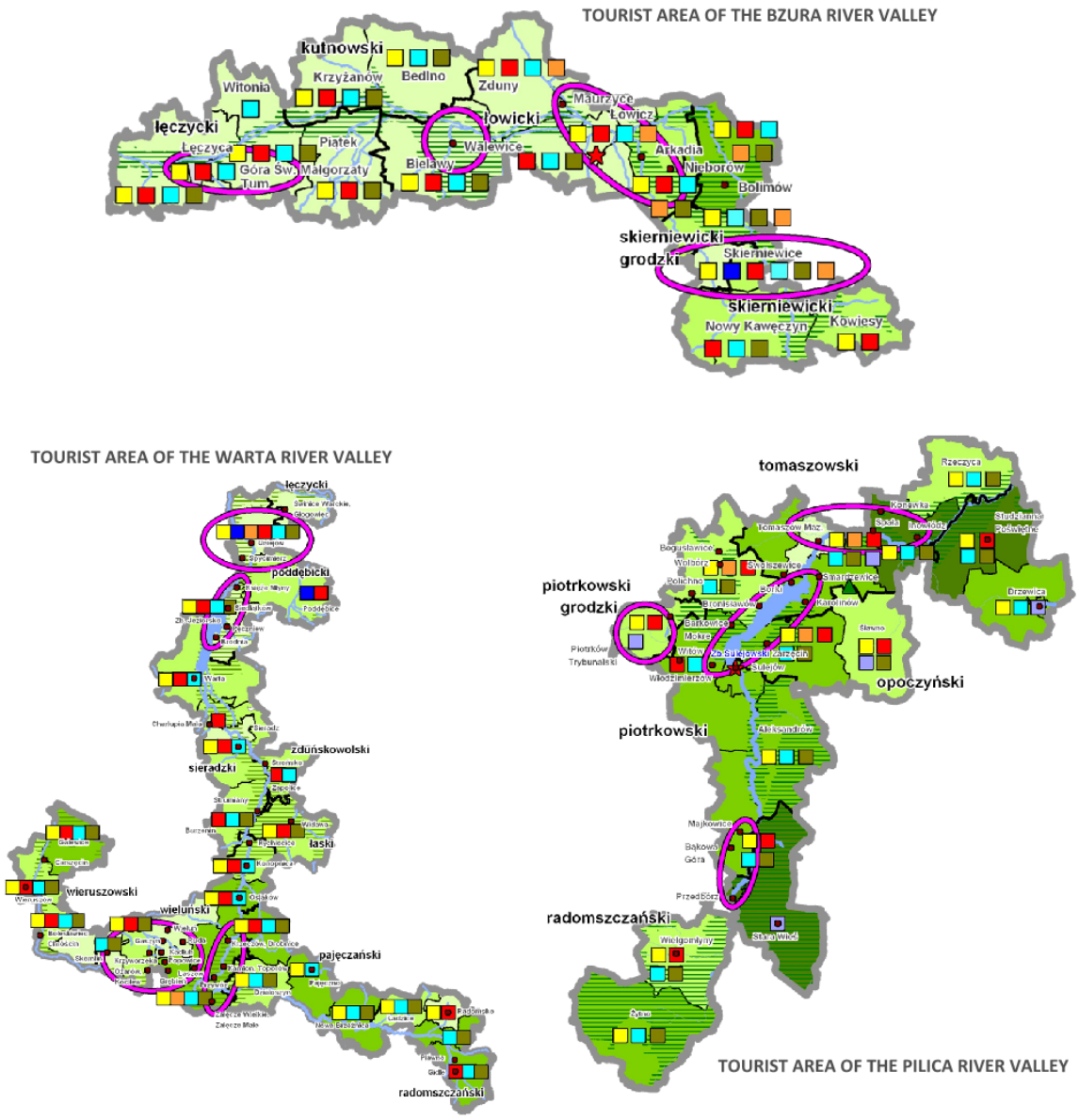


Fig. 130. Tourism potential in the communes in the river valleys of the Pilica, Warta and Bzura in 2011
(Source: own study of SPOoLR)



B. SWOT ANALYSIS

OPPORTUNITIES	STRENGHTS	WEAKNESESS	THREATS
1	2	3	4
1. ECONOMY AND LABOUR MARKET			
internationalization of higher education	well-developed higher education	mismatching education profiles to the needs of regional labour market	population decline
new, one of a kind education programmes in Poland (national qualifications framework)		no cooperation between universities in the region as well as universities and local governments in the region	competition from other universities in Poland and abroad
		poor condition of education and professional training at the secondary and higher level	
	increase of the inhabitants' education level	progressing withdrawal of people with higher education from labour force	
development of media and audio-visual sector of all-Poland significance	unique potential of art universities of national and international renown	disintegration of circles and groups operating in the creative sector	competition of the existing and newly-established art schools in Poland
			dynamic development of creative sectors in other metropolitan areas in Poland
introducing market mechanisms and systemic solutions in the scientific-research area (national policy)	significant research potential of R&D sphere, especially in the areas of medical-pharmaceutical industry, biotechnology, textiles, horticulture	low level of R&D centres' participation in the process of creating and diffusion of innovation into economy as well as insignificant internationalization of projects carried out in R&D centres	insufficient, public and private, financial expenditure on research and development
increase of the private sector importance in financing R&D activity		low innovation level of the region's economy as well as no risk capital	
		no research and development facilities for some developing regional specializations as well as underdevelopment of parks and technological incubators as well as technology transfer centres	
inflow of technologically advanced investments in Poland	big resources of labour and high professional activity of the region's inhabitants	predominance of low added value branches of economy	fast processes of localization change of international-scope industry
		no access and exchange of information on the labour market	
Poland's Energy Policy until 2030 aiming at clean, low-emission technologies based on conventional sources of energy	significant, in the national scale, conventional resources of raw materials used in economy	environment degradation	

1	2	3	4
developing low-emission sectors	specialization of the region in conventional energy production	high CO_2 emission	the need to reduce CO_2 emission resulting from EU climate package
industries developing for RES	big potential for biomass production	low level of using alternative sources of energy	
increase of demand for alternative sources of energy resulting from the EU climate package			
growing demand in the spa services sector and specialist tourism with using geothermal waters	significant resources of geothermal waters		no interest from private investors in financing investments using geothermal waters resources
increase of demand for alternative sources of energy resulting from the EU climate package			
maintaining of the construction demand	specialization of the region in the production of construction materials		
growing interest in ecological construction			
growing importance of design in Poland and abroad	big potential for development of design and production of modern fabrics	poor fair-exhibition facilities compared to other metropolitan centres in Poland	
	specialization of the region in domestic appliances production		moving production to countries with cheaper labour force
growing demand for pharmaceuticals in Poland and abroad	specialization of the region in the production of pharmaceuticals		
internationalization of demand for specialist medical services	specialisation of Lodz in specialist medical services of national and international renown		
	specialization of the spa sphere in the region		
	developed sphere of IT and BPO services		brain-drain of highly-specialized staff by other national and international centres
increase of demand for specialist logistic services in Poland	a big number of warehouse-logistic facilities	no strategic reserves of investment areas with laid utility lines	disruptions in the processes of building transport infrastructure
growing demand for biomass and biogas production	big resources of land and a significant agricultural potential with the areas of intensive agricultural production (plant, including crops, and animal)	deepening deficit of surface waters and the phenomenon of turning into steppe taking place in the northern and north-western part of the region as well as low quality potential of soils and a significant percentage of acid soils	intensification of extreme weather phenomena
	high productivity of agriculture	unfavourable agricultural structure, majority of small farms up to 5ha as well as no integration and co-acting of agricultural producers	agricultural policy preserving unfavourable agricultural structure

1	2	3	4
increase of demand for high-quality food on the national and European market	specialization of the region in the production of fruit and vegetables as well as animal produce		
increasing interest in eco-food			
favourable overall economic situation for food industry products on international markets	developed agricultural-food industry		
	dynamic development of ndustrial and economic zones		time limits of the functioning of the LSEZ
EU policy aimed at using the endogenous potentials of the regions		too big disproportions in economic development at the level of districts and communes with excluding peripheral areas	
increase of interest in active forms of tourism (weekend tourism)	natural-cultural advantages connected with river valleys	deficit and low standard of tourist infrastructure	perceiving the region as an unattractive region tourism-wise from the perspective of Poland
		no cooperation in the area of joint projects	
2. SOCIETY AND QUALITY OF LIFE			
		deepening of unfavourable demographic situation	
fashion for healthy life style and taking care of health		unfavourable situation and health awareness of the region's inhabitants	
		ineffective health prevention	
	well-developed and available material base of primary medical care	intra-regional diversification of availability of specialist medical services and social assistance	increasing structural problems in the national health care system
	numerous medical staff	insufficient amount of specialist medical staff (emergency medicine, palliative medicine, geriatrics)	
		structural mismatch of crèches, kindergartens and schools with regional and local needs	unsettled education system
EU support policy in the area of social economy		exclusion of big social groups in degraded city areas	
		insufficiently developed emergency services and public safety services as well as insufficient feeling of safety of the region's inhabitants	
	significant potential of the culture sector in Lodz	low interest of the region's inhabitants in the regional cultural offer	
	activity of local communities within Local Activity Groups	low-developed feeling of territorial identity of the region's inhabitants	

1	2	3	4
		poorly developed civil society	
national policy supporting continuous education	significant level of human resources, highly spatial-wise diversified (big in cities)	poor quality of human capital in rural areas and towns	
		poor social capital in cities	
		low ecological awareness of the region's inhabitants	
3. SPACE AND FUNCTIONAL AND SPATIAL CONNECTIONS			
formal inclusion of strategic transport system of the region into TEN-T network	favourable transport situation of the region from the point of view of crossing motorways (e.g. A-2 motorway connection with Berlin, Warsaw and Poznan), expressways and modernized railways as well as commencing construction of a modern multi-modal station in Lodz (Lodz Fabryczna together with Lodz Kaliska cross-city tunnel and Lodz Metropolitan Rail	no motorway connection towards south of the country	delays in implementation of target national transport system
			no final decision concerning S-74 expressway (Lodz – Tomaszów Mazowiecki – Kielce)
growing demand for modern and fast rail transport		no fast and efficient rail connections with Poland and Europe	change of national transport policy priorities in the area of High-Speed Rail construction
progressing implementation of National Road Construction Programme for 2011 – 2015, in particular express connection with Wrocław and Warsaw (S-8) and motorway connection with Tricity and Pyrzowice (A-1) which are under construction		no ring roads of cities/towns through which high-intensity transit traffic is directed	social and local barriers in preparing and implementation of transport investments
launching High-Speed Rail Construction Programme in Poland		no fast railway connections of Lodz in Inter City and Euro City system	change of attitude to the development of High-Speed Rail at the national level
Long-Term Rail Investments Programme 2013 with the perspective of 2015			
		insufficient technical conditions of regional roads as well as a bad condition of local roads	
		very bad technical condition of railway infrastructure	
growing demand for air transport	The Lodz Wladyslaw Reymont Airport	insignificant importance of goods air transport	
		slim percentage of air communications in national and international connections	change of priorities of the national transport policy regarding Central Airport for Poland between Lodz and Warsaw
growing demand for services of multimodal transport	marshalling rail yards Lodz – Olechów, Kutno, Zduńska Wola – Karsznice	no integrated goods transport system	delays in railways restructuring processes
supporting collective transport development from EU means	construction of Lodz Metropolitan Rail	no integrated passenger transport systems	

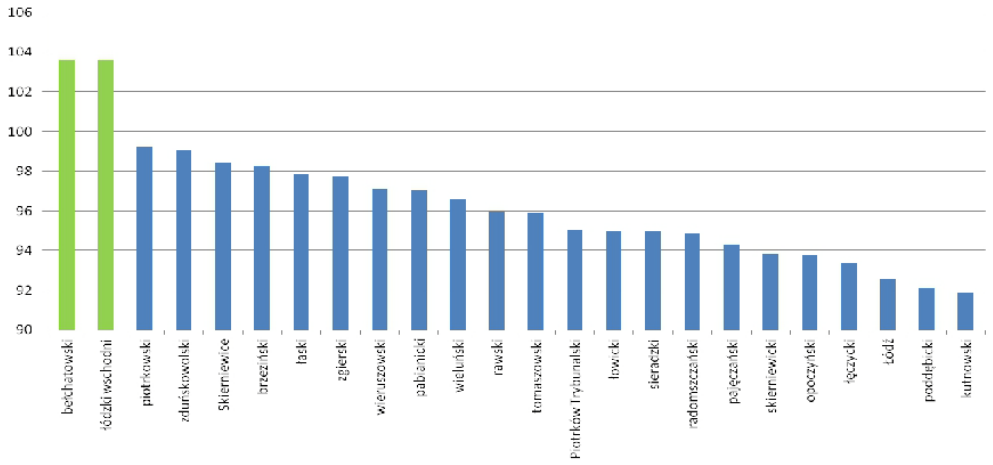
1	2	3	4
		no bicycle trails systems	
	developed network of highest voltage 220 kV and 400 kV transmission lines as well as highest voltage switching stations	bad technical condition of medium and high voltage transmission lines	difficulties in establishing line investments routes
development of branches of power industry connected with gas industry		poorly developed gas system, especially in rural areas	difficulties in establishing line investments routes
The National Programme for Municipal Waste Water Treatment aiming at construction and expansion of sewage system networks and sewage treatment plants in conurbations of an equivalent number of inhabitants exceeding 2 000		unfavourable proportions of water supply system to sewage system, especially in rural areas	
EU policy on water-sewage management preferring a sustainable development of water and sewage system			
regulations supporting implementing national and pro-ecological waste management		poor infrastructure for integrated waste management	
growing interest in digital information and Internet services		insufficient access to broad-band Internet networks	
		low level of being equipped with computer equipment in households	
The National Programme for Municipal Waste Water Treatment aiming at construction and expansion of sewage system networks and sewage treatment plants in conurbations of an equivalent number of inhabitants exceeding 2 000		pollution of surface waters	
EU water directive determining the frames for protection activities of e.g.inland surface waters			
		degradation of environment as a result of exploitation of natural resources	increase of demand for natural resources in connection with road network development
		incoherent network of protected areas	
increase of interest in geotourism	unique worldwide complex of sea and terrestrial fossils dating back 148 million years		
		uncontrolled spread of urbanized areas	

1	2	3	4
increase of interest incultural tourism	unique, XIX-century post-industrial heritage	bad technical condition of historic buildings	perceiving the region as an unattractive region tourism-wise from the perspective of Poland
	valuable urban and rural plans	significant area of degraded areas which require rehabilitation, especially in centres of cities/towns	
		unsettled ownership relations	
4. MANAGEMENT IN THE PUBLIC SECTOR			
Effcient State Strategy – strengthening competence and professionalization of administration	growing implementation of modern management forms	low level of organizational efficiency	politicizing of public administration structures
increased supply of various forms of professional in-services trainings		low level of knowledge and skills in the area of development planning and management	brain-drain of highly-qualified staff by the private sector
		no cooperation of the local government authorities in compiling integrated projects of supralocal importance	
		no cooperation skills of the local government authorities based on partnership	
		no marketing strategy of the region	

C. TRENDS AND STRATEGIC DEVELOPMENT CHALLENGES UNTIL 2020

1. By 2020 the unfavourable demographic situation of the region will have worsened. Population will have decreased to 2.42 million people which constitutes a fall by 113 000 residents in comparison to 2011. Both municipal as well as rural areas will be subject to depopulation. Still, the depopulation in cities will be taking place faster constituting a challenge both to main poles of growth as well as cities/towns. The urbanization indicator will have decreased to the level of 62.7%. Especially unfavourable demographic forecasts concern Lodz, Pabianice, Konstantynów Łódzki and Łask, Piotrków Trybunalski, Pajęczno and Działoszyn, Łowicz, Kutno and Żychlin as well as Wieruszów.

Fig. 131. Population forecast of 2035 for the districts of the Lodzkie Region in 2020; 2011 = 100%
(Source: CSO)



2. In the upcoming decade the population ageing process will deepen. One should also expect an increase of the number of people at the age of 65+ who are disabled. A phenomenon of "double ageing", meaning a fast increase of proportion of people over 75 years old, will intensify. The forecasted economic effects are the following: lower tax revenues, changes in the demand structure, decrease of income, higher costs connected with taking care of the elderly and social assistance as well as increase of demand for medical-care services. Health care and social assistance employees will be looked after on the labour market.

3. The changing demographic situation will significantly influence the education system. A decrease of the number of students at all levels of education will take place and universities will have to face a fierce competition from national and international universities. However, the demands of the modern labour market will increase demand for education services enabling continuous improvement of professional qualifications and life-long education.

4. The demographic situation will cause that potential labour resources in the region will in 2020 decrease by 11.6% in comparison to 2011 and this will be a bigger decrease than the decrease of the total region's population. Shrinking of regional labour resources, especially in towns, as well as statutory amendments of retirement age will result in extending the period of employees' professional activity, increase of salaries or migration from outside as well as development of flexible forms of labour, including tele-work.

5. During the period until 2020, most probably a shift of economic activity will take place and, as a consequence, shift of work places from less developed areas of the region to Lodz and its functional area as well as sub-regional poles of growth. Lodz will have become a carrier of positive changes in the region. In accordance with objectives resulting from implementing the strategy "Europe 2020" – employment indicator of people at the age of 20-64 can increase in the region to the level of 73% (in 2010 66.2%). The significant boost of employment will be accompanied by decreasing structural unemployment as well as improvement of employment quality.
6. A gradual reduction of employment in traditional, low-productive sectors and branches of economy, especially in agriculture will take place on the labour market and there will be a growth of demand for highly-qualified specialists with technical and natural education in technologically advanced branches and knowledge-intensive services. The needs of a modern, regional labour market will result in a significant development of human resources through new programmes of education as well as improvement of education quality at all levels. The society of the region will be increasingly better educated, about 45% of the region's population at the age of 30-34 will hold a higher education diploma and will to a bigger extent contribute to creating knowledge and innovation-based economic development. In 2020 about 1.0% of the regional GDP will be appropriated to research and development (in 2010 – 0.6%), whereby the share of private sector in financing science research will increase significantly.
7. Until 2020 processes which are already taking place in more economically developed countries (disagrarisation, disindustrialisation and servicisation), which lead to an increase of the role of services in economy generating the highest added value at the cost of industry and agriculture, will be intensifying. However, the development of the services sector will not result in a decrease of importance of the industry and specialist agriculture in the region. This will be favoured by technological modernization of key branches of industry as well as development of intelligent specializations. In the agricultural sector changes of production structure and agricultural structure will be taking place. Access to EU funds will speed up processes of farms and agricultural companies' modernization as well as introducing innovative solutions in them. Development of ecological agriculture as well as improvement of food quality will take place.
8. Current competitive advantages of the region, such as low labour costs, will be losing their importance. Technological progress will be becoming the key growth factor of economy productivity. Increase of companies from the branch of medium- and high-technology will take place. In order to stay on the market and improve an enterprise's competitiveness, also from traditional branches, they will have to carry out modernization processes and base their operation on versatile innovation. The majority of enterprises will be absorbing and adopting technologies from the outside. In time a part of scientific-research units as well as enterprises will work out their own advanced technologies, especially in fields in which the region already has a significant development potential. Enterprise-friendly environment, availability of investment areas, better communications accessibility as well as highly-qualified staff will become a basis for increase of direct external investments, including from abroad.
9. It has been assumed that until 2020 the driving force of the region's economic growth will be most of all investments and export, whereas to lower extent than until now private consumption, which during 2010 – 2020 will increase by about 33% (during 2000 – 2010 increase by 41%). It is predicted that by 2015 unit labour costs will have been lower than at present, which with a significant increase of work efficiency will improve the competitiveness of regional economy. In 2020 however, ULC[6] will be similar to the present ones.
10. It has been assumed in the middle-term development strategy for Poland for 2013 – 2020 that in 2020 Poland will achieve 75 – 80% of the average EU GDP per capita (the Lodzkie Region 72%), and the GDP growth dynamics will be higher than in other European countries. The Lodzkie Region will be keeping up with the most advanced

[6] ULC – unit labour cost

regions of Poland by reaching GDP level for per capita equal to 94.0% of the national average (in 2009 91.3% of this average).

11. Implementing one of three priorities of the EU strategy "Europe 2020" – development favouring social inclusion – will cause that social reintegration of excluded groups will take place in the region and so far inactive groups will be introduced to the labour market. Social innovations (e.g. social cooperatives) will correspond to social, cultural and economic needs of groups threatened by social exclusion. It is predicted that the number of people living below the relative poverty limit will decrease by about 100 000 people.

12. Increase of social capital, developed during cultural-historic changes, will be taking place slowly. Still, stimulating processes of social trust growth, increasing care of common well-being, supporting civil activity, development of information society, increase of creative and intellectual potential will as a result lead to a growth of the social capital level.

13. In 2020 transport and infrastructural accessibility will have improved significantly and will have ceased to be a problem of civilization backwardness and development barrier. A strategic road system made of a system of motorways and express roads, being a part of Trans-European Transport Network (TEN – T) will be functioning. As a part of rail infrastructure the main railways will be modernized together with an exchange of the rolling stock. The central multimodal junction Lodz Fabryczna, connected by the cross-city tunnel for conventional rail will be of special importance to the rail service of the region. Lodz Metropolitan Rail, together with Lodz Regional Tram as well as "East-West" tram will provide a high efficiency of the whole collective transport system in the region. Until 2020 a decision will have been made on the construction and schedule of works connected with the construction of High-Speed Rail. When it comes to air service, as of 2013, the international Lodz Wladyslaw Reymont Airport will be able to handle 3 million passengers a year (in 2010 413 000). It is predicted that by 2020, at the national level, the number of passengers using air transport will have doubled and as a consequence expectations of the regions' inhabitants when it comes to air service will have also increased. This should constitute a reason to build the Central Airport for Poland (between Lodz and Warsaw) which will allow completing the air service of the region. Making a final decision about its construction will depend on the present and forecasted overall macroeconomic situation of Poland and updated transport demand forecasts.

