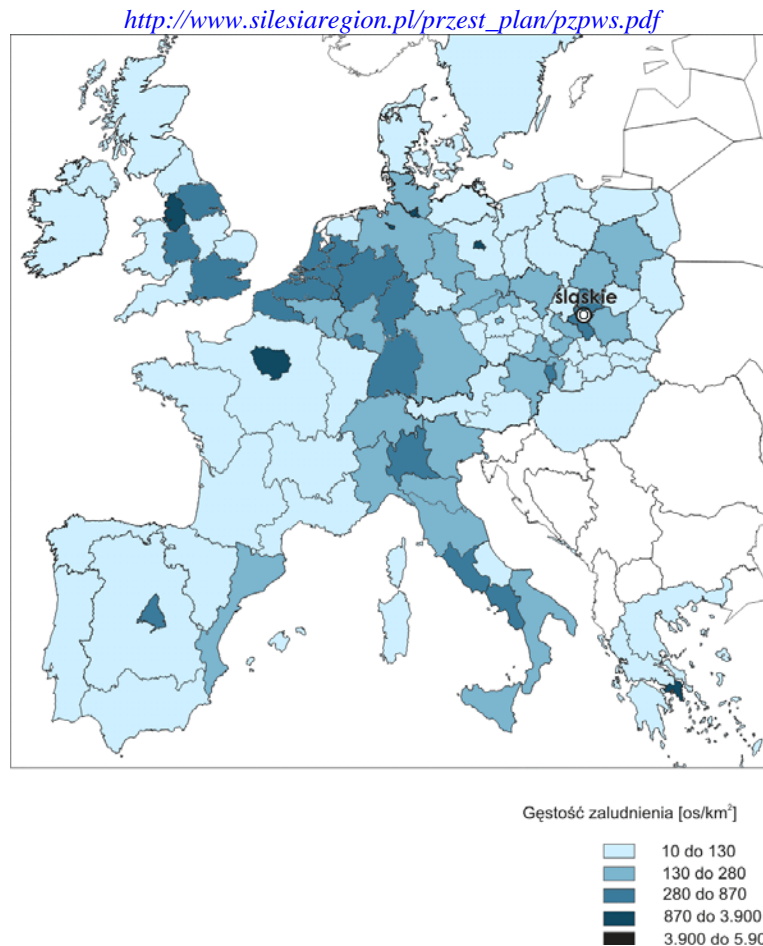


Development for habitat and social impacts of urban sprawl in Upper Silesia metropolitan region, Poland.