14. By 2020 intelligent transportation systems (ITS) will have been successively implemented, improving travel quality and safety. The developing economy will result in making goods freight in all branches of transport more dynamic as well as a hub integration of various branches of transport, making multimodality possible, at the same time with preferring low-emission means of transport. This will result in an increase of demand for comprehensive transport-logistics services. Terminals operating at present in the region (railway-road, airport-road), until 2020 will have been developed and will constitute support for multimodal platforms including a widely understood logistic activity. The Lodzkie Region has a real chance to become one of the main transport hubs in Poland.

15. Entering the digital society development path will result in an intense development of telecommunications services as well as solutions connected with digitalization and informatization of the region. Within the time span until 2020 accessibility of broad band connections and using digital technologies will have improved. "White spots" of access to reliable and fast Internet will have disappeared from the map of the region. As a result of increased investment expenditure on e-government development an effectively functioning administration of 21st century will have been created. An aware digital society will have been formed as an element of innovation pillar.

16. In 2020 energy in Poland and the Lodzkie Region will still come mainly from fossil fuels. The strong conventional energy sector in the region will be implementing cleaner coal technologies. Scientific research and development

works will be carried out on CCS technology – carbon capture, use and storage in geologic structures as well as on new technologies enabling to use the captured CO_2 as a material in other branches of industry. The requirements of climate-energy package create favourable conditions for investments in renewable power industry. Still, it will be difficult to achieve a share in RES in energy use at the planned level of 15% (in 2011 10.8%) by Poland. Moreover, the need of a higher energy safety level will force investments in transmission and distribution lines.

17. By 2020 the accessibility of technical infrastructure in the region will have improved significantly. Thanks to development and modernization of water supply systems the access to high-quality potable water will have come up to the same level in cities/towns and in the country and the accessibility of water supply system will have come near to 100%. Areas with concentrated development, both in cities/towns and rural areas, will to a significant extent have been serviced by community sewage systems with channelling municipal wastewater to sewage treatment plants. Sewage treatment plants servicing big conurbations (over 15 000 of a relative number of inhabitants) will have been equipped with modern technologies, thanks to which there will have been an over 75% reduction of nutrient compounds in the treated sewage, which are the main reason of water courses eutrophication. Almost 100% of inhabitants will have been included in the rational and modern system of waste management (increase by 25% in comparison with 2010) and no more than 50% of collected waste (in 2010 73.4%) will have been sent to waste disposals after segregation.

18. Until 2020 processes of rehabilitation of degraded post-industrial and residential areas will be continued and processes contributing to improvement of spatial order will be launched. At the same time it is forecasted that the process of chaotic urbanization of suburban areas will become more intense which will result in e.g. an increase of infrastructural and social costs.

19. Deepening of multi-directional pressure on environment, connected most of all with development of line infrastructure and uncontrolled urbanization processes is forecasted in the next years. This can threaten functionality and cohesion of numerous precious ecosystems, contribute to landscape degradation, loss of biological diversity, degradation of marsh areas, increase of air pollution, upsetting water balance and other. These processes can lead to an irreversible degradation of areas which today make tourist attractions of the region. Medium-term national development strategy for 2013 – 2020 anticipates providing integrity of the national system of protected areas (e.g. by keeping migration corridors in a passable condition) creating conditions for protecting natural-precious areas as well as restoring and maintaining a proper state of protecting habitats and species.

20. Despite the fact that Poland is not in the sphere of the major susceptibility to climate changes and their very consequences are difficult to assess, the region will be subject, to a bigger or smaller extent, to their negative influence. One should expect in the region a worsening of hydrologic drought, especially in the north-western part and extreme rainfalls and flooding phenomena connected with them may influence mainly river valleys and highly urbanized areas. Negative weather phenomena may also have a negative influence on economic development, e.g. agriculture or forest economy. That is why a territorially oriented intervention connected with implementing an integrated management of basins, reconstruction of natural water retention and implementation of warning-monitoring systems, programmes of afforestation and building small-retention bodies should partly eliminate it.

21. New challenges that the development policy aimed at effective use of territorial capital and integrated planning is facing will improve the efficiency of public institutions. The ability of effective programming and multi-level management of public polices, partnership cooperation of public and private institutions as well as non-governmental organizations will improve and there will be professionalization of staff.

Main development challenges

On the basis of external conditioning, diagnosis of the condition, trends and socio-economic forecasts the most important challenges that the regional policy of Lodzkie Region is facing until 2020, conditioning the area's improvement of competitiveness have been delineated. The general challenge is a sustainable development of the region. Other main development challenges include:

1. **TECHNOLOGICAL RESTRUCTURING OF ECONOMY**
   - creating conditions of producing, diffusion and absorption of innovations, leading to technological restructuring of the region's economy as well as building a network of relationships between enterprises, scientific institutions and business environment institutions;
   - using the potential of possessed resources and conditions for developing low-emission power industry.
2. **CREATIVE HUMAN CAPITAL**
   - actions aimed at stopping and reversing unfavourable demographic trends, including in particular stopping a drain of young people from the region;
   - increasing a high quality, creative human resources, professionally active in all age categories as well as implementing unused labour resources.
3. **COMPETITIVENESS OF LODZ UNIVERSITIES**
   - effective use of academic potential to increase competitiveness of Lodz universities in Poland and abroad;
   - adopting education programmes to the needs of regional labour market as well as improving the cooperation of scientific-research sector with economy.
4. **DEVELOPMENT OF MAIN URBAN CENTRES AND MULTI-FUNCTIONAL DEVELOPMENT OF RURAL AREAS**
   - better use of development potential of Lodz and main urban centres to create and absorb innovation, development of the creative sector, increase of employment, functional connections as well as to stimulate multi-functional development of rural areas;
   - effective use of the potential or rural areas for agriculture development;
   - shaping and improvement of spatial order as well as intensification of rehabilitation processes.
5. **EFFICIENT TRANSPORT CONNECTIONS**
   - providing efficient transport connections with main economic centres in Poland and Europe as well as inter-regional connections providing a territorial cohesion;
   - integration of collective transport system.
6. **ACCESS TO GOOD QUALITY PUBLIC SERVICES**
   - providing the inhabitants with an access to good quality services: education, health, culture and recreation as well as tele-information and technical infrastructure.
7. **DECREASING THE LEVEL OF POVERTY AND SOCIAL EXCLUSION**
   - decreasing the level of poverty and social exclusion to stimulate economic development,
   - actions aimed at equality and counteracting discrimination.
8. **DEVELOPMENT OF SOCIAL CAPITAL AND ENHANCING REGIONAL IDENTITY**
   - creating conditions for the development of social capital and the feeling of regional identity strengthening internal integration of the region.
9. **PROTECTION OF ENVIRONMENT RESOURCES**
   - protecting the state and improving the quality of natural environment as well as rational use of its resources and cultural diversity as a tourism development potential.

The prerequisite for meeting the main development challenges of the region is improving knowledge and institutional ability to manage the region's development.

III. VISION OF THE DEVELOPMENT AND MISSION OF THE REGION

The Development Strategy for the Lodzkie Region 2020 is based on the following **development vision for the region**:

REGION WITH TERRITORIAL AND REPUTATIONAL COHESION, CREATIVE AND COMPETITIVE AT THE NATIONAL AND EUROPEAN LEVEL, WITH THE BEST ACCESSIBILITY BY DIFFERENT MEANS OF TRANSPORT, DISTINGUISHING BY ITS ATTRACTIVENESS FOR INVESTORS AND HIGH QUALITY OF LIFE.

Formulated this way, the **vision of development for the Lodzkie Region** represents the desirable characteristics of the region in the relatively distant future and provides a response to modern developmental challenges. The Lodzkie Region will be characterised by strong internal and external relations as well as attractive conditions of living and working. Creative approach from inhabitants and entrepreneurs will be promoted. The best possible transport accessibility will help to build high attractiveness for investors. An important factor underlying better living conditions and quality of life will be the high quality of the environment to be achieved as a result of reasonable management of its natural resources. The Lodzkie Region will be considered a creative and competitive region with a specific potential, used efficiently for the purpose of long-term growth as well as sustainable and long-lasting development.

This vision of development reflects the **mission of the Lodzkie Region** oriented towards:

INTEGRATED AND TERRITORIALLY ORIENTED POLICY OF SUSTAINABLE DEVELOPMENT, BASED ON ECONOMIC COOPERATION, SOCIAL RELATIONS AND REGIONAL IDENTITY.

The mission is focused on the following strategic aspects:

- **building the future (prosperity) of the region** by strengthening its endogenous potentials and economic cooperation both at the regional, national and international level;
- **developing relations between inhabitants and communities** and contributing to the creation of regional identity while respecting multi-cultural environments and regional diversity.

IV. STRATEGIC DEVELOPMENT POLICY

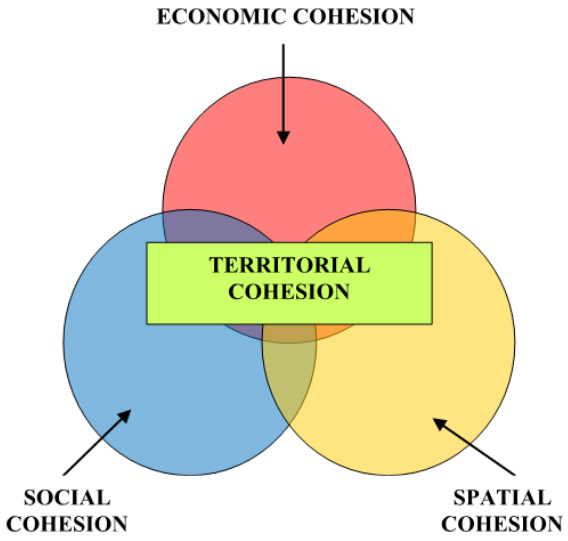
A. CORE ASPECTS OF THE DEVELOPMENT STRATEGY FOR THE LODZKIE REGION 2020

Territorial aspects are at the core of the Development Strategy for the Lodzkie Region 2020.

The "Development Strategy..." describes the aims and directions of public interventions as well as areas of support for activities focused on promoting development.

As the main tool underlying the regional policy, the "Development Strategy..." points out the need to strengthen and ensure better use of unique developmental potentials (so-called territorial capitals) inherent to the region and accumulated in the designated functional areas. These potentials include economic, social and spatial resources. Thus, cohesion at the regional level (territorial cohesion) will be achieved by means of sustainable development characterised by economic, social and environmental cohesion.

Fig. 132. Development policy - territorial dimension - diagram

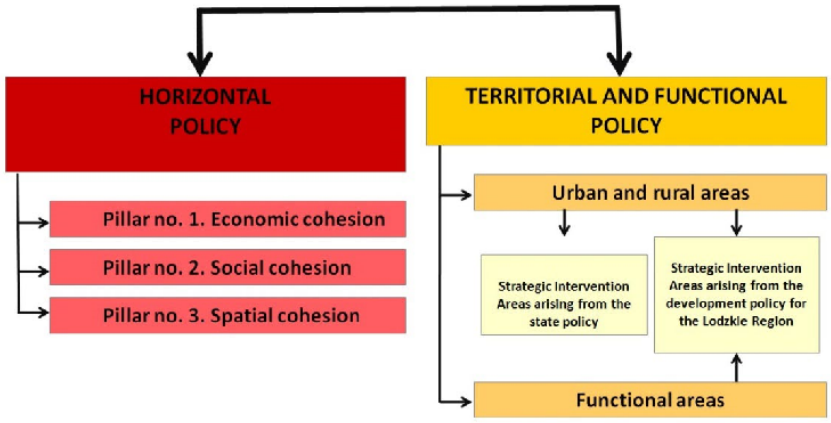


The new principle of integrated approach to development by way of departing from sectoral planning towards building and strengthening territorial capital will help to involve the total local governmental community in development-related processes.

In order to support positive transformations and to eliminate the main barriers to the regional development, and also to ensure effective use of developmental resources, it has been assumed in the "Development Strategy..." that the regional development policy will be implemented at two levels:

- horizontal, i.e. with respect to the entire region,
- territorial and functional, i.e. with respect to urban, rural and functional areas.

Fig. 133. Core aspects of the Development Strategy for the Lodzkie Region 2020 – diagram



The primary aspect relates to the **horizontal policy for the entire region and aimed at all entities operating in the region**. This aspect includes three pillars of the regional development to allow achieving sustainable development of the Lodzkie Region.

In order to ensure better use of the specific features of all the sub-regional areas and to achieve synergy in developmental processes, the horizontal policy has been extended to include **territorial and functional policy for urban, rural and dedicated functional areas, oriented towards entities operating in the designated areas**. This policy is based first of all on the cooperation of the local government units with a view to creating and implementing integrated projects. This aspect of the development policy gives a chance to reduce the scale of polarisation and to involve economically weaker communes in developmental processes. Given the existing functional and spatial approach, the entities will be granted preferential treatment with respect to implementation of integrated projects as long as they are associated with the leading potentials and functions which form the basis for delimitation of such areas. It has been assumed in the "Development Strategy..." that support will be given to projects covering different spheres of activities (intersectoral projects) within a specific area (territory). This will help to achieve the greatest developmental effect while respecting the principle of concentration of financial means in time and space.

A part of the territorial and functional policy is policy focused on **urban and rural areas**. The urban policy covers both cities/towns and their nearby communes. These units, functionally interrelated and undergoing urbanisation processes, constitute urban areas. Rural areas include all the rural communes in the region except for functional areas of cities/towns.

The "Development Strategy..." assumes that the pro-urban development policy will be implemented by means of integrated projects in urban areas. This means that the criteria for granting financial assistance will have to give preference to such projects.

The territorial and functional policy in urban and rural areas will also be implemented with the aid of **territorial contracts**[1]. Pursuant to the policy adopted at the national level territorial contracts are prepared and agreed based on **Strategic Intervention Areas (SIAs) resulting from the objectives of the state policy**. The activities within these SIAs at the regional level will be supported by governmental instruments. The SIAs of specific significance to the national development have been designated for the Lodzkie Region based on the areas indicated in the "National Strategy of Regional Development 2010-2020: Regions, Cities, Rural Areas". These are:

- Lodz and its functional area,
- sub-regional centres – cities/towns with district rights and a population of more than 20 000 as well as their functional areas,
- cities/towns with district rights, experiencing a decline in their social and economic functions,
- rural areas with poor availability of public services.

These areas will be included together with the **Strategic Intervention Areas resulting from the development policy for the Lodzkie Region** which will help to take advantage of the unique internal potentials localised in urban and rural areas for the purpose of development. These are:

- areas within the area of impact of the TEN-T network.

Another element of the territorial and functional policy is a policy relating to **dedicated functional areas**. These areas were designated on account of their uniform endogenous potentials which are the main development-related factor as well as their functional and spatial internal and supra-regional relations which contribute to the greater competitiveness of the region and its socio-economic development. The development policy within functional areas will be implemented by means of integrated projects based on partnership and cooperation of local government units and entities operating in the area. This will help to strengthen the existing potentials, achieve synergy effects and contribute to a more effective use of financial means. The designated **dedicated functional areas are Strategic Intervention Areas resulting from the development policy for the Lodzkie Region**.

[1]Territorial contract – a document for the purpose of coordinating development-promoting activities of the government and local government units, oriented towards achieving common goals established with respect to a specific territory referred to in the contract.

B. HORIZONTAL POLICY

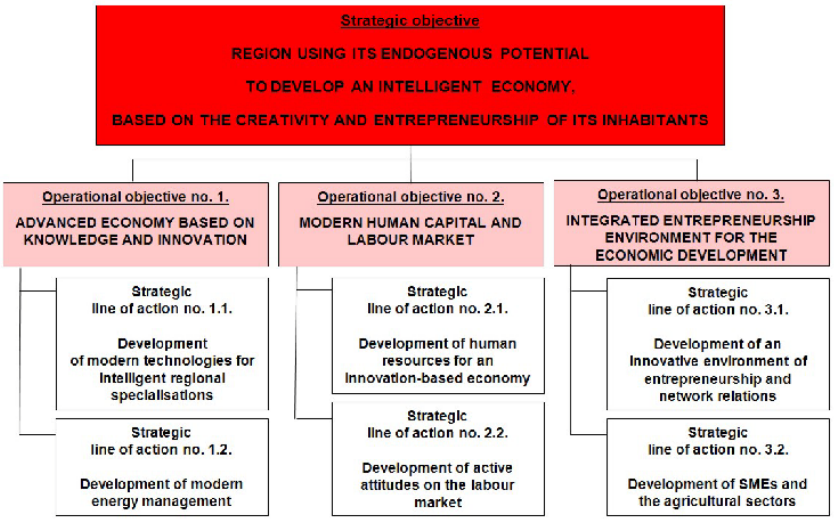
Pillar 1. Economic cohesion

Cohesion at the regional level means the participation of all local government units and all regional entities as well as the optimal use of the development potentials inherent to the region, mostly in the form of integrated projects and cooperation networks. Economic cohesion signifies actions aimed at reducing disproportions that have existed so far between the level of economic development of the Lodzkie Region and other regions in Poland and Europe. Better economic cohesion at the regional level requires that **endogenous potentials, which today are mostly underused due to the lack of cooperation between economic partners and local government units, should be activated and strengthened**. It is assumed that implementation of **integrated projects and local development programmes** will lead to the activation of synergy mechanisms, greater competitiveness of the region and its deeper **functional integration**.

Development activities will be oriented first of all towards supporting competitiveness of the regional economy. It is assumed that the fundamental factor to dynamise economic processes will involve using **development potentials based mostly on the knowledge and intellectual capital**, which will provide the basis for developing **modern and intelligent technologies in the key industrial sectors of the region**. Supporting the development of the innovation potential of the region and commercialisation processes will help to build up the capability of flexible and rapid adaptation of economic structures to the changing global requirements, and also the capability of **anticipating future developmental challenges**.

In order to achieve better competitiveness of the region, it is necessary to develop the academic and R&D potentials, and to focus on "intelligent" **regional specialisations**. Development of the region depends on the quality of human capital, creativity and entrepreneurial skills of its inhabitants as well as economic and social entities within its limits. It is necessary to strengthen network relations and the environment of entrepreneurship and innovativeness in the region.

The development of **economic cohesion of the region** will be achieved based on the objectives and strategic lines of actions as described below:



Operational objective 1.
ADVANCED ECONOMY BASED ON KNOWLEDGE AND INNOVATION

Core aspects of the objective

Economic development, both at the regional, national and global level, is generated by sectors based on knowledge and innovations. One of the most essential elements of advanced economy based on knowledge and innovation is the science and research sector which forms the basis for innovative solutions. Today, a specifically important source of innovations is multidisciplinary research studies. The development of the science and research sector and innovative solutions contributes to the transfer of knowledge and innovations into the economy sector which leads to the improvement of its competitiveness.

Compared to economies based on the traditional development factors, knowledge-based economy (KBE[2]) helps to achieve greater and faster development effects by generating the benefits of innovation rent. The placement of modern products and services on the market results in high profitability and greater accumulation of a capital in the region. Remuneration of employees and the level of internal demand also increase, and it is possible to achieve savings in the consumption of raw materials and energy. The region becomes attractive as a location for new investments and highly profitable activities, and in the long term, it is perceived as an attractive business and residential location.

The development of technologically advanced economy requires that both processes resulting in innovations as well as their absorption and diffusion in the regional environment be strengthened. This dynamises economic processes, increases the efficiency of management and contributes to the creation of intelligent regional specialisations, and as a result helps to attain competitive advantages. Therefore, a policy promoting development should be oriented towards research and strengthening the R&D sector, advancement of technologies of strategic importance to economy, and formation of cooperation networks between universities, research institutions, public authorities and entrepreneurs.

The specific features of the sectoral structure of the region indicate that the development of advanced economy based on knowledge and innovation should be oriented towards technological upgrade rather than supporting specific sectors. It is assumed that support based on public funds will be provided through a two-pronged approach: searching for technological niches and supporting the possibility of development of unique technologies which could be used for commercial purposes in the economic sectors of the region as well as technological restructuring within the key industries of the region.

A special role in the stimulation of development of modern technologies in the region will be attributed to the creative sector[3] with its extensive resources and development potential. It is assumed that development of the Lodzkie Region will be catalysed by creative activities, including broadly defined creative industries which constitute one of the most innovative sectors of the economy. This will help to improve the image of the region and contribute to the accumulation of creative human capital.

One of the challenges of modern times is the satisfaction of energy demand. Both the greater energy efficiency of the economy and the generally reduced energy consumption as a result

[2]KBE – according to the definition of the OECD, economy based directly on the creation (considered to be equivalent to production) and further transfer, i.e. distribution and practical use of knowledge and innovation.

[3]The creative sector can be divided into two groups of activities: creative activities (advertising, architecture, works of art, artistic handicraft, design and fashion, video, film, music and photography, artistic activities and entertainment, publishing, software development) and highly knowledge-based activities (production and ICT services, financial services, legal services and other services for business (e.g. consulting, market surveys, research and development (R&D) and higher education).

of rationalised energy use have become the objectives underlying further stable and sustainable economic development. On account of specific conditions and the potential for development of the modern energy economy the activities taken with a view to developing a modern energy sector will be focused on science and research activities and their application as well as closely connected with the development of an advanced economy based on the knowledge and innovation, and the implementation of intelligent digital technologies.

It is assumed that the achievement of the "**Advanced economy based on knowledge and innovation**" will allow attaining a high position in developing and introducing advanced innovative technologies in the national context, and taking a "civilisation leap" in the socio-economic development of the region. This will enhance the importance and competitiveness of the region in the international context and help to include the intelligent economy of the region into a network of global relations.

Strategic lines of action

1.1. Development of modern technologies for intelligent regional specialisations

1.1.1. **Development of the R&D sector,** e.g. by developing and providing a strong science and research basis for the economy of the region, stimulating the development of technological and application research corresponding to the economic needs of the region, supporting research for the development of modern technologies[4] of strategic importance to the development of intelligent regional specialisations, activating channels and mechanisms of diffusion and commercialisation of research results, supporting application projects implemented by universities for business entities, promoting "good practices" in cooperation between the R&D sector and entrepreneurs;

1.1.2. **Development of modern technologies (biotechnologies, nanotechnologies and advanced materials, mechatronics, ICT technologies) for the key industries of the region (especially textile, energy, medical, pharmaceutical, cosmetic, food and agricultural, and furniture industries, construction materials, machine and electromachine industries, ecological industries),** e.g. by supporting innovative enterprises and diffusion of innovative solutions into the economy, initiating enterprises, disseminating knowledge and information about modern technologies, their importance and potential for use in the key industries of the region, promoting entities using modern technologies;

1.1.3. **Development of dedicated services (e.g. health care services, eco-services, logistics, BPO, IT) based on modern and intelligent technologies,** specifically by supporting the development of wellness functions and dedicated medical services, supporting the development of dedicated clinical centres, including centres for cardiology, oncology, other civilisation diseases and transplantology, specialist medical personnel in geriatrics, palliative care and emergency medicine, implementing innovative health care solutions, supporting the sector of environmental services (e.g. recycling, services limiting environmental risks, reducing pollution and consumption of natural resources), supporting the development of technologies related to logistic, accounting and IT services for enterprises;

1.1.4. **Development of creative industries (e.g. film and music industries, design, media),** e.g. by supporting the implementation of modern technologies, supporting creative activity focused mostly on media, film and music industries, promoting design/industrial design, fostering "good practices" in the field of application of modern design in the economy, developing exhibition functions, providing assistance to cultural organisations and institutions, expanding the material base related to creative industries.

[4]Modern technologies – effective and environmentally friendly technologies.

1.2. Development of modern energy economy

1.2.1. **Implementation of low-carbon and energy-efficient technologies,** mostly in the industry, transport, municipal and housing sector, agriculture, e.g. by supporting the development of energy-efficient industrial and consumer technologies and energy storage, supporting investment projects oriented towards greater energy cogeneration, first of all in the municipal and housing sector, and related to the rationalisation of energy consumption and saving energy, supporting pilot investment projects associated with the application of more effective technologies of coal (especially brown coal) combustion and CO_2 sequestration, promoting so-called "good energy practices", supporting the exchange of knowledge with respect to the use of eco-innovative energy (including energy-efficient) technologies, supporting activities aimed at raising social awareness of the implementation of innovative solutions and development of pro-ecology attitudes;

1.2.2. **Development of "green industries" and services to foster the use of RES,** e.g. by supporting the development of microtechnologies aimed at using energy from biomass originating from agricultural and forestry production and biogas for processing municipal and industrial waste, geothermal installations, including those producing energy generated in a process linked to the production of biomass and biogas, and also low-carbon public transport based on RES energy, supporting the development of entrepreneurship related to offering services of demand management for energy users, promoting energy generation from renewable energy sources and using RES in the municipal and housing sector and public institutions;

Operational objective 2.
MODERN HUMAN CAPITAL AND LABOUR MARKET

Core aspects of the objective

Ensuring stable economic growth and creating new jobs in the economy based on knowledge and innovation requires focusing on the development of human capital determined by the level of education, creativity, job skills, adaptation to changes in the environment and health condition. Concentration of active and educated people, capable of creating new solutions, in the region plays a key role in economic processes and provides the basis for proper development of the region. Additionally, the quality of human capital has an impact on the creation, diffusion and absorption of innovative solutions. Of significant relevance to the growth of the level of human capital is e.g. the potential of professional development, possibility of ensuring good quality of life and satisfactory wages, especially for well-educated specialists. Maintenance of the high quality of labour resources in the region requires creating stimuli for the development of an advanced economy based on knowledge and innovation as well as continuous stimulation of the demand on the labour market.

Modern human capital is highly mobile, both professionally and spatially. It is necessary to actively counteract labour migration outside the region, at the same time supporting active attitudes on the labour market and increasing professional mobility.

The development of the labour market means greater employment as a result of professional activation of the population and increase in the number of attractive jobs. It is necessary to take actions stimulating greater demand for specialists, people with university (especially technical) education and people professionally related with the creative sector.

In order to achieve greater demand for jobs in the region and to stop outflow of inhabitants from the region, of significant importance will be structural changes in the economy, development of entrepreneurship and capabilities of using IT and ICT technologies underlying full participation in social and economic life. The greatest challenge for the regional labour market in the near future will be the structural transformation of the economy as required for its modernisation and better competitiveness. It is assumed that it is necessary to ensure greater percentage of employment in sectors inherent to the economy based on knowledge and innovation. Another challenge is to stimulate the process of transfer of employment in agriculture to the other sectors of the economy. This is related to the multifunctional development of rural areas, creation of new jobs outside the agricultural sector and conditions favourable for individual entrepreneurship. It is assumed that this will be accompanied by greater demand for jobs in the sector of services which is an important factor in modernising the economy.

Of essential importance for the development of the region in the context of demographic forecasts and changes in the pension scheme is the capability of using the potential of the elderly and providing them with appropriate labour conditions. Employees and employers need to be ready to create and participate in the “silver economy”.

It is assumed that the achievement of the “**Modern human capital and labour market**” will provide a stable basis for the development of an advanced economy based on knowledge and innovation, reduce the unemployment rate in the region and help to increase the average remuneration, and also significantly enhance the regional gross value added as well as the gross domestic product. The final level of human capital in the region will correspond to challenges of the regional labour market.

Strategic lines of action

2.1. Formation and development of human resources for an innovative economy

2.1.1. **Development of the academic potential and strengthening the lines of education for an intelligent economy of the region,** specifically by strengthening the infrastructure and scientific activities of the academic community, supporting the development of a cooperation network in the academic community e.g. as part of inter-university agreements, activation of university education towards preparing highly qualified human resources, introducing new, innovative lines of education and adapting educational services offered by universities to the needs of the regional labour market, ordering lines of education of special importance to the economy of the region, promoting new methods of education, activation of scholarship funds to support the best students pursuing lines of education relevant to the development of the region, supporting cooperation between the academic and business environments as well as transition of university graduates to working life;

2.1.2. **Development of vocational education,** e.g. by supporting the establishment of networks of vocational schools, including translocal schools, supporting scarce lines of vocational education in accordance with the needs of the regional labour market, stimulating cooperation between vocational schools and employers, including supporting modular schools, vocational internship, vocational training classes and individualisation of education of highly able students, supporting the development of a modern material base for vocational education to ensure adequate facilities for practical vocational training, promoting vocational education;

2.1.3. **Development of pro-innovation attitudes among entrepreneurs,** e.g. by creating new and developing the existing incubators of entrepreneurship, organising courses and training workshops for entrepreneurs, including in the field of acquiring assistance funds, developing skills in using modern digital technologies and language skills.

2.2. Development of active attitudes on the labour market

2.2.1. **Professional activation of the population,** specifically by supporting professional and spatial mobility of the population, providing support to people establishing their own businesses, promoting flexible forms of employment and organisation of work, including self-employment and family business, supporting the development of academic entrepreneurship which would allow reconciling scientific advancement and gainful employment, stimulating cooperation between educational institutions and employers, development of professional career consulting, promoting advancement of knowledge and vocational skills as part of life-long learning, raising qualifications of employees of labour market institutions, creating a system of information about the needs and current trends on the regional labour market, introducing a system of incentives to promote employment in the region;

2.2.2. **Promotion of the "silver economy" model,** e.g. by fostering the advancement of knowledge and vocational skills of the elderly, development of career consulting, promoting and implementing training courses and social information campaigns for employers on counteracting exclusion on the grounds of age, supporting the creation of jobs to satisfy the needs of the elderly.

Operational objective 3.
INTEGRATED ENVIRONMENT OF ENTREPRENEURSHIP FOR ECONOMIC DEVELOPMENT

Core aspects of the objective

Entrepreneurship is an important factor which contributes to the greater level of socio-economic development. It has an immediate impact on the economic growth, situation on the labour market, economic revival of the region. At the same time, medium-size, small and mostly micro entrepreneurs are highly susceptible to the changes in the economic cycle and involved in innovativeness[5] to an insignificant degree, displaying considerable reluctance to cooperate as part of network structures.

It is assumed that in order to improve competitiveness of regional enterprises, greater integration of business environments will take place, and networks of relations between enterprises, universities, research centres and business environment institutions will be built. An integrated environment of entrepreneurship is one of the elements of so-called territorial capital[6]. This is conducive to innovativeness and implementation of new products. Regions with a network-based economic structure have a greater opportunity to enhance their competitiveness and to develop an advanced economy based on knowledge and innovation. Inclusion of the regional enterprises into a network of global relations will also help to strengthen the position of the region in the international context. Of vital importance in the process of developing a territorially integrated environment of entrepreneurship is the development of cluster structures[7], which are in the initial phase of development in the region, and so-called open innovation models based on informal relations facilitating exchange of knowledge between enterprises, research institutions, business environment institutions and local authorities, used for the creation and introduction of joint innovation projects. In particular, micro and small enterprises, as a result of their inclusion in network-based systems, have a greater opportunity of development, productivity enhancement, identification of market niches and better access to export markets. This is why the development of entrepreneurial attitudes, regional and local entrepreneurship culture, creation and professionalisation of organisations and intermediate institutions between science and business is so important. Of considerable significance in the development of entrepreneurship are also financial instruments, including in particular financial institutions supporting high-risk enterprises. An important role in the process of acquisition of investors will be performed by a complex policy of attracting investments, focused e.g. on creating favourable investment conditions for business entities from outside the region and Poland, and also the process of preparation of a list of areas for investments in the region.

An important segment of the economy in the region is the agricultural sector. It is assumed that in order to improve productiveness and competitiveness of agriculture, it will be necessary to enhance the quality of production of food and other agricultural and horticultural products, and also to phase in agricultural restructuring and modernisation processes. Thus, network relations in the agricultural sector and cooperation connections will be strengthened.

It is assumed that the efforts towards the formation of **an integrated environment of entrepreneurship for economic development** will help to enhance competitiveness of business entities and the agricultural sector, to achieve greater creativeness and innovativeness and to strengthen and professionalise business environment institutions in the region.

[5]Innovativeness comprises a variety of activities in the field of science (research), technology, organisation, finances and business (commerce) aimed at developing and implementing new or significantly improved products and processes, where these products and process are considered new at least from the point of view of their originator.

[6]Territorial capital – accessibility of material and non-material factors within a given area, which may comprise certain resources or limitations.

[7]Cluster – spatially and geographically concentrated group of enterprises, institutions and organisations networked via vertical and horizontal, frequently informal, relations which enable these enterprises to achieve a permanent competitive advantage as a result of concentration of specific resources.

Strategic lines of action

3.1. Development of innovative environment of entrepreneurship and network relations

3.1.1. Development of economic clusters, specifically those based on modern technologies and being developed around universities and in special economic zones, e.g. by promoting cluster systems, raising awareness among entrepreneurs of the benefits resulting from inclusion in a network of cluster relations, supporting joint projects and enterprises based on cooperation networks;

3.1.2. Development of IT platforms for entrepreneurship, specifically by initiating the formation of regional systems of scientific, technical, economic and organisational information, supporting the existing IT platforms for entrepreneurs of the Lodzkie Region (e.g. Lodz Knowledge Transfer Platform), stimulating development of web-based portals for exporters, innovators and clusters, fostering a model of business based on broadly defined ICT solutions;

3.1.3. Cooperation between entrepreneurs, local authorities and the R&D sector, e.g. by providing support to so-called open innovations, financial support systems (e.g. vouchers for innovations, grants for research workers for internship in enterprises), access to non-payable consultations with sector-specific specialists, providing support to innovation brokers, promoting "good practices" for joint science and business projects of strategic importance to the region;

3.1.4. Global policy of "attracting" investors, e.g. by coordinating investment policy and supporting local authorities at the stage of acquiring investors, developing a full listing of areas to be offered for investments, supporting the preparation of strategic areas for investments, ensuring high quality of services for investors, creating a system of specialist support for investment planning, creating preferential conditions for investors starting to cooperate with SMEs in the region, taking actions oriented towards integrated territorial marketing;

3.1.5. Development of business environment institutions, including centres for diffusion of innovative solutions, e.g. by supporting technological parks, technological incubators, academic incubators of entrepreneurship, incubators of entrepreneurship, technology transfer centres, training and consulting centres, supporting seed capital funds, loan funds, credit guarantee funds, institutions reducing the risk of business operations (e.g. *venture capital*).

3.2. Development of SMEs and the agricultural sector

3.2.1. Greater competitiveness of SMEs, e.g. by supporting production- and services-oriented investments, including innovative enterprises: technological (product-, process-oriented), non-technological (organisational, marketing) and other (eco-innovations, social innovations) which contribute to the creation and maintenance of jobs, development of SMEs operating in the high-tech sector, using modern technologies and conducting business operations in the key industries and dedicated services for the region, promoting SMEs with highly visible external competitiveness and included in network structures, supporting the development of companies related to commercialisation of research results, activities aimed at adapting SMEs to standards of environmental protection and rational use of resources, supporting new business models for SMEs, promoting corporate social responsibility;

3.2.2. Greater productivity of the agricultural sector, e.g. by supporting people and companies starting business operations related to services for the agricultural sector, manufacturing and promoting regional products, restructuring and modernisation of farms and generation-to-generation exchange, integration of agricultural producers in food production and processing, marketing, promotion and food distribution, supporting biological progress in the agriculture and certification of agricultural products, supporting activities oriented towards producing machines and equipment for the agricultural sector.

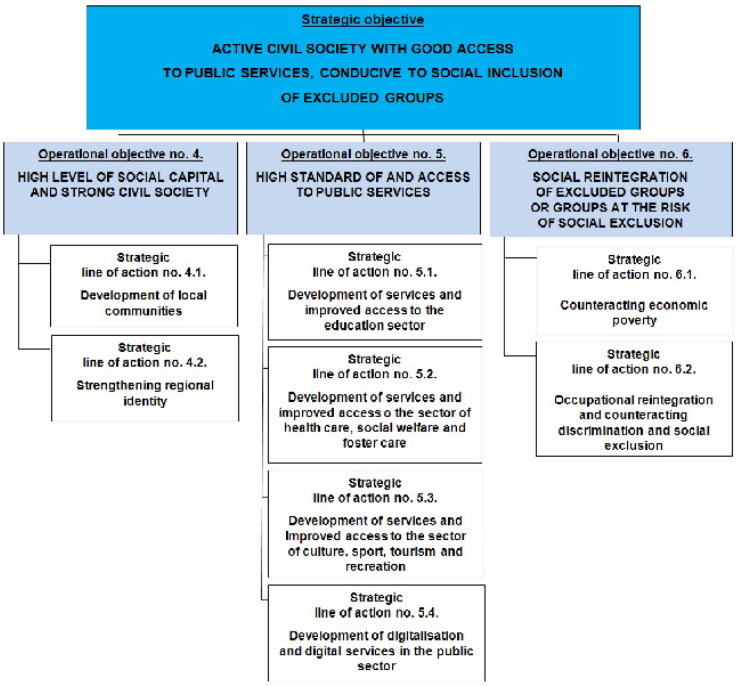
Pillar 2. Social cohesion

Social cohesion in the regional context is defined by **regional and local awareness, cultural identity, self-organisation of the society and bridging social capital, i.e. cooperation between groups and local authorities**. Social problems identifiable in the Lodzkie Region and low quality of social capital have a definitive impact on the low level of social cohesion.

Development-related actions will be oriented towards **ensuring high level of social capital, reducing social inequalities and strengthening local solidarity**, which in turn will contribute to greater social cohesion of the region and better quality of life. One of the requirements which allow increasing the quality of life is a high standard and accessibility of public services (education, health care, social assistance and foster care, culture, sport, tourism and recreation). This will require taking actions with a view to improving the material base of the social infrastructure and its adaptation to the needs of inhabitants of the region. Reducing social inequalities will be also achieved by reintegration of excluded groups and counteracting discrimination. Steps will be taken to achieve progressive elimination of economic poverty, providing people at the risk of social exclusion, especially those at the risk of poverty, unemployment, the disabled and the elderly, with the opportunity of the broadest possible participation in social life, as well as projects oriented towards counteracting phenomena related to social pathology. A highly important group of actions will include strengthening people-to-people solidarity. This will be supported by initiatives activating local communities, supporting the sector of non-governmental organisations as well as developing regional identity. These actions will be aimed at building trust and social bonds, promoting civil attitudes and being active for the common good.

These efforts will not only contribute to greater participation, but they will also strengthen integrity of the region, improve its positive perception among the inhabitants, reduce social polarisation, and additionally, by consolidating the feeling of community, they will help to build up public security.

The development of **social cohesion of the region** will be achieved based on the objectives and strategic lines of action as described below:



Operational objective 4.
HIGH LEVEL OF SOCIAL CAPITAL AND STRONG CIVIL SOCIETY

Core aspects of the objective

Social capital[8] is an important factor underlying socio-economic development. The essential elements of social capital include external and inter-group trust as well as the capability of cooperating, which are indispensable for creating a network-based economy. Another essential factor in building social capital is the regional identity. Such identity is conducive to learning about one's cultural heritage, respecting tradition, supporting folk culture, building one's knowledge about the region. Identification with the place of living inclines to responsibility for it and taking care of it. Special importance is also attributed to education and promotion of attitudes conducive to joint actions, including in particular those oriented towards young people, involvement in local activities, taking care of local space, and also development of ecology-promoting attitudes.

A strong civil society is relevant not only to the economy, but also to the quality of life. It is assumed that a significant increase will be achieved in the social participation in public life, in planning and implementing public tasks, including the creation of public policies (e.g. by ensuring greater involvement of inhabitants in building associations and cooperation, commitment to activities targeted at local communities or greater identification with "local homelands").

Of specific importance is the development of the sector of non-governmental organisations and professionalisation of their operations. Non-governmental organisations, not focused on their own profit, operate for the benefit of communities by satisfying their needs, thus contributing to the formation of a strong society. An important manifestation of citizens' activity and the status of social development is the degree of involvement in voluntary work. This shows a sense of identity and local identification as well as the level of civil awareness. Of utmost importance for the development of the region is the sector of non-governmental organisations as a strong partner for local authorities at all levels, which should represent the voice of the society and actively influence development of the region.

It is assumed that the achievement of the "**High level of social capital and strong civil society**" will contribute to rapid socio-economic development and greater social cohesion of the region, have a significant impact on the quality of life of its inhabitants, and hence it will help to improve attractiveness and competitiveness of the region.

Strategic lines of action

4.1. Development of local communities

4.1.1. **Development of a civil society,** e.g. by supporting training courses, educational programmes and contests/competitions to foster pro-civil, pro-social and pro-ecology attitudes e.g. in schools, supporting efforts aimed at strengthening a civil dialogue and activities for the common good, in particular among young people, involvement of local public institutions in cooperation with inhabitants, stimulating development of individual and corporate philanthropy, supporting activities aimed at building competence of social leaders and animators of activities in local communities, activity of the elderly, fostering and developing mechanisms of citizens' participation in governing activities;

[8]Social capital – capability of citizens to mobilise and combine resources which is conducive to creativeness and strengthens the will of cooperation and agreement in achieving common goals, resulting from mutual trust and the applicable standards and models of conduct. (Social Capital Development Strategy, September 2011).

4.1.2. **Development of the sector of non-governmental organisations,** e.g. by promoting volunteer activities and supporting training courses for volunteers and members of non-governmental organisations with respect to implementing their tasks as defined in articles of association, stimulating cooperation between non-governmental organisations, private and public sectors, creating regional centres for cooperation, supporting the establishment and operations of local centres for social dialogue, developing multiannual programs for cooperation between local authorities and non-governmental organisations, strengthening the basis for self-financing of non-governmental organisations and their financial resources, promoting services provided by non-governmental organisations, supporting activities aimed at building competences of employees of non-governmental organisations, supporting delegation of public tasks to non-governmental organisations.

4.2. Strengthening regional identity

4.2.1. **Development of regional and local identity based on historical and cultural diversity,** e.g. by enhancing historical knowledge about the region at all levels of school education, organising competitions/contests relating to the knowledge of the region, supporting training courses for cultural animators, promoting and supporting development of folklore, including in particular national and international festivals, folk handicraft workshops, traditional regional products, initiating the establishment of cultural parks and "live" open-air museums;

4.2.2. **Strengthening the development of symbolic functions,** e.g. by creating the quality of space, resources, products and symbolic events, supporting the implementation of integrated projects initiated e.g. by Local Activity Groups and other local communities, promoting cultural and environmental qualities of the region, promoting and supporting cultural products and events;

4.2.3. **Promoting the "Lodzkie" brand,** e.g. by organising exhibitions, events and contests to promote the region and regional products at the national and international level, holding interactive promotional campaigns on the website of the Marshal's Office of the Lodzkie Region, supporting the development of marketing strategies for functional areas.

Operational objective 5.
HIGH STANDARD AND ACCESSIBILITY OF PUBLIC SERVICES

Core aspects of the objective

An important factor underlying attractiveness of the region and its civilisation level are the conditions of living of its inhabitants as determined by e.g. access to the essential public services, which defines the quality of life and social cohesion. This applies first of all to educational services, health care services, social welfare and foster care, culture and recreation. Weak or difficult access of inhabitants to the social infrastructure and unsatisfactory quality of services are a considerable civilisation barrier, especially in rural areas and small towns.

Generally available, modern and high-quality education is one of the fundamental objectives implemented by the European Union. Providing equal opportunities of access to education at all levels, also for the disabled, has become a vital challenge. Special importance in the region is attributed to general implementation of pre-school education, especially in rural areas. Given the new challenges associated with the development of information society, priority is also given to building skills of using digital technologies as a modern tool for acquiring, processing and sharing knowledge and information at all levels of education.

In order to improve the health care situation of inhabitants of the region, it is assumed that actions will be taken in the field of preventive health care and improving access to the essential medical services. In the context of demographic changes, it is necessary to develop social welfare and a sector of services for the elderly.

Of equal importance is access to cultural, tourist, sport and recreational activities related to the development of so-called "leisure industries" which strengthen the quality of social capital, economic potential of the region and make it possible to promote healthy lifestyle. It is assumed that the development of the essential cultural infrastructure will be supported, especially in small towns and rural areas. In the age of development of information civilisation, of special importance is digitalisation of resources and services of cultural institutions, which is necessary for their better functioning in accordance with the market needs. As far as the infrastructure of sport, tourism and recreation is concerned, it is assumed that the tourist base and sports facilities will be upgraded and integrated efforts will be taken for the development of active, wellness and cultural tourism.

As a result of the development of digitalisation and digital services in the public sector, the standard and accessibility of public services will be improved. The development of digital technologies will add to the efficiency of development managements, and an expanded assortment of IT-based services will allow multilevel co-management based on partnership. The development of e-administration and popularisation of electronic customer services for the public is an important instrument of interactive cooperation and participation of the inhabitants, non-governmental organisations and other social and economic structures in the decision-making process associated with the development. Stimulating activities of local authorities in terms of creating integrated web-based portals and social forums functioning in the local, regional and supraregional context will provide better access to public services.

It is assumed that the achievement of the **"High standard of and access to public services"** will help to reduce unequal access to social infrastructure and satisfy the basic needs of the population in this regard; it will improve their quality of life, add to attractiveness of the region as a place of living and provide the basis for involvement of all inhabitants in development processes.

Strategic lines of action

5.1. Development of services and better access to the education sector

5.1.1. Development of nurseries and pre-school facilities, e.g. by supporting construction of new and modernisation of the existing facilities, including in particular those in rural areas and small towns, supporting the development of different forms of care of children at preschool age and children up to 3 years old;

5.1.2. Improvement of the standard of educational establishments at all levels of education, e.g. by supporting adaptation of primary schools to the educational needs of 6-year-olds, developing dedicated laboratories in schools for the study of specific subjects and an infrastructure of training facilities for adults;

5.1.3. Development of competences and digital technologies in the process of education at all levels, in particular by supporting programmes, training courses and preparatory courses for teachers in the field of application of digital technologies as part of teaching programmes, supporting creation of educational platforms as a means of communication between teachers and students, expanding teaching to include different forms of e-learning, supporting IT development of teaching staff in educational establishments.

5.2. Development of services and better access to the sector of health care, social welfare and foster care

5.2.1. Development and rationalisation of the sector of health care, social welfare and foster care, e.g. by supporting expansion of the infrastructure, social welfare and foster care, including a network of day care centres and other alternative forms of care for people with chronic diseases and the elderly, implementing ICT solutions in the field of public health – development of e-services in the field of health care;

5.2.2. Development of services and preventive health care programmes and other social welfare and foster care programmes, e.g. by supporting implementation of preventive health care programmes oriented towards reducing the incidence of civilisation diseases, educational programmes, training courses and promotional campaigns related to healthy lifestyles and regular medical check-ups in preventive care, fostering health-promoting behaviours, supporting the development of community care services for people with chronic diseases and the elderly, supporting activities aimed at improving professional qualification of social and foster care human resources.

5.3. Development of services and better access to the sector of culture, sport, tourism and recreation

5.3.1. Development of the base of cultural, sport, tourism and recreational services, e.g. by supporting activities aimed at greater attractiveness and upgrading the cultural, sport and recreational services, including educational establishments, entertainment services, business and conference facilities and tourist infrastructure, including tourist trails, oriented towards wellness, active and cultural tourism, supporting digitalisation of tourism-oriented resources and services, culture and cultural heritage resources;

5.3.2. Development of cultural, sport, tourism and recreational services, e.g. by supporting the creation of integrated tourist products, promoting the existing tourist products, supporting training courses aimed at increasing the quality of cultural, sport, tourism and recreational services, stimulating activities aimed expanding the scope of services offered by cultural institutions, supporting cultural events of national and international importance, supporting activities aimed at increasing competences of personnel in the sector of culture, sport, tourism and recreation, supporting the creation of a cooperation network among entities involved in activities aimed at cultural development.

5.4. Development of digitalisation and digital services in the public sector

5.4.1. **Development of e-administration and fostering electronic public services,** e.g. by implementing systems supporting services for inhabitants and investors, promoting campaigns relating to the capability of using computer-based technologies to contact public administration, popularisation of the use of electronic signatures, supporting activities aimed at improving competences of public administration personnel in using ICT technologies;

5.4.2. **Interactive tools of communication between local authorities and inhabitants,** e.g. by supporting campaigns, courses, computer literacy training workshops for inhabitants, starting websites for communication between citizens and local authorities, administration and public institutions, promoting the use of Internet-based messengers;

5.4.3. **Development of databases**, e.g. by developing the Regional Territorial Observatory, supporting development of databases and their updating (including spatial databases and cartographic studies), collecting information and digitalisation of the existing data, integration of databases of public institutions, supporting the process of securing databases in public institutions, providing access to certain resources, supporting development of integrated digital platforms at the local, regional and supraregional level.

Operational objective 6.
SOCIAL REINTEGRATION OF EXCLUDED GROUPS OR GROUPS AT THE RISK OF SOCIAL EXCLUSION

Core aspects of the objective

Problems related to reintegration of excluded groups into social life and economic processes has been strongly emphasised in the EU strategy "Europe 2020 A strategy for smart, sustainable and inclusive growth" which is aimed at achieving e.g. greater employment rate and significant reduction of the poverty scale and social exclusion. Social exclusion[9] generates the costs borne by the entire society as it becomes a significant barrier to economic growth. This is particularly visible in the context of unfavourable demographic processes, including the ageing society. Given the immediate economic context, counteracting and limiting social exclusion has become a priority in strategies aimed at stimulating economic growth. A serious problem is the phenomenon of learned helplessness which is seen in such behaviours as demanding attitude, total dependence on social welfare, lack of one's own initiative, gradual loss of life aspirations, etc. Despite higher living standards, the lack of significant progress in counteracting and fighting poverty[10], both at the national and regional level, remains a problem which especially affects children and young people and frequently mutates into the so-called inherited poverty.

A very important instrument to overcome social problems is the development of the sector of social economy,[11] with the essential aim of achieving social objectives by economic methods. It is assumed that the existing entities of social economy will be activated and such new entities will be created, and they will be involved in business activities of groups at a disadvantage at local labour markets as well as integrating groups at the risk of social exclusion.

It is assumed that the achievement of **"Social reintegration of excluded groups or groups at the risk of social exclusion"** will help to improve the quality of human and social capital, restore labour force in the labour market and increase the socio-economic potential of the region. The relevant activities will be aimed at e.g. providing assistance in entering the labour market for people excluded so far, effective reduction of poverty, social and cultural activation as well as improving qualifications of disadvantaged groups, and also fighting social pathologies.[12]

[9]Social exclusion – situation which makes it impossible or significantly more difficult for an individual or a group to perform social roles, use public resources and social infrastructure, gain income in a dignified manner. Social exclusion poses the greatest threat to the following groups: unemployed, large families, lone parents, disabled people, people with mental disabilities, elderly people, addicted, homeless people, people with low professional qualifications, victims of family pathology, children and young people from vulnerable environments and growing outside their families, and also immigrants and members of national minorities.

[10]Poverty means non-satisfaction of the essential material needs of a human being at a desirable level. This is poverty in absolute terms – while in relative terms, poverty is considered a form of inequality, excessive gap between the standard of living of individual population groups.

[11]Social economy – according to the EMES European Research Network, organised operations with mostly social objectives, where profits are re-invested in implementing such objectives or in a community, and not to maximise profits or increase incomes of shareholders or owners. Social economy is focused on social utility and its welfare.

[12]Social pathology – a social phenomena related to individuals and social groups behaving in a manner inconsistent with the applicable values of a given culture.

Strategic lines of action

6.1. Counteracting economic poverty

6.1.1. Counteracting learned helplessness, e.g. by supporting programmes, training sessions, courses to help to get rid of the habits characteristic for so-called learned helplessness, improving professional qualifications, supporting the development of social entrepreneurship;

6.1.2. Supporting children and young people from families in a difficult economic situation, specifically by supporting initiatives and programmes contributing to providing equal opportunities of development and education of children and young people from families in a difficult economic situation, including e.g. programmes related to providing meals in schools, programmes related to the supply of hardware, teaching aids and materials necessary for development of skills and interests, initiatives to enable participation in additional teaching classes and out-of-school courses, scholarship programmes for students with high abilities.

6.2. Professional reintegration and counteracting discrimination and social exclusion

6.2.1. Development and dissemination of social economy, e.g. by: supporting the establishment and development of social enterprises, including social cooperatives, social economy entities, e.g. social integration centres and clubs, professional activation centres, occupational therapy workshops, creation of infrastructure and supporting professional consulting services in cooperation networks, return and non-return financing mechanisms, including support for the formation of loan and guarantee funds for social enterprises and social economy entities, educational activities, promoting the concepts of social economy, supporting the creation of cooperation platforms and networks, and local initiatives;

6.2.2. Activation of groups at the risk of social exclusion, e.g. by: supporting the creation of specialist training and rehabilitation centres, including professional rehabilitation, promoting supported-employment enterprises, supporting the development of specialist physical therapy services and promoting physical therapy programmes for the disabled to enable their returning to the labour market and social integration, supporting enterprises for the limitation of digital exclusion, supporting the development of institutions activating the elderly and providing assistance and therapy to dependent persons, supporting the development of integration-centred education at different stages, supporting enterprises for universal accessibility, including accessibility by means of transport and universal designing with the aim of social inclusion of persons with reduced functionality;

6.2.3. counteracting and preventing social exclusion, e.g. by: supporting innovative solutions aimed at counteracting social exclusions, training courses and educational programmes concerning addictions, including e.g. preventive treatment oriented towards prevention of addictions, providing access to modern therapeutic methods, supporting actions with respect to social reintegration of excluded persons, counteracting domestic violence, supporting actions and programmes oriented towards the homeless, including programmes to create the phenomenon, development of community day care and socio-therapeutic centres and social rehabilitation programmes for young people who come into conflict with the law, supporting actions and programmes oriented towards young people who leave family-based and institutional foster care.

Pillar 3. Spatial cohesion

Spatial cohesion, which is one of the constituents of territorial cohesion, means **an efficient networked system of the environment created and transformed by human beings, with cities as hub points connected via elements of infrastructure, mostly transport infrastructure**. **Spatial cohesion is also created based on a continuous environmental system with river valleys as its axes.**

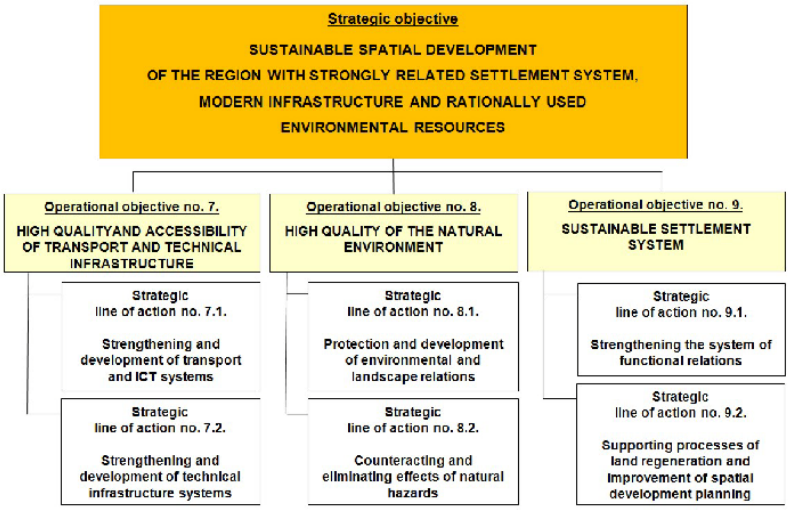
The importance of cities/towns in the settlement system of the Lodzkie Region will determine its functions. Cities/towns – growth poles, will play the most important role, while Lodz and its metropolitan area will be the core of the system. The strength of functions of the metropolitan area will determine the scope of functional relations both inside the metropolitan area and the region, and with other metropolises in Poland and Europe.

An essential condition required for achieving spatial cohesion of the region will be an effective and sustainable transport system. High-quality technical condition of the transport infrastructure and good internal and external accessibility of the region by different means of transport are the key elements underlying the diffusion of development processes. Additionally, of significant importance will be the development of ICT systems based on modern solutions in the field of digitalisation and computerisation which will enable the development of digital society in the region. Transport and communication relations will be complemented by the access to high-quality technical infrastructure. The application of innovative technologies and modern systems in energy production, water and waste water management and waste management will form the basis for improving the quality of life in the settlement system.

A coherent environmental system is one of the vital endogenous potentials of the region. Effective use of this potential will enable the development of tourism, recreational and wellness functions. A necessary requirement for ensuring high-quality environment will also include actions aimed at counteracting natural and anthropogenic risks. The implementation of the adopted objectives will enable sustainable development combining three aspects – economy, man and environment.

Distinctive features of a coherent spatial system include: **capability of achieving competitive advantages, capability of adapting to changing economic conditions and deriving synergistic effects.** As such, spatial cohesion of the region means the creation of the opportunity to **fully use endogenous potentials and effective formation of functional and spatial relations between nodal points of the system**. **This status of spatial cohesion will ensure uniform socio-economic development and prevention of peripherisation processes**, and it will contribute to greater functional integration of the region.

The creation of **spatial cohesion of the region** will be achieved by the objectives and strategic lines of actions as described below:



Operational objective 7.
HIGH QUALITY AND ACCESSIBILITY OF TRANSPORT AND TECHNICAL INFRASTRUCTURE

Core aspects of the objective

Accessibility and quality of transport, communication and technical infrastructure is the essential factor underlying economic and social development, which determines attractiveness for investors, and also ensures high quality of services for inhabitants. Relations with international transport networks provide access to external markets, transfer of innovations and inflow of highly qualified specialists. In the context of the internal relations, high-quality transport infrastructure underlies spatial cohesion of the region. It is assumed that in order to strengthen and develop transport systems, the relevant actions will be oriented towards: improvement of the quality and accessibility of transport infrastructure, integration of individual subsystems, development of logistics services as well as intelligent traffic management systems. In the context of development of modern markets and tourism, there will be increased demand for faster air travel and development of airports. Improvement of passenger and goods transport services will be ensured via the integration of transport systems, with the use of modern logistics and multimodal services. Knowledge-based economy requires modern systems of social communication, data and information exchange, both in the structures of governmental agencies, enterprises, entities providing public services, and in people-to-people relations. This communication is ensured via the Internet and modern means of communication such as mobile and line telephony, and also radio and TV connections. It is assumed that greater access to broadband connections to the Internet, digitalisation of services and data, and also educational activities, in particular social groups with the lowest indicator of Internet use, will contribute to the dissemination of e-services and creation of information society. An inherent element of life of inhabitants and efficient functioning and development of the economy is the accessibility and quality of technical infrastructure as well as an efficient system for removal and disposal of production and municipal by-products (waste water, waste products) in accordance with the requirements of environmental protection. The development of technical infrastructure will be oriented towards ensuring energy security in the region by improving the technical condition of point and line elements of transmission, distribution and receiving grids. It will also be possible to use RES (geothermal water, biomass, wind and solar energy) for local energy production and implementation of new low-carbon technologies and solutions. Of significant importance will be also actions aimed at balancing network disproportions as part of the development of water and waste water management and integrated waste management. Additionally, actions will be taken to increase safety and security of the infrastructure, including in particular vulnerable strategic networks and facilities, and also actions related to the construction of modern transport and ICT systems for efficient functioning of the critical infrastructure[13] to ensure effective means of evacuation in the event of a crisis or armed conflict.

The achievement of **"High quality and accessibility of transport and technical infrastructure"** will allow taking full advantage of the potentials of the region, and it will also strengthen its development processes.

[13]Systems and their constituent facilities, functionally related to one another, including buildings and structures, equipment, installations, services of key importance to national security and security of citizens, and used to ensure efficient functioning of public administrative bodies, institutions and entrepreneurs. The critical infrastructure includes e.g. the transport system, technical infrastructure (according to the Crisis Management Act).

Strategic lines of action

7.1. Strengthening and development of transport and ICT systems

7.1.1. **Development of strategic external and internal connections by road, railway and air,** e.g. by: supporting the construction of connections via motorways and expressways, expansion and reconstruction of public roads, construction of ring roads and diversion of roads; construction and modernisation of: railway lines, stations and train stops, expansion of the Lodz Airport, including its connection to the transport system and expansion of transport services, actions aimed at constructing high-speed railway and central airport for Poland;

7.1.2. **Development of ecological passenger transport,** e.g. by: construction of the Lodz Metropolitan Rail Line, purchase of modern railway rolling stock, support for modernisation of tram lines and purchase of modern rolling stock, full integration of systems, including e.g. implementation of multimodal junctions, including in particular the central junction at Lodz Fabryczna station, Park&Ride and Bike&Ride systems, promoting environmentally friendly means of transport (railway, trams, bicycles), supporting the construction of a system of cycling routes;

7.1.3. **Development of ecological goods transport, including intermodal junctions and transport logistics**, e.g. by: supporting the process of transforming the existing container and cargo handling stations into intermodal terminals, supporting the construction of new terminals, modernisation of the system of transport and communication relations between cargo handling stations, logistics centres, cargo airports and economic zones, supporting the expansion of the cargo infrastructure at the Lodz Airport;

7.1.4. **Improved access to IT networks and ICT services,** e.g. by: supporting the strengthening and expansion of the skeletal ICT infrastructure and local access network, promoting innovative information and communication technologies;

7.1.5. **Securing back-up facilities for the transport and ICT infrastructure and equipment for national defence and public security,** e.g. by: supporting the development of a modern transport and ICT system for the functioning of the critical infrastructure as an element of the integrated rescue operations crews, designating and marking of fixed transport routes for dangerous goods and places for their stops, supporting the implementation of intelligent transport systems.

7.2. Strengthening and development of technical infrastructure systems

7.2.1. **Providing energy security in power engineering, heating and gas distribution systems,** e.g. by: supporting the diversification of energy sources, modernisation, construction or expansion of transmission and distribution power engineering networks, and facilities for production of electric power, supporting actions aimed at reducing energy intensity in energy transmission and distribution and at final users, supporting the implementation of projects related intelligent power engineering networks, supporting the modernisation and expansion of centralised heating system networks, development of gas distribution networks;

7.2.2. **Development of water and waste water systems,** e.g. by: supporting the construction, expansion and modernisation of systems related to the supply high-quality water, sealing water supply systems and ensuring effective systems for waste water disposal and treatment;

7.2.3. **Rationalisation of waste management,** e.g. by: supporting the implementation of an effective waste processing system, construction and expansion of waste disposal systems, including adapting installations in the existing power plants and power/heat-and-power plants to waste co-combustion and supporting actions aimed at closing and regeneration of municipal landfills;

7.2.4. **Securing back-up facilities for the technical infrastructure and equipment for national defence and public security,** e.g. by: supporting actions aimed at protecting the critical infrastructure and preparing suitable solutions in case it is damaged or its functions are disrupted, supporting public institutions oriented towards national defence and public security.

Operational objective 8.
HIGH QUALITY OF THE NATURAL ENVIRONMENT

Core aspects of the objective

Natural environment is a factor which plays an increasingly important role in defining socio-economic functions and development. High-quality environment and access to its resources have important ecological functions, exert impact on the quality of life and quality of human capital. Qualities of the natural environment determine also attractiveness of the region in terms of tourism and recreation, thus becoming important stimulators of economic development. The lack of continuity in protected areas and fragmented space, as well as strong anthropopressure on areas of valuable environmental qualities lead to the degradation of the natural environment. Limitation of environmental devastation requires support from public authorities and continuous actions aimed at raising ecological awareness of inhabitants of the region. At the regional level, it is assumed that certain ecological relations will be provided between areas of the highest environmental and landscape qualities in order to derive an internally coherent ecological system compatible with the national system. The essential actions will include e.g. providing legal protection to areas with valuable environmental and landscape qualities, maintaining biodiversity, including NATURA 2000 areas, counteracting uncontrolled suburbanisation and protection of river valleys against development.

Climate changes progressing at the global level, which bring more and more frequent droughts or heavy rain falls and floods, are significant factors to be taken into account when taking decisions relating to the limitation and minimisation of their adverse effects. Of vital relevance is the need to change the approach to anti-flood protection which should involve restoring flood areas and construction of polders rather than river regulation by constructing flood embankments and retention reservoirs. Another challenge is related to the occurrence of heavy rain falls, especially in urban areas characterised with a very high percentage of hardened surfaces. In order to limit the effects of droughts, it is also assumed that natural and artificial retention will be improved, and rational agricultural economy will be introduced based on water irrigation systems. Additionally, important hazards are related to fires, strong winds and harmful insects which require strong actions aimed at reducing and mitigating the effects of their occurrence.

The achievement of "**High quality of the natural environment**" will contribute to the improvement of spatial, economic and social cohesion and allow taking full advantage of the potentials of the Lodzkie Region, and also it will help to increase the quality of life of the inhabitants of the region.

Strategic lines of action

8.1. Protection and creation of environmental and landscape relations

8.1.1. **Development of an internally coherent, regional system of protected areas in relation to the national system,** e.g. by: supporting actions aimed at providing legal protection to areas of the highest environmental qualities, protection of ecological corridors and counteracting fragmentation of environmental spaces, promoting environmental qualities of the region, supporting educational programmes and competitions aimed at raising ecological awareness;

8.1.2. **Maintenance of biological diversity,** e.g. by: maintenance of environmental resources, protection and re-introduction of endangered environmental components, in particular habitats, flora and fauna species, also in NATURA 2000 areas, protection and restoration of natural ecosystems, control and limitation of development of invasive species, creation of a coherent system of information about the existing species and natural habitats, and monitoring the status of biodiversity, in particular in protected and endangered areas;

8.1.3. **Creation of an environmental and cultural system within the area of relations of the Lodz Agglomeration,** e.g. by: supporting actions aimed at protecting green areas, forests, historical structures and areas, their restructuring and combining these elements into a coherent environmental and cultural system, counteracting uncontrolled suburbanisation, promoting environment and cultural qualities.

8.2. Counteracting and fighting the effects of natural and anthropogenic hazards

8.2.1. **Providing greater anti-flood protection,** e.g. by: the development of anti-flood infrastructure, including construction of polders, dry reservoirs, pump stations, relief canals, small retention reservoirs with mainly anti-flood functions, construction and modernisation of anti-flood equipment, supporting the construction of ecological anti-flood protection, restoring natural flood areas and protection of riparian forests, expansion of integrated early flood warning systems, and counteracting urbanisation of flood areas;

8.2.2. **Increasing retention waters,** e.g. by: supporting actions aimed at increasing natural retention, including greater wooded areas, taking into account diversity of tree species, increasing the area of trees and bushes as a substitute for forests in the areas of the best soils and intensive agricultural production, maintaining rational agricultural economy, including adapting the farming structure, agro-technology and agricultural species to the existing water deficit, reconstruction of the existing water irrigation systems and construction of water irrigation equipment, small retention reservoirs and channel retention equipment, supporting actions aimed at increasing retention of storm waters, in particular at sites of their occurrence (scattered retention), supporting actions aimed at preventing and reducing the process of eutrophication with a view to retaining and storing good-quality waters;

8.2.3. **Enhancing protection against the effects of natural hazards (fires, floods, hurricanes, insect pest) and serious emergencies,** e.g. by: supporting the expansion of the systems of identification, monitoring and elimination of the effects of hazards, conducting rescue operations in the event of risks to forest, rural and urbanised areas, expansion of anti-hazard infrastructure, supporting actions aimed at increasing qualifications of the emergency operations crews responsible for protection against such hazards.

Operational objective 9.
SUSTAINABLE SETTLEMENT SYSTEM

Core aspects of the objective

Experiences at both the global and national level show that socio-economic development processes are mostly concentrated in large urban centres. Cities/towns increase their attractiveness by increasing the strength of their functions and becoming growth poles. With developed economy, attractive jobs, a wide variety of higher-end cultural, research, educational and other services, including administrative and financial services, they broaden their area of influence and create economic relations with other growth poles and areas in the immediate vicinity. A significant factor which contributes to increasing the most immediate impact area of an urban centre is its accessibility, i.e. efficiency of communication relations.

It is assumed that the settlement system in the Lodzkie Region will provide a stable structure of networked functional relations between centres of different size. Lodz will be the metropolitan core of the system, and its potential will be complemented by cities/towns functioning as subregional growth poles. These centres will involve concentration of specialist and complementary functions of supraregional importance (e.g. industrial, logistics, educational, scientific, academic, medical and other). The development of the other cities and rural areas will be based on unique endogenous potentials. It is assumed that as a result of the undertaken activities and development of specialist functions of high complementarity, these areas will be included in the network of functional relations and will become a significant element in the balancing of the settlement system in the region. At the same time, it is assumed that significant strengthening of intraregional relations will contribute to the elimination of external burdens for border areas and help to prevent their marginalisation. The key line of actions aimed at strengthening the role of urban centres and building up their attractiveness as a place of living and area for investments is to achieve orderly regional planning. It is assumed that degraded brownfield and residential areas in cities/towns will be subject to renovation, and actions will be taken to improve the quality of public spaces, including those of symbolic importance, as well as counteractions against uncontrolled emergence of suburbs.

It is assumed that achievement of the objective **"Sustainable settlement system"** will help to ensure equal accessibility to public services, dissemination of development across the region as well as spatial coherence. The related synergistic processes will contribute to greater competitiveness of the region at the national and European level.

Strategic lines of action

9.1. <u>Strengthening the system of functional relations</u>

9.1.1. Development of complementary and specialist functions as well as functional relations between the metropolitan centre and subregional centres (growth poles) in intra- and supraregional systems, e.g. by supporting the development of higher-end public services, services for enterprises, promoting investments based on endogenous potentials of metropolises and growth poles which help to develop their specialist and complementary functions (especially culture-forming, academic, educational, science and research functions), initiating and stimulating integrated activities aimed at building a cooperation network with national metropolitan centres and relations between intraregional growth poles, promoting the relevant "good practices";

9.1.2. **Inclusion of urban and rural centres into a complementary system of functional relations,** e.g. by supporting investments based on endogenous potentials (e.g. food processing industry, construction materials, wellness and tourist services), supporting the development of non-agricultural functions in rural areas, promoting "good practices" in relation to the development of suburban areas.

9.2. Supporting land regeneration processes and improvement of orderly spatial planning

9.2.1. **Regeneration of degraded residential and brownfield areas, including renovation of historical spatial systems and historical monuments**, e.g. by supporting the creation and implementation of integrated projects aimed at comprehensive regeneration of areas, organisation of workshops and conferences concerning the possibility of solving problems related to degraded areas, supporting conservation works leading to renovation of historical monuments and areas, and using historical monuments for cultural, social, educational, tourism-related and economic purposes, organising competitions for the best regeneration and renovation projects;

9.2.2. **Development of the cultural landscape, including high quality of public spaces, preventing chaotic suburbanisation and promoting good models of regional architecture**[14]**,** e.g. by stimulating the preparation of local spatial development plans, regional historical studies and building catalogues to formulate objectives underlying the development of an orderly spatial planning process, supporting competitions for the best urban projects concerning development of public spaces, promoting cultural landscape qualities, especially those which may create symbolic places (e.g. in architectural objectives, on organised green areas and in forests).

[14]Good models of regional architecture – regional building catalogues.

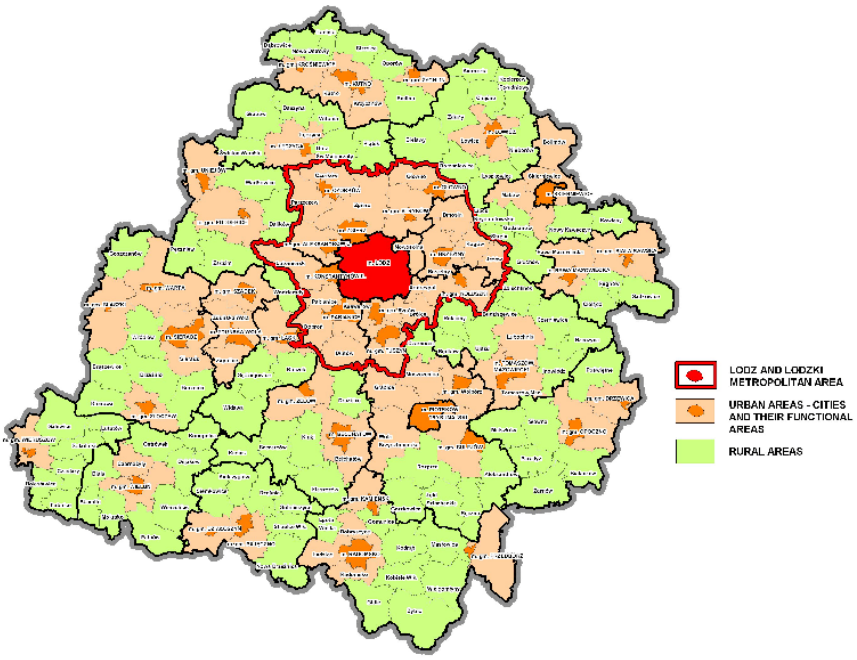
C. TERRITORIAL AND FUNCTIONAL POLICY

1. Urban and rural areas

A significant role in the development processes will be played by **urban areas**, i.e. cities/towns and their functional areas, i.e. growth poles. In the coming decade, the most important development-related challenges in urban areas will include the capability of using endogenous potentials for creating economic growth and building competitive advantage, improving the quality of life of inhabitants. This is where growth processes and economic development will be dynamised, and new jobs will be created. At the same time they will be an attractive place of living, with high-quality public services and harmonious environment. The main urban centres, i.e. Lodz and subregional centres (cities/towns with a population of more than 20,000) will become the driving force of knowledge-based economy using academic, science and research potential, while small and medium-sized cities/towns will become local development centres for rural areas. Of significant importance for the implementation of the projected actions will be the cooperation between local government units in urban areas, including in particular at the time of creation and implementation of integrated territorial investments.

Rural areas are perceived as complex and multi-functional areas, places of living, working and leisure. It is assumed that we will see the development of innovative agriculture and non-agricultural business activities which will generate new jobs, e.g. in food processing industry, services, commerce, tourism and agro-tourism, handicraft and hand-made products. The improvement of the civilisation level in rural areas will be achieved by strengthening development potentials of communal centres, better access to public services, improvement of the human and social capital quality, limiting the scale of poverty and social exclusion, and providing good transportation and infrastructural accessibility. A key role in the development of rural areas will be attributed to environmental protection and prevention of natural and anthropogenic threats.

Fig. 134. Urban and rural areas in the Lodzkie Region



1.1. URBAN AREAS

Strategic objective

URBAN AREAS PROVIDING THEIR INHABITANTS WITH HIGH QUALITY OF LIFE, USING COMPETITIVE ADVANTAGES FOR DYNAMIC ECONOMIC GROWTH AND ADAPTING TO DEMOGRAPHIC AND CLIMATE CHANGES

Strategic lines of action:

1. Supporting system-wide regeneration of socially and economically degraded areas.
2. Supporting actions related to the development of high-quality public spaces.
3. Supporting actions related to the prevention of adverse suburbanisation.
4. Supporting actions aimed at increasing the quality of public services and adapting them to the needs of the ageing society.
5. Supporting actions related to the construction of ring road systems and connections to expressways and motorways.
6. Supporting actions related to the development of collective transport systems and integration of transportation systems.
7. Supporting actions related to energy efficiency, e.g. implementation of energy-saving technologies in the construction industry, power engineering, transport and waste management sectors.
8. Supporting actions related to the rationalisation of water and waste water management, including greater water retention.
9. Supporting actions related to the maintenance and development of air corridors and protection of green areas.
10. Supporting the development of symbolic functions to build supraregional importance of urban functional areas.

1.2. RURAL AREAS

Strategic objective

RURAL AREAS AS ATTRACTIVE SETTLEMENT AREAS USING INTERNAL POTENTIALS FOR MULTIFUNCTIONAL DEVELOPMENT

Strategic lines of action:

1. Supporting actions related to the implementation of innovative solutions in agriculture and forest management, emergence and activities of agricultural producers' organisations.
2. Supporting actions related to the development of ecological agriculture, local markets promoting regional products and agro-tourism.
3. Supporting actions related to the development of small and medium-sized non-agricultural enterprises.
4. Supporting actions related to the initiation and implementation of the Revival of Rural Areas Programme in the Lodzkie Region.
5. Supporting actions related to the application of the Good Agricultural Practices Code, including e.g. improvement of the efficiency of water and soil management in agriculture (especially to prevent soil acidification) and supporting actions related to the implementation of agricultural and environmental programmes (including actions to protect biodiversity), achieving greater water retention e.g. by increasing forested and wooded lands.
6. Supporting actions aimed at improving access to the essential public services, including pre-school education, health care, cultural and sports services.
7. Supporting the development of a public transportation system and a network of district and communal roads relevant to achieving better accessibility by means of transport.

8. Supporting actions aimed at ensuring energy security, including the expansion and modernisation of medium- and low-voltage power engineering networks and using renewable energy sources.
9. Supporting the development of water and waste water systems.

One of the instruments which enable implementation of the development policy for urban and rural areas are Strategic Intervention Areas (SIAs). These areas, arising from the objectives of the national policy, are relevant to integration of the regional development policy implemented at the national level with the development policy implemented at the regional level. The regional policy will be implemented in these areas based on territorial contracts. The National Regional Development Strategy specifies 8 types of SIAs and grants all the regions the right to their detailed delimitation. Based on the criteria described in the National Strategy of Regional Development and including specific regional features, the "Development Strategy..." identified 4 types of strategic intervention areas. These are:

1. Regional centres – regional cities which since 1 January 1999 have been the place of residence of a voivode (region governor) and (or) regional parliament, and their functional areas – **Lodz and its functional area:**
   - designated based on socio-economic, functional and spatial features of communes;
2. Sub-regional centres – medium-sized cities/towns (with a population of more than 20 000) with important functions at the subregional and regional level, and their functional areas – **cities/towns with district rights and population of more than 20 000, and their functional areas;**
3. Strategic intervention areas for the restructuring and renovation of cities/town losing their socio-economic functions – **cities/towns with district rights, experiencing a decrease in their socio-economic functions:**
   - it is assumed that cities/towns with district rights, experiencing a decrease in their social and economic functions, are centres which satisfy the following 6 out of 11 criteria: 1. population dynamics in 2006-2010 below the average value for the cities/town with district rights in the region, 2. dynamics of the number of self-employed natural persons entered into the REGON register in 2006-2010 below the average value for the cities/town with district rights in the region, 3. dynamics of the employed population in 2006-2010 below the average value for the cities/town with district rights in the region, 4. dynamics of the communal revenues in 2006-2010 below the average value for the cities/town with district rights in the region, 5. dynamics of the unemployed population in 2006-2010 above the average value for the cities/town with district rights in the region, 6. number of students per 1 Internet-enabled computer in primary schools in 2010 higher than the average value for the cities/town with district rights in the region, 7. percentage of households using community social welfare in 2010 higher than the median percentage for the cities/town with district rights in the region, 8. tax-based revenues per 1 inhabitant in 2010 lower than the third quartile for the cities/town with district rights in the region, 9. number of health care centres per 1 000 inhabitants in 2010 equal to or lower than the third quartile for the cities/town with district rights in the region, 10. dynamics of housing resources in 2006-2010 below the average for the cities/town with district rights in the region, 11. percentage of population using the waste water system in 2010 below the average for the cities/town with district rights in the region;
4. Areas with the lowest indicators of access to public services – **rural communes, not included in urban functional areas, with poor accessibility of public services:**
   - it has been assumed that rural communes with poor accessibility to public services are communes which satisfy the following 5 out of 9 criteria: 1. percentage of children aged 3-5 years old in pre-school education below 50% (2010), 2. average results of mathematics exam in lower-secondary schools (mathematics and natural sciences) (2010) at least 10% below the average for rural areas, 3. number of students in primary schools per 1 Internet-enabled computer (2010) at least 20% higher than the average for rural areas, 4. percentage of population using the waste water system (2010) below 50% for the above-defined rural areas, 5. number of physicians per 1 000 inhabitants in 2010

at least 50% below the average for rural areas, 6. number of outpatient clinics per 1 000 inhabitants in 2010 at least 40% below the average for rural areas, 7. average number of participants of events in cultural centres, clubs and day care centres in 2007-2009 per 1,000 inhabitants below the average for rural areas, 8. number of chemist's shops per 1 000 inhabitants at least 20% below the average for rural areas, 9. number of books in libraries per 1 000 inhabitants at least 20% below the average for rural areas,

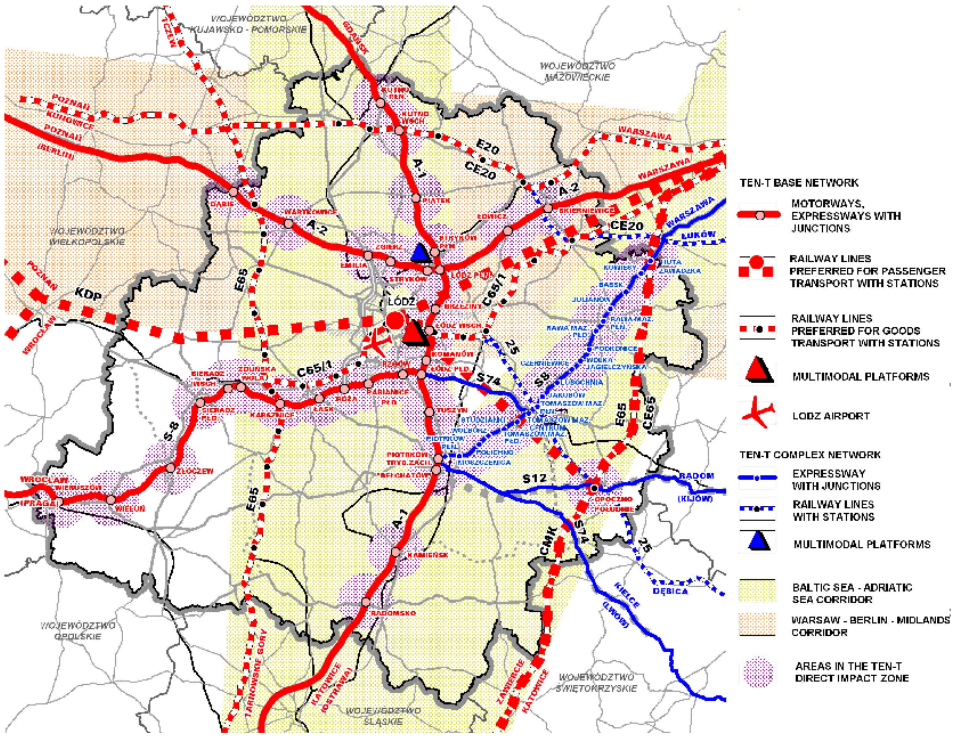
Communes satisfying the above criteria in 2010 are shown in the graphical appendix 1 (page 135).

Furthermore, for the effective use of localisation advantages of urban and rural areas, the "Development Strategy..." indicates the Strategic Intervention Areas arising from the development policy for the Lodzkie Region. They include areas in the TEN-T network impact zone.

The location of the Lodzkie Region at the intersection of two pan-European corridors, Baltic Sea – Adriatic Sea and Warsaw – Berlin – ... – Midlands, offers new development stimuli to these areas. In the Lodzkie Region, the TEN-T network includes three types of transport: transport by road, rail and air as well as multimodal platforms. The new transport network will help to improve transportation services for passengers and enterprises in the EU. The EU priority is to focus transportation funds on creating infrastructure and transport connections linking major socio-economic centres and gateways to third countries (ports, airports and connections by land) to ensure competitiveness, greater employment and economic growth. The Lodzkie Region will have access to a strong European transport network via motorway and expressway hubs, railway stations, railway multimodal terminals for passengers and goods.

It has been recognised that communes located in the vicinity of TEN-T hubs or with the best access to these points will be provided with the strongest development stimuli for the regional economy. In order to discount the location of areas in the zone of direct impact of the Trans-European Transport Network, they will have to be provided with local infrastructural elements, i.e. e.g. access roads, power engineering networks, gas, heating, water supply, waste water and ICT networks to ensure high standard of the suggested services and to provide the basis for attractive investments.

Fig. 135. Strategic Intervention Areas arising from the development policy for the Lodzkie Region – areas in the zone of direct impact of the TEN-T network



2. Functional areas

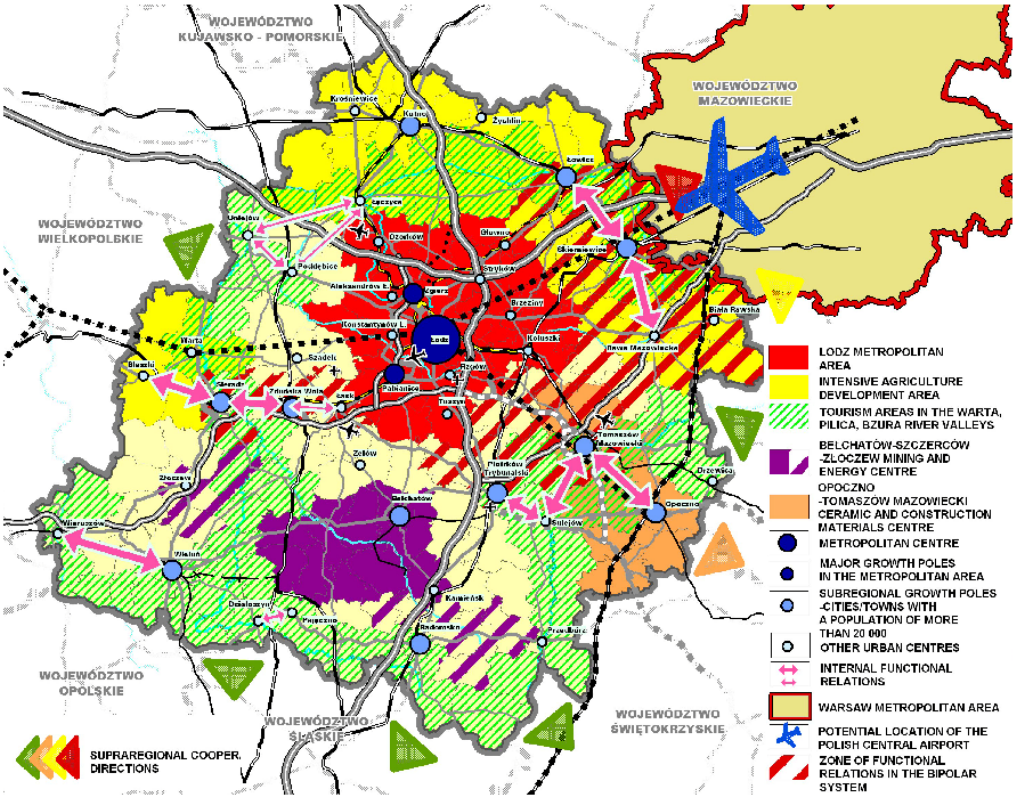
Functional areas have been shown in the "Development Strategy..." in order to implement the integrated development policy in functional and territorial terms.

Delimitation of functional areas is based on two types of criteria. The most important of them is the uniformity of endogenous potentials resulting from physical and geographic or structural and economic features. It is assumed that these potentials will be the leading development factor in the individual functional areas, and thus the region itself. Strengthening these potentials is one of the objectives of the development policy for functional areas. Another criterion for delimitation was based on functional and spatial relations. These relations, both intraregional and supraregional with the neighbouring regions, accelerate the development processes, contribute to greater attractiveness and competitiveness of the region and its socio-economic development, thus their reinforcement is also one of the objectives of the development policy for functional areas.

One of the most important development challenges for functional areas is the cooperation of local government units in creating and implementing integrated projects.

Functional areas are considered Strategic Intervention Areas arising from the development policy for the Lodzkie Region and used for achieving development objectives in terms of territorial and functional concentration.

Fig. 136. Strategic Intervention Areas arising from the development policy for the Lodzkie Region – functional areas



2.1. LODZ METROPOLITAN AREA

Strategic objective

COHERENT, DYNAMIC AND COMPETITIVE AREA OF DEVELOPMENT OF METROPOLITAN FUNCTIONS, CONTRIBUTING TO THE NATIONAL SYSTEM OF METROPOLISES AND PARTICIPATING IN THE DEVELOPMENT OF THE LODZ – WARSAW BIPOLAR METROPOLITAN SYSTEM

Strategic lines of action:

1. Supporting activities related to the development of creative economy, based on the unique potential of universities of arts, in the field of art and culture, including film and music industry, media, and design.
2. Supporting activities related to the formation of a cooperation network in the academic environment to create lines of education of national and international importance, compatible with the existing and future needs of the metropolitan and regional labour market.
3. Supporting the development of R&D into state-of-the-art technologies.
4. Strengthening the existing institutions of higher culture and supporting symbolic functions and cultural events at the national and international level.
5. Supporting renovation of central urban areas, especially industrial heritage areas.
6. Supporting actions related to the development of integrated tourism products based on cultural qualities and attractiveness of the natural environment.
7. Supporting actions aimed at developing functions related to fairs and exhibition, congresses, entertainment shows and sports events.
8. Supporting actions related to the creation of an integrated transport hub of national and international importance.
9. Supporting actions related to the improvement of an internal transportation system in the Lodz Metropolitan Area by establishing an integrated and multimodal public transportation system.
10. Supporting enterprises aimed at achieving system-wide cooperation between local government units.
11. Initiating and supporting actions related to the development of the Lodz – Warsaw bipolar metropolitan system and other interregional functional relations, specifically with respect to the development of advanced knowledge-based economy and innovations – clusters (e.g. Central European Cluster of Advanced Technologies, Central European Cluster of Advanced Textile Technologies, Pharmaceutical and Medical Cluster, Creative Industries Cluster, Central European Platform of Logistics Services, Balneology).

2.2. BEŁCHATÓW – SZCZERCÓW – ZŁOCZEW MINING AND ENERGY CENTRE

Strategic objective

AREA OF THE DEVELOPMENT OF MODERN ENERGY ECONOMY CREATING AND USING INNOVATIVE AND ENVIRONMENTALLY FRIENDLY TECHNOLOGIES

Strategic lines of action:

1. Supporting actions related to the development of a specialist research centre in the region and vocational education in the field of energy economy.
2. Supporting actions related to the development of "green industries" as well as the development and implementation of low-carbon coal technologies.
3. Supporting actions related to brownfield reclamation, including e.g. to grow forests.
4. Supporting actions aimed at limiting adverse effects of industrial areas, particularly with respect to water and waste water management.
5. Supporting actions aimed at improving the external and internal accessibility by means of transport.
6. Supporting actions related to the development of supraregional functional relations in the field of energy economy – clusters (e.g. Eco-energy Cluster).

2.3. OPOCZNO – TOMASZÓW MAZOWIECKI CENTRE FOR CERAMIC AND CONSTRUCTION MATERIALS

Strategic objective

AREA OF THE MODERN INDUSTRY OF CONSTRUCTION MATERIALS,BASED ON RAW MATERIAL RESOURCESAND USING INNOVATIVE TECHNOLOGIESAND CREATIVE SOLUTIONS IN DESIGNING

Strategic lines of action:

1. Supporting actions aimed at improving access to knowledge and transfer of the most recent technological achievements in the ceramic and glass industry.
2. Supporting network relations, including e.g. with respect to the introduction of modern industrial designing technologies.
3. Supporting the development of specialist vocational education in the region for the ceramic and glass industry at the secondary and university level.
4. Supporting actions related to the development of a research and development centre in the region for the ceramic and glass industry.
5. Supporting actions related to the creation of an interactive museum of the ceramic and glass industry.
6. Supporting actions related to brownfield reclamation, including actions to grow forests.
7. Supporting actions aimed at improving the external and internal accessibility by means of transport.
8. Supporting actions related to the creation of supraregional functional and spatial relations towards development of modern construction materials industry – clusters (e.g. Lodzkie and Swietokrzyskie Platform for Advanced Construction Materials).

2.4. AREA OF INTENSIVE AGRICULTURE DEVELOPMENT

Strategic objective

AREA OF DEVELOPMENT OF COMPETITIVE, PRODUCTIVE AGRICULTURE AND MODERN FOOD PROCESSING INDUSTRY BASED ON ENTREPRENEURIAL TRADITIONS AND NETWORK STRUCTURES RELATED WITH THE SCIENCE AND RESEARCH SECTOR

Strategic lines of action:

1. Supporting the development of supraregional higher education and specialist vocational education in the field of agriculture at the secondary level.
2. Supporting the formation and activities of agricultural manufacturers' organisations.
3. Supporting the development of a cooperation network between the science and research community and the local agricultural authorities, agricultural manufacturers as well as food processing companies and other entities.
4. Supporting the formation of agricultural wholesale markets.
5. Supporting actions related to the international agricultural business.
6. Supporting actions related to the production of biogas and biofuels based on agricultural and forest products, wastes of agricultural and forest products and food processing wastes.
7. Providing greater water retention as well as development and modernisation of water irrigation systems.
8. Initiating and supporting processes of unification of farming and forest lands.
9. Supporting actions aimed at improving the external and internal accessibility by means of transport.
10. Supporting actions related to the development of supraregional functional and spatial relations in the field of food processing – clusters (e.g. Lodzkie-Mazowieckie Fruit and Vegetable Cluster).

2.5. TOURIST AREAS IN THE PILICA, WARTA AND BZURA RIVER VALLEYS

Strategic objective

AREAS OF DEVELOPMENT OF WELLNESS, CONFERENCE, SPORTS AND ACTIVE TOURISM OF SUPRALOCAL IMPORTANCE AND USING ENDOGENOUS POTENTIALSOF THE NATURAL ENVIRONMENT AND CULTURAL HERITAGE

Strategic lines of action:

1. Supporting actions aimed at developing active, recreational and sports tourism, geotourism and tourist accommodation, including agro-tourism.
2. Supporting actions aimed at expanding tourist trails.
3. Supporting actions aimed at developing conference and congress functions.
4. Supporting brand-building actions and those aimed at creating demand for balneotherapeutic, wellness and physical therapy services.
5. Supporting actions aimed at developing integrated tourism products based on cultural and environmental qualities, including geological features, and practising traditions.
6. Supporting actions aimed at presenting the areas as attractive for tourists.
7. Supporting actions aimed at improving the cleanliness of waters in the Sulejowski Reservoir, Jeziorsko Reservoir and forest lands.
8. Supporting actions aimed at implementing system-wide solutions with respect to water and waste water management.
9. Supporting actions aimed at improving the external and internal accessibility by means of transport.
10. Supporting actions aimed at developing functional and spatial relations at the supraregional level (cultural and tourist zone of the Pilica river, cultural and tourist zone of the Warta river, cultural and tourist zone of the Bzura river).

V. STRATEGY IMPLEMENTATION

A. IMPLEMENTATION ENTITIES

The formulation and achievement of the objectives specified in the strategy is the responsibility of the regional government. It is the **main coordinator and organiser of the strategy implementation process**. In this process, it is responsible for initiating and financing certain undertakings, and frequently as a direct investor implementing public purpose investments. However, many objectives and lines of action are beyond the control of the regional authorities. In this case, the role of the local government will involve coordinating, inspiring and motivating to certain actions as well as popularising certain attitudes and behaviours among different entities, economic and social organisations for the implementation of the objectives specified in the "Development Strategy...". The strategy implementation process will also involve a large group of other public entities: local government units in the Lodzkie Region, local authorities in other regions, government administration, business sector and business environment institutions, local economic and professional bodies, non-governmental organisations and inhabitants of the region, units from the educational and research sector, international organisations and regions in other countries. Relations and cooperation between these entities will be based on **partnership**.

Successful implementation of the "Development Strategy..." will depend on the **efficient management in the public sector**. The main challenges at the national and regional level include the following: developing partnership-based relations between government bodies and citizens, lack of effective mechanisms of strategic planning, simple procedures for providing public services, effective planning and robust management of resources and common use of the most recent ICT technologies. Efficient management in local administration has become an important source of stable competitive advantages of the region in relation to other regions in Poland and abroad as it allows better coordination of projects, synergistic development effects development and rational spending of public funds. More efficient management will be provided as a result of:

- shifting from sectoral to integrated approach to the strategic programming process, strengthening relations between strategies, programmes, socio-economic and spatial plans,
- improving the capability of cooperation between partners representing different public institutions, private entities or third-sector organisations,
- better use of analyses, research studies and expert opinions in decision-making processes and during preparation of strategic documents,
- improved skills in preparing strategic documents and continuity of programme works,
- greater capability of administrative units to coordinate and monitor projects under implementation and to evaluate the degree of progress in attaining pre-determined strategic objectives,
- connecting budget planning with strategic objectives of the development policy and shifting to activity-based budgeting,
- implementing systems for the measurement of quality of public services.

The policy of the regional government with respect to the improvement of functioning of the decision-making processes and partnership-based relations will be oriented towards:

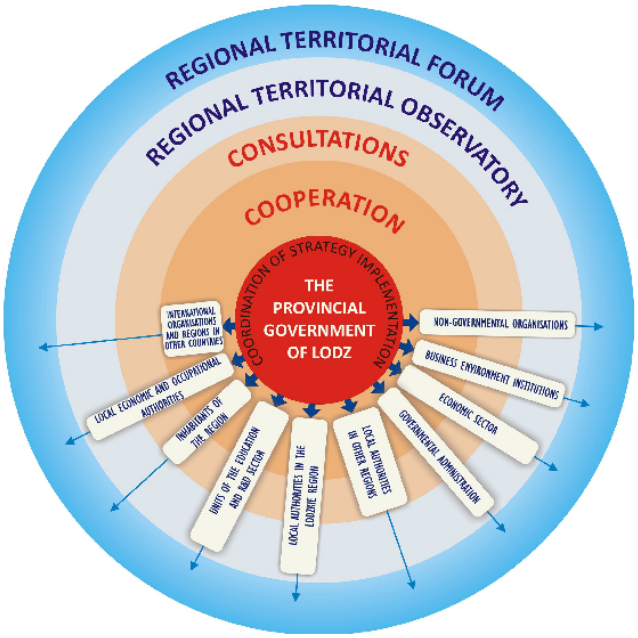
- **development of skills of cooperating in different organisational forms**: public-private, public-public and public-social partnership e.g. by teaching skills of partnership-based cooperation and negotiations, promoting "good practices", stimulating activities, projects, enterprises implemented by multiple entities, supporting agreements and unions of local authorities;
- **development of skills related to multi-level governance in the public administration structures** by providing financial support for the development of knowledge and skills of the administration personnel as well as joint preparation of intercommunal programmes and projects; this applies to both intraregional and supraregional fields of cooperation with the neighbouring regions;
- **development of skills of integrated management and planning**, in particular by supporting training programmes for the public administration, fostering knowledge about new public management methods and certified management systems (e.g. ISO, EMAS), joint preparation of integrated intercommunal development programmes and projects in functional areas, promoting "good practices", supporting and promoting studies aimed at improving public management.

It is also assumed that a **system of expert support** will be created (e.g. with respect to budgeting, forecasting financial situation and investment planning, creating integrated development strategies for functional areas), in particular by creating databases of regional experts in different areas, creating databases of companies and expert units, promoting cooperation between local authorities and experts.

An important element of the implementation of the "Development Strategy..." and at the same time a challenge for local authorities is **marketing and promotion of the region**. Promotion of the "Lodzkie" brand will allow creating qualities and development potentials of the Lodzkie Region; it will influence development of a positive image of the region in the country and improve its recognisability at the international level. Development of intercommunal marketing strategies and promotion of intercommunal brands and products will contribute to greater territorial cohesion of the Lodzkie Region.

The National Territorial Forum provides space for discussions and exchange of experiences in regional development at the national level. A similar **Regional Territorial Forum** will be created as a platform for exchanging knowledge and experiences between regional actors in the development policy.

Fig. 137. Entities participating in the implementation of the strategy – diagram



B. SUPRAREGIONAL CONTEXT OF THE STRATEGY IMPLEMENTATION

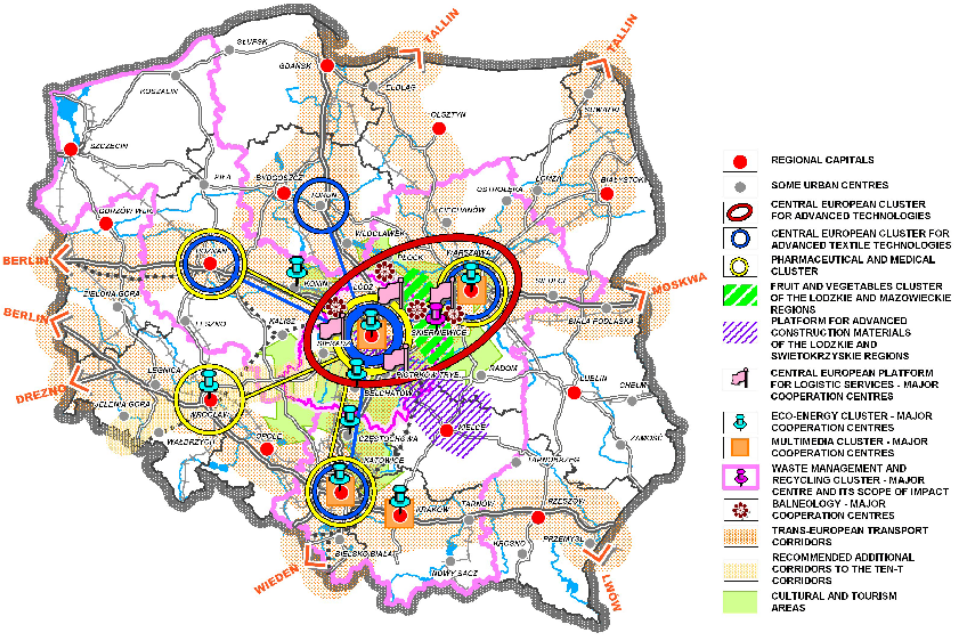
A highly significant element of the strategy implementation is the supraregional cooperation both at the national and international level. Cooperation between the Lodzkie Region and other regions in Poland as well as partner regions in Europe will be fostered first of all based on economic networks comprising innovative economic sectors, institutional and social resources of the region as well as a communication infrastructure. This will help to strengthen endogenous resources of the Lodzkie Region and play an important role in transforming the region into a knowledge-based region. Supraregional cooperation of the Lodzkie Region represents a two-pronged approach of the strategic development policy: horizontal policy for the entire region, territorial and functional policy as part of development policy for specific regions. It is assumed in the "Development Strategy..." that **supraregional cooperation teams** will be established to coordinate such activities. The "Development Strategy..." specifies the following strategic fields of cooperation at the national level:

- **Central European Cluster for Advanced Textile Technologies** based on cooperation between enterprises producing intelligent textiles, R&D and design units operating in the field of textiles and fabrics in the Lodzkie, Wielkopolskie, Kujawsko-Pomorskie, Mazowieckie and Slaskie Regions. This project will help to strengthen functional relations as part of the development of the Lodz – Warsaw bipolar system.
- **Central European Cluster for Advanced Technologies** as a platform of cooperation between science and R&D institutions and enterprises in the Lodzkie and Mazowieckie Regions with the aim of creating and implementing innovations which contribute to the development of knowledge-based economy. This project will help to strengthen functional relations as part of the development of the Lodz – Warsaw bipolar system.
- **Pharmaceutical and Medical Cluster** which will contribute to the development of cooperation especially between R&D institutions in the field of pharmacy, medicine and biotechnology, producers of medication and medical devices, dedicated hospitals, research and medical facilities, and also medical universities/academies in the Lodzkie, Slaskie, Dolnoslaskie, Wielkopolskie and Mazowieckie Regions. This project will help to strengthen functional relations as part of the development of the Lodz – Warsaw bipolar system.
- **Multimedia Cluster** as a forum of cooperation between entities operating in the media, film and TV industries, and information processing units, universities and R&D centres in the Lodzkie, Mazowieckie, Slaskie and Malopolskie Regions. This project will help to strengthen functional relations as part of the development of the Lodz – Warsaw bipolar system.
- **Fruit and Vegetables Cluster of the Lodzkie and Mazowieckie Regions** as a forum of cooperation between producers of fruit and vegetables, food processing companies and R&D institutions in the Lodzkie and Mazowieckie Regions. This project will help to strengthen supraregional functional relations of the Intensive Agriculture Development Area.
- **Platform for Advanced Construction Materials of the Lodzkie and Swietokrzyskie Regions** based on relations between producers of ceramic tiles, cement, plasterboards and construction chemicals, and mines in the Lodzkie and Swietokrzystkie Regions. This project will help to strengthen supraregional functional relations of the Opoczno – Tomaszow Mazowiecki Ceramic and Construction Centre.
- **Waste Management and Recycling Cluster** in Skierniewice, based on cooperation between entrepreneurs operating in waste management and companies providing consulting services, R&D institutions and business environment institutions in the Lodzkie, Lubelskie, Mazowieckie,

Malopolskie, Slaskie, Wielkopolskie and Zachodniopomorskie Regions. This cluster will help e.g. to improve efficient use of waste resources and exchange of knowledge about innovations in the field of waste management, recycling and similar operations.

- **Eco-energy Cluster** as a platform for cooperation, based on the potential of different enterprises, institutions and units in the field of development of modern energy management in the Lodzkie, Mazowieckie, Dolnoslaskie, Slaskie, Malopolskie and Wielkopolskie Regions. This project will help to strengthen supraregional functional relations of the Bełchatów – Szczerców – Złoczew Mining and Energy Centre.
- **Central European Platform for Logistics Services** a centre for development and concentration of modern logistics functions in the Lodzkie and Mazowieckie Regions. This project will help to strengthen functional relations as part of development of the Lodz – Warsaw bipolar system and the Baltic Sea – Adriatic Sea corridor.
- **Trans-European Transport Corridors** as a platform for cooperation between the Lodzkie Region and Mazowieckie, Slaskie, Malopolskie, Kujawsko-Pomorskie, Pomorskie, Wielkopolskie, Dolnoslaskie Regions for the establishment of an infrastructural network and transport connections linking the main socio-economic centres in the country and gateways to third countries (ports, airports and connections by land) in order to improve competitiveness and accessibility. This project will help to strengthen functional relations as part of development of the Lodz – Warsaw bipolar system and the Baltic Sea – Adriatic Sea corridor.
- **Cultural and tourist areas** based on cooperation between the Lodzkie, Wielkopolskie, Opolskie, Slaskie, Swietokrzyskie and Mazowieckie Regions by way of projects based on environmental and cultural qualities of areas located in the Pilica and Warta river valleys. This project will help to strengthen supraregional **functional relations of the Tourist Areas of the Pilica, Warta and Bzura River Valleys.**
- **Balneology** based on cooperation between the Lodzkie and Mazowieckie Regions by means of projects using geothermal water resources as well as environmental and cultural potential. This project will help to create new jobs, improve attractiveness of the region for investors and strengthen functional relations as part of development of the Lodz – Warsaw bipolar system.

Fig. 138. External relations in the Lodzkie Region – strategic directions of cooperation at the national level.



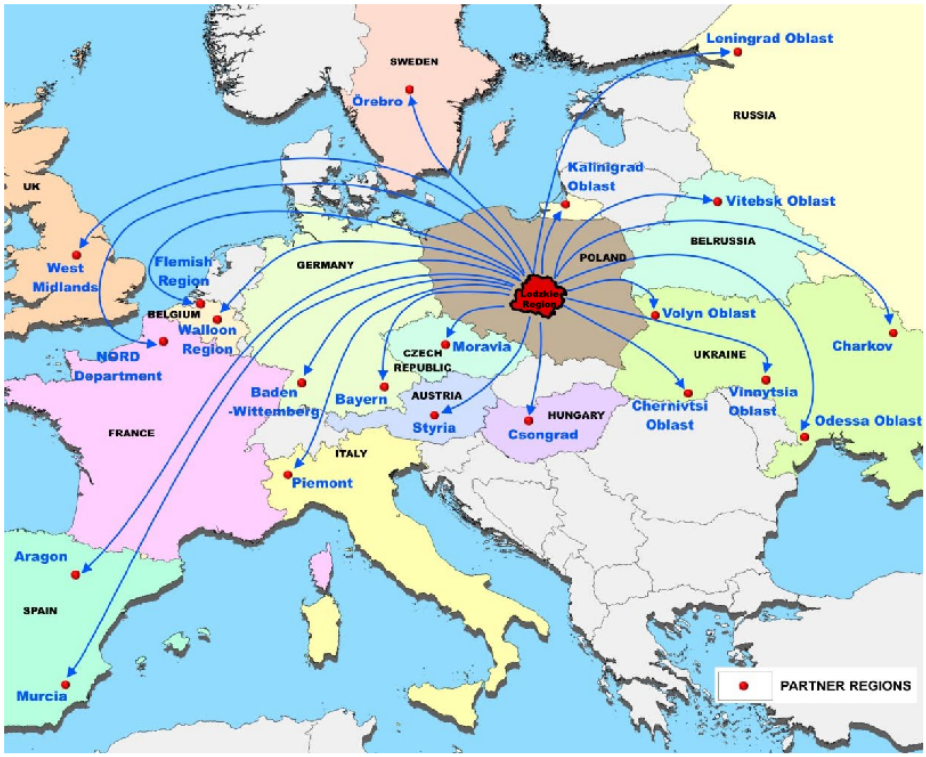
Global cooperation of the Lodzkie Region and development of international relations with European and non-European regions at the level of local authorities will help to e.g.:

- improve competitiveness of the Lodzkie Region at the international level,
- acquire knowledge and experience in regional management based on the experiences of different EU regions with similar economic and demographic potentials,
- promote good practices in self-governance at the local and regional level,
- develop interregional and international tourism,
- develop international cooperation in the field of e.g. economy, science, research and development,
- develop cooperation with communities of Polish origin abroad,
- promote the Lodzkie Region and build the brand of the region.

Additionally, the "Development Strategy..." considers it a priority to ensure cooperation with the following European entities: The Committee of the Regions (CoR), The European Regions Research and Innovation Network (ERRIN), The Assembly of European Regions (AER), The Lisbon Monitoring Platform (LMP), The Tele Regions Network (TRN).

The "Development Strategy..." assumes also cooperation with other international associations of local and regional communities and other European regions, which will contribute to the achievement of strategic objectives of the development policy for the region, both in terms of the horizontal policy as well as the territorial and functional policy.

Fig. 139. External relations in the Lodzkie Region – strategic directions of cooperation at the international level



C. FINANCIAL SOURCES AND INSTRUMENTS FOR THE STRATEGY IMPLEMENTATION

The "Development Strategy for the Lodzkie Region 2020" will be a priority document with respect to the budget of the region and other sources of financing. Implementation of the "Development Strategy for the Lodzkie Region 2020" will depend to a great extent on the internal investment capabilities created mostly by local authorities of the region and funds provided by private partners involved in building the regional development. From the point of view of internal investment capabilities, of key importance is the current and future financial standing of communal, district and regional authorities.

The status of financial management by the local authorities in 2007-2012 should be evaluated as positive. The debt indicator related to the loan repayment and debt-to-income ratios remain within safe limits. Thus, local authorities have investment capabilities which nonetheless depend to a great extent on the tendency to actively acquire external financing. According to estimates, in 2014-2020, the total internal budgetary funds allocated to implementation of the "Development Strategy for the Lodzkie Region 2020" from local authorities should range from PLN 17.1 billion for the conservative scenario up to PLN 22.4 billion for the best case scenario.

Efficiency and successfulness of the implementation of the "Development Strategy for the Lodzkie Region 2020" will depend on the possibility of acquiring external support in addition to own funds. Given the continuing negotiations at the EU level and the lack of defined financing framework for the development policy at the national level, it is impossible today to estimate potential financial streams. Review and diversification of the anticipated funds and other tools to finance development indicate that the main external sources for stimulating development of the Lodzkie Region include: funds from the state budget (e.g. funds allocated under territorial contracts), EU funds and funds from international financial institutions (e.g. The European Investment Bank, The World Bank, The European Bank of Reconstruction and Development). These sources may also be supplemented by dedicated funds (e.g. The National and Regional Fund for Environmental Protection and Water Management; The Financial Mechanism and Norwegian Financial Mechanism; funds held by Bank Gospodarstwa Krajowego, including e.g.: The Municipal Investments Development Fund, The Technological Loan Fund (FKT), The National Road Fund (KFD) with respect to national roads and tasks specified in the applicable governmental programme, The Railway Fund (FK), The National Capital Fund (KFK), support for loan funds for SMEs), and also pro-development funds managed by individual ministries (e.g. The Ministry of Science and Higher Education, The Ministry of Culture and National Heritage).

Other potential sources of support for the implementation of the Strategy objectives include the following instruments e.g.: "Connecting Europe" – transport, energy and digital infrastructure; "Horizon 2020" – science research and innovation; "Erasmus for All" – education and training programmes; "Leonardo da Vinci" programme – education and vocational training; Programme for Social Transformations and Innovations – employment and social inclusion; LIFE Programme – environmental and climate activities. A potential variety of financial streams which could be acquired is much wider, however, in reality; these are funds of secondary importance with no significant relevance to stimulating development processes in the Lodzkie Region.

The most essential sources of financing include EU funds (The European Regional Development Fund, The European Social Fund and The Cohesion Fund) which – in addition to the funds allocated as part of the common agricultural policy (especially pillar 2 concerning development of rural areas and agriculture), should give a strong development stimulus to the Lodzkie Region. According to estimates, in 2014-2020, European funds available under the cohesion policy, which could be used for the implementation of the "Development Strategy for the Lodzkie Region" range from PLN 15.2 billion for the baseline scenario up to PLN 19.6 billion for the best case scenario. This is a total potential pool of funds which could be acquired by local authorities, private entities and other institutions from the public sector for building competitiveness and cohesion in economic, social and spatial terms in the Lodzkie Region. At the same time, it is assumed that the anticipated decentralisation of the allocation of EU funds should have a positive impact on the independent formation of the regional development policy.

Priorities and strategic intervention areas, indicated both at the national level (National Strategy for Regional Development) and at the EU level (Europe 2020), are reflected in the Development Strategy for the Lodzkie Region 2020 and fully compatible with the vision and strategic development objectives for the Lodzkie Region. The suggested reorientation of the European and national regional policies will provide conditions conducive to the regional development. Changes to the main lines of allocation of funds in the new programming period should be favourable for the Lodzkie Region and provide greater opportunities of dynamisation of the development processes.

Financing of the Development Strategy for the Lodzkie Region 2020 requires strong involvement of private funds, including e.g. loan funds, guarantee funds and credit guarantee funds as well as development of financial instruments based on public-private partnership, the purpose of which is the implementation of projects by public institutions and private partners based on a task- and risk-share scheme. Budgets comprising multiple entities using financial package mechanisms, which provide the basis for creating integrated projects in the new programming period, will be increasingly important.

One of the main instruments for implementation of the strategy will be territorial contract as a tool for coordinating development-oriented activities between the government and regional government units based on the identified development-related needs and priorities of the region and development-related priorities at the national level. The contract will specify the rules for thematic concentration (i.e. where funds are to be spent) and the rules for implementation of the territorial dimension, including support for the national Strategic Intervention Areas (i.e. particularly significant from the point of view of development of geographical areas to which the funds will be allocated). The territorial contract will be implemented based on development programmes and operational programmes, and it will be financed from both EU and national funds.

As part of the territorial contract, a new instrument was established, designed for urban or other functional areas – Integrated Territorial Investments (ITIs), combining activities financed from the ERDF and the ESF. By definition, this new tool is to provide more efficient implementation of the cohesion policy. The main criterion for the implementation of ITI projects should be the degree of their integration. It will be possible to implement a bundle of small projects based on a series of small enterprises, frequently in collaboration with non-governmental organisations, or to implement one global project across the area.

D. STRATEGY MONITORING SYSTEM

The implementation of the "Development Strategy..." requires monitoring changes in the region on an ongoing basis, and also responding to problems and threats, if any, to the achievement of results as provided in the strategy. These tasks are attainable solely thanks to an **efficient, integrated monitoring and evaluation system** which enables introducing adequate adjustments according to the changing circumstances and will ensure that reliable information is provided to the public and decision-makers about the progress in achieving objectives specified in the development strategy for the region. An efficient monitoring and evaluation system is also necessary for effective spending of the available funds, and the results of analytical studies concerning the efficiency of public interventions enable effective allocation of financial resources to specific lines of action. The implementation of the "Development Strategy..." will be monitored on an ongoing basis combined with its evaluation, while obtaining a coherent system.

The **National Territorial Observatory (NTO)** and the **Regional Territorial Observatory (RTO)** will help to improve the monitoring and evaluation of public policies. It is assumed that the observatories will form a system of information flow among the most important public participants of the planning and implementation of development policies, both at the national and regional level. The collected data and their analysis as part of one system will allow evaluating not only the degree of implementation of the Development Strategy for the Lodzkie Region 2020, but also provide the basis for rapid response to any deviation from the pre-determined lines of action. In addition to the regional government units and national authorities, the system will also involve research, educational and information institutions, including e.g. research institutes, universities and non-governmental organisations. Of key importance will be also collaboration between the Regional Territorial Observatory and other institutions and inhabitants of the Lodzkie Region, whose knowledge and experience could stimulate discussion over the strategic lines of development of the region as part of the new Regional Territorial Forum.

The Regional Territorial Observatory will be responsible e.g. for:

- conducting analyses and evaluations of public policies specified in strategic national documents (The National Long-Term Development Strategy, The National Medium-Term Development Strategy, integrated development strategies, The National Spatial Development Concept), which have impact on the development of the Lodzkie Region,
- conducting analyses and evaluations of strategic regional documents in terms of their compatibility with the Development Strategy for the Lodzkie Region 2020,
- conducting cyclic and system-wide qualitative studies and strategic analyses with respect to the socio-economic situation and development trends,
- forecasting socio-economic changes in the region and preparing reports, development scenarios for the region and recommendations concerning changes to development policies for the region,
- providing information about progress in implementing the regional policy,
- working together with the National Territorial Observatory,
- creating and coordinating a cooperation network between institutions focused on regional development at the regional level as well as exchange of information and data.

The establishment of an integrated monitoring system will also involve creating, developing and updating databases, supporting accumulation of data, processing of the existing information to digital data, supporting the process of securing databases in public institutions and ensuring wider accessibility of certain resources.

The process of implementation of the Development Strategy for the Lodzkie Region 2020 will be monitored based on an (electronic) database of indicators for individual strategic goals and operational objectives as part of the horizontal policies, and also strategic goals for urban areas, rural areas and functional areas as part of the territorial and functional policy. This method of collecting, processing and presenting data will enable monitoring the effects of implementation of the development policy and changes in the socio-economic situation of the region with respect to specific territories.

The essential document for the process of monitoring and evaluation will be the **Annual Report on the Implementation of the Development Strategy for the Lodzkie Region 2020**, as approved by the Board of the Lodzkie Region. This document will be prepared based on the information derived from the Regional Territorial Observatory and public statistics.

The main reporting areas:

- socio-economic situation of the Lodzkie Region based on the essential macroeconomic indicators;
- degree of implementation of the objectives based on the achieved indicators (analysis);
- status of implementation of programmes to be implemented at the regional level.

Additionally, it is assumed that the Development Strategy for the Lodzkie Region 2020 will be evaluated after 4 years. Subsequent evaluations will be conducted at two years' intervals. Thus, it will be possible to carry out a comprehensive assessment of the degree of achievement of the individual objectives of regional development.

STRATEGY MONITORING INDICATORS

Indicator	Level of the indicator for the Lodzkie Region in 2010	Level of the indicator for Poland in 2010	Level of the indicator for the Lodzkie Region in 2020	Data source
1	2	3	4	5
HORIZONTAL POLICY				
I. STRATEGIC OBJECTIVE – ECONOMIC COHESION				
Working efficiency GVA[15] per 1 employed person (PLN)	80 324	90 193	national average	CSO
GDP[16] per 1 inhabitant in the weakest subregion compared to GDP per 1 inhabitant in the strongest subregion (difference between GDP per 1 inhabitant at the subregional level)	1 : 1.91	1 : 5.66	1 : 1.94	CSO
GDP per 1 inhabitant of the region compared to GDP per 1 inhabitant of Poland (%)	92.10	100.00	94.00	CSO
Investments in the national economy per 1 inhabitant (current prices) (PLN)	5 399	5 690	national average	CSO
Gross value of fixed assets in the national economy per 1 inhabitant (current prices) (PLN)	56 808	65 993	national average	CSO
GDP per 1 inhabitant of the region according to the purchasing power compared to GDP per 1 inhabitant of the EU27 (EU27 = 100) (%)	57.00	62.00	72.00[17]	PRIMUS Research and Education Centre
OPERATIONAL OBJECTIVE NO. 1 ADVANCED ECONOMY OF KNOWLEDGE AND INNOVATION				
Expenditure on R&D activities[18] compared to regional GDP (%)	0.64	0.74	1.00	CSO
Employment of researchers in the field of R&D per 1 000 working people[19] (FTEs[20])	2.80	3.70	national average	CSO
Employment by sections of the Polish Classification of Business Activities (PKD) (2007)[21] J, K, R, M in relation to the total employment (%)	7.09	8.77	10.00	CSO
Number of granted patents per 100 000 inhabitants	3.70	3.62	6.00	CSO
Inventions submitted for registration in the region in relation to all inventions submitted for registration in Poland (%)	6.60	100.00	10.00	CSO
Number of innovative industrial enterprises in the sector of product and process innovations in relation to the total number of industrial enterprises (%)	13.42	17.10	national average	CSO
Number of innovative enterprises in the services sector in relation to the total number of service providers (%)	10.34	12.79	national average	CSO
Net income from the sale of new or significantly improved products in industrial enterprises in relation to the total sales income (%)	6.70	11.34	national average	CSO
1	2	3	4	5

[15] GVA – Gross Value Added
[16] GDP – gross domestic product
[17] For the average growth rate of the EU27 equal to 2% per annum
[18] R&D – research and development
[19] Working people – employed people and unemployed people actively looking for a job
[20] FTE– full-time equivalent
[21] PKD 2007 sections; **J:** information and communication, **K:** financial and insurance services, **R:** cultural, recreational activities and entertainment, **M:** professional, research and technical activities

Energy from renewable sources to the total amount of energy produced in the region (%)	1.46	6.90	2.00	CSO
Post-treatment industrial waste water in relation to the total waste water to be treated during the year (%)	98.5	93.3	100.00	CSO
Recovered waste products (other than municipal waste) to the amount of waste produced during the year (%)	14.7	74.3	national average	CSO
Dust contamination retained or neutralised in devices used to reduce contamination in relation to the total level of contamination (%)	99.9	99.7	99.9	CSO
Gas contamination retained or neutralised in devices used to reduce contamination in relation to the total level of contamination (%)	64.5	57.4	80.0	CSO
Total CO_2 emissions to the air (%)				
OPERATIONAL OBJECTIVE NO. 2. MODERN HUMAN CAPITAL AND LABOUR MARKET				
Population at the age of 15-64 with university degree in relation to the total population of this age group (%)	19.10	19.80	24.40	CSO (BAEL[22])
Population with university degree in relation tothe total population registered as unemployed (%)	9.80	10.50	below the level of 2010	CSO
Average total gross monthly salary without business entities with up to 9 employees in relation to the national average (%)	89.30	100.00	national average	CSO
Employed population at the age of 20-64 in relation to the total population in this age group (%)	66.20	64.60	73.00	CSO (BAEL)
Registered unemployment rate (%)	12.20	12.40	8.00	CSO
Population at the age of 25-64 involved in life-long learning in relation to the total population in this age group (%)	4.20	5.30	national average	BAEL
OPERATIONAL OBJECTIVE NO. 3. INTEGRATED ENTREPRENEURSHIP ENVIRONMENT FOR ECONOMIC DEVELOPMENT				
Number of self-employed natural persons entered into the REGON register per 10 000 inhabitants	711	770	national average	CSO
Number of new units entered into the REGON register per 10 000 inhabitants	99	104	national average	CSO
Global agricultural production per 1 ha of farming land (PLN)	6 000	4 888	6 800	CSO
Investment areas provided with utilities in relation to the total investment areas (%)				
Number of full-time professional staff employed in the centres for innovativeness and entrepreneurship				(PARP)
Business operators using services provided by business environment institutions (technological parks, technological incubators, technology transfer centres) in relation to the total number of operators				

[22]BAEL – survey of the economic activity of the population

1	2	3	4	5
II. STRATEGIC OBJECTIVE – SOCIAL COHESION				
Population registered as unemployed, without a job for a period longer than 1 year in relation to the total number of the unemployed (%)	29.70	29.10	national average	CSO
People using social welfare services per 10 000 inhabitants	545.80	546.10	450.00	CSO
Population at the risk of poverty in the Lodzkie Region in relation to the population at the risk of poverty in the EU27 (EU = 100) (%)	108.50	X	100.00	Eurostat
OPERATIONAL OBJECTIVE NO. 4. HIGH LEVEL OF SOCIAL CAPITAL AND STRONG CIVIL SOCIETY				
Voter turnout at elections to LGUs[23] (%)	46.50	47.30	65.00	(PKW)
Number of non-governmental organisations per 1,000 inhabitants	2.62	2.74	3.40	CSO
Number of persons donating 1% of their tax for non-governmental organisations located in the region in relation to the total number of taxpayers (%)				
Expenditure of communal government units on civil initiatives in relation to the total expenditure (%)				
Number of symbolic products and events of regional importance and related to history and tradition, organised under the auspices of the Marshall of the Lodzkie Region				
Population identifying themselves with the Lodzkie Region in relation to the total population				
Population identifying themselves with cultural subregions in relation to the total population of the cultural subregion				
OPERATIONAL OBJECTIVE NO. 5. HIGH STANDARD AND ACCESSIBILITY OF PUBLIC SERVICES				
Children at the age of 3-5 attending preschools in relation to the total number of children in this age group in the region (%)	64.30	60.80	85.00	CSO
Number of students per 1 Internet-enabled computer with a broadband connection in primary and lower-secondary schools	18.03	18.12	national average	CSO
Number of physicians per 10 000 inhabitants (except dentists, according to the primary workplace)	24.13	20.77	27.00	CSO
Number of beds in hospices, health care and nursing centres, nursing and care homes per 100 000 inhabitants	48.85	68.23	national average	CSO
Percentage of used overnight lodgings in collective accommodation facilities (%)	31.26	34.27	national average	CSO
Number of year-long overnight lodgings in collective accommodation facilities per 1 000 inhabitants	7.85	15.84	65% of the national average	CSO
Number of spectators and visitors to theatres and music institutions per 1 000 inhabitants	237.55	301.73	national average	CSO
Number of participants of events organised by cultural centres, clubs, day care centres per 1 000 inhabitants	630 (2009)	902 (2009)	national average	CSO
Number of communes with the option of submitting applications and requests online				
Number of local administrative units via an electronic document management system (%)				

[23] LGUs – local government units

1	2	3	4	5
OPERATIONAL OBJECTIVE NO. 6. SOCIAL REINTEGRATION OF EXCLUDED GROUPS OR GROUPS AT THE RISK OF SOCIAL EXCLUSION				
Number of members of households with expenses below the relative poverty threshold[24] in relation to the total number of members of households (%)	12.20	17.10	8.20	CSO
Number of employed disabled people at the age of 16-64 in relation to the total number of disabled people in this age group (%)	24.30	20.50	31.00	CSO
Number of crimes and offences per 1 000 inhabitants	29.48	29.80	25.00	CSO
Number of the new social economy entities per 100 000 inhabitants[25]				CSO
Number of homeless people per 1 000 inhabitants				
III. STRATEGIC OBJECTIVE – SPATIAL COHESION				
Number of flats released for use per 1 000 inhabitants	2.70	3.60	national average	CSO
Developed and urbanised areas – industrial areas in relation to the total area (%)	0.32	0.36	0.35	CSO
Number of communes connected via the collective transport network with Lodz during weekdays				
Density of the motorway network in the Lodzkie Region in relation to the EU27 average (km/1 000 km^2)	4.10 (2009)	15.70[26]	15.00	Eurostat
OPERATIONAL OBJECTIVE NO. 7. HIGH QUALITY AND ACCESSIBILITY OF THE TRANSPORT AND TECHNICAL INFRASTRUCTURE				
District and communal roads with ground surfaces in relation to the total length of the roads (%)	30.00	36.80	20.00	CSO
Density of cycling routes (km/100 km^2)				
Length of railway lines adapted to the speed of 100 km/h and more (km)	333.88 (until 2010)	very high	647.63 (until 2020)	PKP PLK S.A.
Number of passenger transports via the urban transportation system per 10 000 inhabitants of cities/towns with urban transportation systems (million)	1.30	very high	1.7	CSO
Number of passengers at the Lodz Airport in relation to the total number of passengers at Polish airports (arrivals + departures) (%)	2.00	100.00	7.50	CSO
Number of households with Internet-enabled PCs in relation to the total number of households (%)	52.30	59.60	national average	CSO
Number of inhabitants using waste water systems in relation to the total population (%)	58.80	61.60	76.60	CSO
Municipal waste products deposited at landfills in relation to the total amount of mixed municipal waste products (%)	82.00	80.00	55.00	CSO
Number of Park & Ride parking spaces[27]				
Number of passengers using the agglomeration railway transport services (thousand passengers per year)				
Quantity of goods handled at intermodal terminals (TEU[28])				Terminal operators
Length of modernised power engineering lines in relation to those which need to be modernised (110 kV, 15 kV, 0.4 kV) (%)				PSE S.A. (Polish Transmission System Operator)

[24]Relative poverty threshold – an amount set at 50% of the average monthly expenses in equivalent households.
25A study submitted for implementation under the Public Statistics Research Programme for 2013.
26Value for the EU27 in 2009.
[27]Park & Ride – a system which enables parking on the ouskirts of a city/town and arriving into the centre by public transport means.
[28]TEU – twenty feet equivalent unit; a unit equivalent to a 20-feet container.

1	2	3	4	5
Number of households using pipeline gas	416 664	7 201 392	447 100	CSO, Mazowiecka Spółka Gazownicza
OPERATIONAL OBJECTIVE NO. 8. HIGH QUALITY OF THE NATURAL ENVIRONMENT				
Legally protected areas in relation to the total area of the region (%)	19.70	32.40	33.00	CSO
Forest lands in relation to the total area of the region (%)	21.10	29.20	25.00	CSO
Number of small water retention reservoirs	673 (total)	30 842 (total) 1 928 (average)	687	Yearbook of the CSO, Environmental Protection
Total investment expenditure on small water retention reservoirs (KPLN)	4 941	61 950 (total) 3 872 (average)	national average	CSO
Area of forests affected by fires (ha)	86.80	2 126.70 (total) 132.90 (average)	40.00	CSO, Environmental Protection
OPERATIONAL OBJECTIVE NO. 9. SUSTAINABLE SETTLEMENT SYSTEM				
Population density at growth poles[29] in relation to the population density in all cities/towns in the region	3.31	X	4.00	CSO
Growth rate of the number of business entities entered into the REGON register per 1 000 inhabitants at growth poles (2010 = 100%) (%)	Absolute value: 108.25 (=100%)	X	119.07 (=100%)	CSO
Growth rate of CIT-based revenues for growth poles per 1 000 inhabitants (2010 = 100%) (%)	Absolute value: PLN 64 894.27 (=100%)	X	PLN 71 383.69 (=100%)	CSO
Number of entities entered into the REGON register in rural communes per 10 000 inhabitants of rural communes	605.20	677.90	national average	CSO
Area included in the Local Spatial Development Plans in relation to the total area of the region (%)	29.00	26.30	40.00	CSO
Area of lands which need to be regenerated in towns with a population of more than 15 000 in relation to their total area (%)				
TERRITORIAL AND FUNCTIONAL POLICY				
STRATEGIC OBJECTIVE FOR THE AREAS NO. 1.1. URBAN AREAS				
Own CIT-based income of communes in urban areas per inhabitant (PLN)	48.46	X	65.00	CSO
Average usable area of flats per inhabitant in urban areas (m^2)	25.08	X	26.00	CSO
Number of geriatricians per 10 000 inhabitants at post-working age in urban areas				
Area of regenerated lands in cities/towns in relation to their total area				

[29] Growth poles – this term refers to the following cities/towns: Lodz, Zgierz, Pabianice, Kutno, Łowicz, Skierniewice, Sieradz, Zduńska Wola, Wieluń, Radomsko, Piotrków Trybunalski, Bełchatów, Tomaszów Mazowiecki, Opoczno.

1	2	3	4	5
STRATEGIC OBJECTIVE FOR THE AREAS NO. 1.2. RURAL AREAS				
Number of entities entered into the REGON register for rural areas per 1 000 inhabitants in rural areas	53.32	X	80.00	CSO
Children at the age of 3-5 attending preschools in relation to the total number of children in this age group in rural areas (%)	37.79	X	80.00	CSO
Water supply system in relation to the waste water system in rural areas	9.26	X	4.00	CSO
Area of farming lands in ecological farms in relation to the total area of farming lands in rural areas				
STRATEGIC OBJECTIVE FOR THE FUNCTIONAL AREAS NO. 2.1. LODZ METROPOLITAN AREA				
GDP per inhabitant in the Lodz Metropolitan Area (PLN)	40 890	X	60 000	CSO
Economic entities in the creative economy sector (art, culture, film and music industries, media, design and designing) in relation to the total number of entities entered into the REGON register in the Lodz Metropolitan Area				
Number of international exhibitions, trade fairs and similar events in the Lodz Metropolitan Area				
STRATEGIC OBJECTIVE FOR THE FUNCTIONAL AREAS NO. 2.2. BEŁCHATÓW – SZCZERCÓW – ZŁOCZEW MINING AND ENERGY CENTRE				
Annual CO_2 emissions in the Bełchatów Power Plant per 1 GJ of produced energy (kg)	290.7	X	270.00	Regional Inspectorate for Environmental Protection (WIOŚ)
Area of regenerated lands in relation to the total area of lands which need to be regenerated in the functional area				
STRATEGIC OBJECTIVE FOR THE FUNCTIONAL AREA NO. 2.3. OPOCZNO – TOMASZÓW MAZOWIECKI CENTRE OF CERAMIC AND CONSTRUCTION MATERIALS				
Number of industrial products sold per inhabitant of the Opoczynski and Tomaszowski districts (PLN)	12 671 (2009)	X	18 200	CSO
Number of utility designs in the ceramic industry submitted for registration to the Patent Office in the Lodzkie Region				
STRATEGIC OBJECTIVE FOR THE FUNCTIONAL AREA NO. 2.4. AREA OF INTENSIVE AGRICULTURE DEVELOPMENT				
Number of business entities in the food and agricultural industry, entered into the REGON register, with more than 50 employees in the functional area	32	X	50	CSO
Number of groups of agricultural producers in the intensive agriculture development area	17	X	40	CSO
STRATEGIC OBJECTIVE FOR THE FUNCTIONAL AREAS NO. 2.5. TOURIST AREAS IN THE PILICA, WARTA AND BZURA RIVER VALLEYS				
Number of certified integrated tourist products in tourist areas of the Pilica, Warta and Bzura river valleys				
Status of surface water bodies: a) Jeziorsko Reservoir b) Sulejowski Reservoir	good (2011) poor (2011)		good good	Regional Inspectorate for Environmental Protection (WIOŚ)

*) indicator in the gray field is suggested to be investigated

X – not applicable

1) The GDP growth in subregions until 2020 has been estimated based on the growth trends so far: Lodzkie subregion: 6%, Lodz City subregion: 5%, Piotrkowski subregion: 4%, Sieradzki subregion: 2.8%, Skierniewicki subregion: 3.2%.

VI. GLOSSARY

Urban agglomeration – a group of cities with a very large concentration of economic potential, technical and social infrastructure, social and financial capital. Smaller (satellite) towns are concentrated around a major central city with which they have strong vertical and functional connections. Socio-economic development and functions of the satellite towns depend on the development and functions of the central city and play an auxiliary role in relation to them.

SWOT analysis – one of the essential methods of strategic analysis. It involves identifying the existing and potential factors divided into 4 groups:
– Strengths – positive internal factors,
– Weaknesses – negative internal factors,
– Opportunities – positive external factors,
– Threats – negative external factors.

BPO (Business Process Outsourcing) – a business process which involves outsourcing specific products and/or services from external companies which take full responsibility for such products and services. Products and services are delivered in BPO centres which specialise in efficient and cost-effective implementation of specific business processes (most often: finances and accounting, HR administration, customer relations, procurement processes).

CCS (Carbon Capture and Storage) – technology of capturing, transporting and storing carbon dioxide (CO_2) in underground geological structures.

Natural system continuity – providing relations between protected areas of the highest natural value, such as national and landscape parks, protected landscape areas, natural and landscape complexes. These relations include so-called ecological (wildlife) corridors which enable free migration, propagation and genetic exchange of living organisms. As a rule, they are located along river valleys and in other areas without high density settlements (forests, wetlands, meadows and pastures, farmlands).

R&D – research and development activities; creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and to devise new applications for this stock of knowledge.

Energy security – according to the Energy Law, condition of the economy which enables satisfying the current and prospective demand for fuels and energy in a technically and economically reasonable manner, respecting the requirements of environmental protection.

Diversification – differentiation of the structure (e.g. products, investments, suppliers, etc.) to reduce the risk inherent in business operations.

Innovative activities – a variety of research and development activities, technical, organisational, financial and business operations with a view to developing and implementing new or significantly improved products and processes.

Social economy – according to the EMES European Research Network, organised operations with mostly social objectives, where profits are re-invested in implementing such objectives or in a community, and not to maximise profits or increase incomes of shareholders or owners. Social economy is focused on social utility and its welfare.

EMAS (Eco-Management and Audit Scheme) – an environmental management system implemented by regulation of the European Parliament and of the Council, in which different organisations (enterprises, institutions, organisations, governmental agencies) can participate on a voluntary basis. The main objective of the system is to recognise organisations which go beyond the scope of minimum compliance with regulations and continue to improve the effects of their environmental operations.

EMES (European Research Network) – defines a number of economic and social criteria to be satisfied by an ideal social economy entity (thus not considered obligatory); in practice, not all social enterprises manage to meet all the objectives set by the EMES.

ERTMS (European Railway Traffic Management System) – a system of digital radio communication and data transmission (so-called GSM-R), unified at the European level, and the European Train Control System (ETCS) which enables e.g. displaying information from traffic control devices inside a train cabin and monitoring compliance with the transmitted information.

KBE (Knowledge-Based Economy) – according to the OECD definition, economy based directly on the creation (considered to be equivalent to manufacturing) and transfer, i.e. distribution, and practical use of knowledge and innovations.

Business environment institutions – institutions offering assistance to entrepreneurs with respect to the creation, operation and development of their enterprises; BEIs include: regional and local development agencies, organisations representing entrepreneurs, support centres for innovation and entrepreneurship, including e.g. technological parks and incubators, entrepreneurship incubators, advanced technology centres, training and consulting centres and institutions providing financial support (loan guarantee funds, seed capital funds, local and regional loan funds).

IT /ICT (Information Technology / Information and Communication Technology) **–** a field of knowledge and business operations, combining computer science and telecommunication, focused on creating, acquiring, processing, managing, transferring, securing and presenting information.

ITS (Intelligent Transportation System) – a system for global road traffic management and control (with priority given to collective transportation) as well as management of parking spaces. It frequently includes also driver behaviour monitoring and traffic flow measurements.

Surface water bodies – a separate and significant surface water body such as a lake or another natural water reservoir, artificial water reservoir, water course, stream, flow, river, waterway or their parts, internal sea waters, transitional or coastal waters.

Cluster – one of forms for organising business activities, where spatially concentrated enterprises with complementary business activities form a structure with strong functional relations. They are informal rather than formal and long-term rather than short-term relations, and imply simultaneous existence of cooperation and competition. Cluster relations include also relations with institutions (e.g. research or business environment institutions) operating in the same field. The development of strong relations contributes to greater knowledge, self-learning capability and adaptation of the entire structure which helps to gain a permanent competitive advantage.

Human capital – all of the personality traits, level of the acquired knowledge and skills as well as intellectual capabilities and physical fitness, which describe the ability of each human being to work and create new solutions. It can be considered a feature of an individual or a social group. Human capital is one of the elements required for the development of knowledge-based economy. It is closely related with the level of education which should be developed on an ongoing basis.

Social capital – capability of citizens to work together, establish and maintain contacts, and function in different types of relations, resulting from mutual trust as well as the applicable standards and models of conduct. A high level of capital contributes to more rapid development as teamwork provides better and faster effects as well as a higher level of creativity.

Territorial capital – accessibility of material and non-material factors in a given area, which may be created by certain resources or limitations.

Territorial contract – a document underlying coordination of development-promoting activities of the government and local government units, oriented towards achieving common goals established for the territory specified in the contract.

Convergence – emergence of convergent practices; reducing differences; becoming convergent.

Local Activity Group – a type of private-public partnership created on a bottom-up basis at the initiative of inhabitants. It brings together representatives of local organisations from the public, private and non-governmental sectors as well as inhabitants. It is a corporate body (most frequently an association, less frequently – a foundation or federation of associations), with articles of association and governing bodies such as a council, executive board and board of auditors. It is responsible for developing Local Development Strategy, where objectives of such strategy are implemented using financial support under the Rural Development Programme.

Palliative care – an area of health care that focuses on treating and care of terminally ill patients in the final stage of a terminal disease. Its main objective is not to stop the disease process, but to improve the patient's quality of life.

Metropolis – a city/town or a group of cities/towns characterised not so much by large population as first of all by concentration of metropolitan functions. They include mostly services related to academic activities, research and development, entrepreneurship environment, exhibitions and conferences, cultural and tourism-oriented activities, and also production-related functions of the high technology sector. Metropolises include also concentration of social capital, innovations, political power and control functions of large corporations, including supranational ones. A metropolitan function relates not so much to the type and size of the involved entities, but their capability of creating external network relations with other national and international metropolitan centres and their capability of metropolising areas, i.e. creating their own metropolitan areas.

SMEs – micro, small and medium-sized enterprises, i.e. enterprises with less than 250 employees and annual sales of less than EUR 50 million; micro enterprises have 9 employees at maximum, small enterprises – 10-49 employees, and medium-sized enterprises – 50-249 employees.

Functional area – area designated on account of its spatial features, endogenous potential, concentration and development of specialist economic functions as well as the existing and emerging functional relations.

Metropolitan area – pursuant to the Spatial Planning and Development Act of 27 March 2003 it is "an area of a large city and its immediate vicinity functionally related with it, defined according the concept of the national spatial development". As far as Lodz is concerned, it can be considered an area

of emerging functional areas of the Lodz Agglomeration. At the same time the planned area, as an integral whole with the central city, may provide the basis for the development of the Lodz Metropolitan Area in the future. The planned functions of the metropolitan area are supplementary or complementary functions in relation to the central city, and relations inside the metropolitan area can be horizontal despite the existing tendency of the central city to dominate the area.

SIAs (Strategic Intervention Areas) – areas targeted by the regional policy of a country. These are areas with both the lowest level of development, which require intervention of the government due to the scale of problems which they cannot solve themselves, and the highest level of development, which have or will have a great impact on the national development for socio-economic reasons.

RES – renewable energy sources which are practically inexhaustible due to the fact that their sources are renewable in time (e.g. wind energy, solar energy, biomass, geothermal energy).

Social pathology – social phenomena related to individuals and social groups behaving in a manner inconsistent with the applicable values of a given culture.

Foster care – assistance and support by public authorities for children deprived of parental care, provided in two forms: family foster care and institutional foster care.

GBP per capita (in PPPs) – gross domestic product per inhabitant in purchasing power parities. In other words, this indicator takes into account currencies of other countries, thus better reflecting the value of income of citizens.

Polarisation – strongly manifesting differences.

Development policy – a system of reciprocally related activities undertaken and implemented in order to ensure stable and sustainable national development, socio-economic, regional and spatial cohesion, greater economic competitiveness and new jobs at the national, regional or local level.

EU cohesion policy – policy established by the European Community Treaty, aimed at strengthening economic, social and territorial cohesion by reducing disproportions with respect to the level of development of different regions and less privileged areas, including rural areas.

Endogenous (internal) potential – a system of one's own factors of urban or regional development arising e.g. from the functional, spatial and economic structure, level of development of social capital, institutional resources and social infrastructure, cultural and economic traditions as well as environmental features. The type and quality of these factors is often unique at the national or regional level which enables development of specialised functions and is an attractive localisation feature for the economy, attracting external capital. Currently, spatial and economic planning is based on the concept that endogenous potential is more important as a factor of development compared to external assistance in the form of subsidies and grants. Additionally, development based on endogenous potential is considered more stable in the long term.

Vertical relations – hierarchical functional relations between regions, cities/towns and enterprises, mostly unidirectional from entities with a stronger potential and impact to smaller and weaker entities. Entities with such relations are dependent on one another in different ways.

Horizontal (parallel) relations – functional relations between regions, cities/towns and enterprises, bidirectional and not hierarchical, although connecting entities of different type, size and impact on the surrounding environment. Entities with such relations are independent from one another in terms of their governance, organisation and capital, which does not exclude attempts of an entity to dominate other entities.

Region – a region within the designated administrative boundaries.

Relative poverty threshold – an amount set at 50% of the average monthly expenses in equivalent households.

ENI (Equivalent Number of Inhabitants) – a multiple of the pollution load in waste water discharged from industrial plants and service providers in relation to the unit pollution load in waste water discharged from households per inhabitant per 24 hours.

Creative sector – different types of business operations for which the key factor of production is the development of new ideas, concepts and associations. This sector can be divided into two groups of activities: creative activities (advertising, architecture, works of art, arts and crafts, design and fashion, video, film, music and photography, artistic activities and entertainment, publishing, software activities) and highly knowledge-based activities (production and ICT services), financial services, legal services and other services for business (e.g. consulting, market surveys, research and development (R&D) and university education).

Servicisation – increasing the share of services in the structure of the phenomenon under investigation.

Silver economy – socio-economic trend, the idea of which is to take advantage of the potential of the elderly while taking into account their needs.

Information society – society developing through information, in which the main factors of development include the capability of collecting, processing and using information as well as the development of IT industry. In the economy created by such society information is a factor of production, "raw material" and at the same time a product.

Suburbanisation – one of the urbanisation stages, a process of migration of city/town inhabitants to suburban areas which results in the development of suburban residential areas occupied by well-off population. At the same time, on account of the low land rent, a large number of industrial enterprises and service providers which require large space migrate to rural areas near cities/towns.

SESAR (Single European Sky ATM Research) – air traffic control system project which allows transmitting automatically information about the most important flight parameters (e.g. flight altitude and direction) to the control tower and other aircraft in the vicinity to ensure mutual "electronic visibility".

Synergy – a combination of different factors which together have a greater effect than the sum of their individual effects.

TEN-T (Trans-European Networks – Transport) – a programme prepared by the European Union aimed at expansion and modernisation of the European infrastructure of the main lines connecting the European continent.

Intermodal transport – transport of goods in one cargo loading unit (mostly a container) or vehicle, using more than one type of transport, without cargo handling operations.

Multimodal transport – transport of goods and people using more than one type of transport.

Poverty – non-satisfaction of the essential material needs of human beings at a desirable level. This is poverty in absolute terms – while in relative terms, poverty is considered a form of inequality, an excessive gap between the standard of living of individual population groups.

GVA (Gross Value Added) – the value of products and services produced by national market and non-market units, reduced by intermediate consumption due to production of such products and services.

Employer-supported volunteering – activities which involve undertaking and supporting by employer actions for charity with voluntary participation of employees. Examples of employer-supported volunteering: fund-raising campaigns, blood donation campaigns, more complex activities which involve joint organisation of and participation in campaigns for charity.

Valuation adjustment indicator for farming production space – a synthetic indicator to evaluate environmental conditions for agricultural development. The following four aspects are taken into account: quality of soil and its suitability for farming purposes (max. 100 points), climate for farming (max. 15 points), water conditions (max. 5 points) and landscape (max. 5 points).

Social exclusion – a situation which makes it impossible or significantly more difficult for an individual or a group to perform social roles, use public resources and social infrastructure, gain income in a dignified manner. Social exclusion poses the greatest threat to the following groups: unemployed, families with many children, single parents with children, disabled people, people with mental disabilities, elderly people, addicted, homeless people, people with low professional qualifications, victims of domestic pathology, children and young people from vulnerable environments and growing outside their families, and also immigrants and members of national minorities.

VII. LIST OF EXPERT STUDIES

1. Zofia Wysokińska, prof. dr hab., *Konkurencyjność gospodarcza regionu łódzkiego i jego perspektywy rozwojowe*
2. Julita Czernecka, dr, Agnieszka Ciszewska, mgr, Joanna Jabłkowska, prof. dr hab., *Analiza i prognoza rozwoju potencjału akademickiego regionu łódzkiego w kontekście struktury kształcenia, potrzeb regionu i oczekiwań przedsiębiorstw, potrzeb kształcenia ustawicznego, jakości kształcenia – jako podstawy dla wzmocnienia kreatywności i innowacyjności regionu*
3. Bogdan Piasecki , prof. dr hab., Anna Rogut, prof. nadzw. dr hab., *Analiza możliwości rozwoju specjalizacji regionalnych z uwzględnieniem innowacyjnego potencjału sfery badawczo-rozwojowej*
4. Maciej Kozakiewicz, dr, *Analiza potencjału innowacyjnego regionu w zakresie intensyfikacji współpracy między sektorem nauki a sektorem przedsiębiorstw w tworzeniu wspólnych projektów, umiędzynarodowienie potencjału innowacyjnego w regionie – diagnoza, szanse rozwojowe. Zdefiniowanie obszarów tematycznych przyszłych wspólnych projektów sfer nauki i gospodarki o znaczeniu strategicznym*
5. Łukasz Arendt, dr, Elżbieta Kryńska, prof. dr hab., Iwona Kukulak-Dolata, dr, *Analiza regionalnego rynku pracy – metropolitalnego, subregionalnych, na potrzeby aktualizacji „Strategii Rozwoju Województwa Łódzkiego na lata 2007-2020"*
6. Jerzy Różański, prof. dr hab., *Efekty napływu bezpośrednich inwestycji zagranicznych do województwa łódzkiego na tle innych województw w Polsce*
7. Mieczysław Grzesik, prof. dr hab., Zdzisława Romanowska-Duda, prof. nadzw. dr hab., *Ekspertyza obecnego stanu potencjału obszarów wiejskich w województwie łódzkim, pod kątem możliwości rozwoju funkcji rolniczych i pozarolniczych, na potrzeby aktualizacji „Strategii rozwoju województwa łódzkiego na lata 2011-2020"*
8. Paweł Starosta, prof. nadzw. dr hab., *Zasoby kapitału ludzkiego i społecznego w województwie łódzkim*
9. Bartosz Bartosiewicz, dr, Tadeusz Marszał, prof. dr hab., *Zróżnicowanie przestrzenne dostępności miast i gmin w województwie łódzkim w świetle sieci transportu zbiorowego*
10. Wawrzyniec Rudolf, dr, *Kształtowanie zdolności do partnerskiej współpracy z sektorem prywatnym i organizacjami pozarządowymi na potrzeby aktualizacji „Strategii Rozwoju Województwa Łódzkiego na lata 2007-2020"*
11. Maciej Turała, dr, *Analiza sprawności instytucjonalnej gmin województwa łódzkiego*
12. Aleksandra Nowakowska, prof. nadzw. dr hab., Zbigniew Przygocki, dr, Mariusz E. Sokołowicz, dr, *Zdolności inwestycyjne jednostek samorządu terytorialnego województwa łódzkiego w perspektywie 2020 roku*

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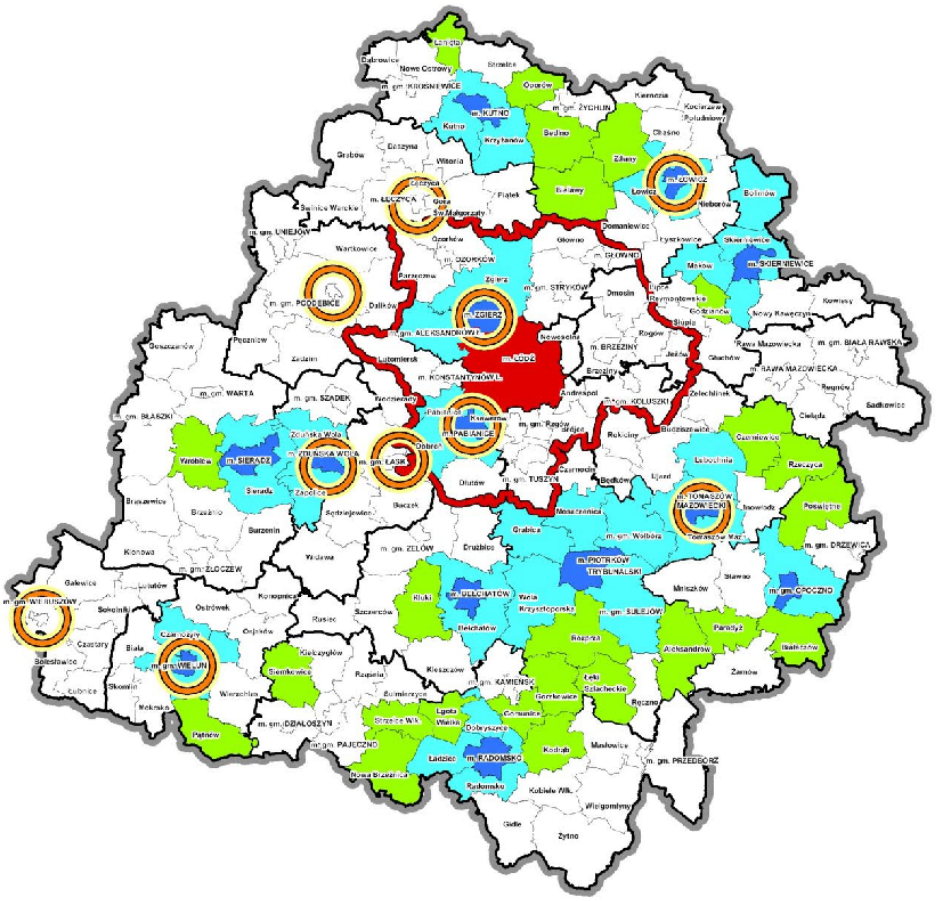
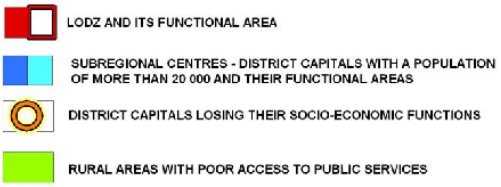
GRAPHICAL APPENDIX NO. 1

STRATEGIC INTERVENTION AREAS (SIAs) ACCORDING TO THE OBJECTIVES OF THE STATE POLICY IN THE LODZKIE REGION IN 2010





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