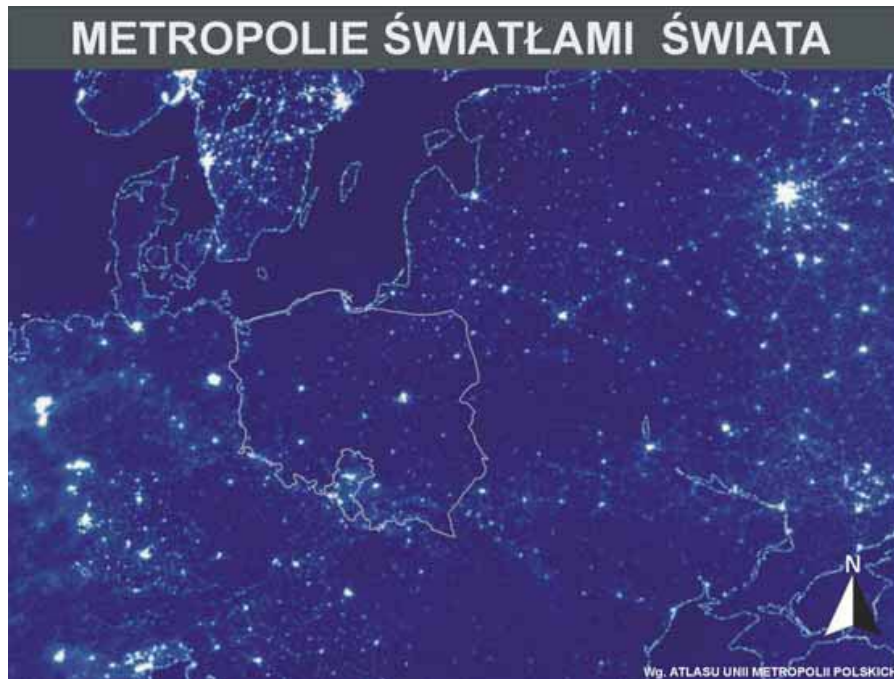
About Silesia region



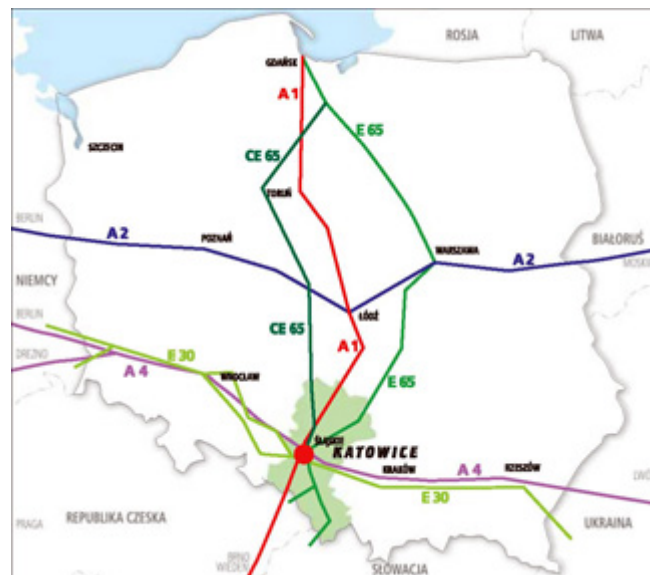
Silesia Voivodeship in comparison with European regions – density of population (persons /km²)

Silesia Voivodeship covers the area of 12 331 km² and is inhabited by over 4.7 ml people, which represents 12.4% of the total Polish population. Accordingly, it is Poland's most densely populated region and one of Europe's biggest regions either. Also, it is the most urbanized part of Poland. Silesia Voivodeship is characterized by a variety of morphological and geological forms, where almost all typical Polish land reliefs may be found. This region has diverse and attractive cultural landscapes, both in terms of local, national and European importance, dating back to distant past. The geographical location of Silesia Voivodeship at the intersection of old trade routes running from the west towards the east of Europe, and from the south to the north, combined with abundant natural resources deposited in this land, had a big impact on the formation of social and economic processes and settlement forms in the region and its rich cultural landscape.

Metropolises are the light of the world



Geographic location of Silesia Region in Poland



<http://www.um.katowice.pl/pl/index.php?option=content&task=view&id=913&Itemid=140>

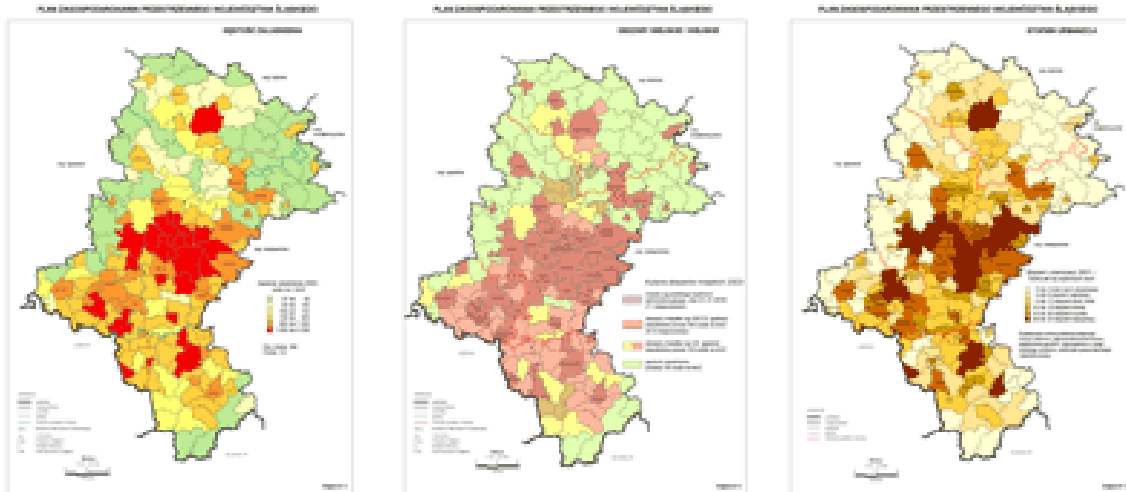
The historical divisions of the area comprising Silesia Voivodeship have determined its contemporary multi-cultural nature and the richness of its cultural environment. The elements of cultural heritage preserved to date have a different degree of legibility in the spatial structure of the region and its landscape. The cultural material and intangible resources play an important role in the preservation of Silesia's identity, its tourist and economic attractiveness and new job opportunities. There are archaeological sites from the Stone Age,

Bronze Age and early Iron Age, early Medieval and Medieval Times. Also, there is a dense network of historic urban settlements of Medieval origin. Likewise, many villages in Silesia date back to the Medieval times. There are 46 historical towns within the Voivodeship boundaries. In architecture the development of industry was associated with the growth of factory-housing complexes, industry-sponsored workers' housing estates, as well as owners' residences and palaces.

Density of population

Urban and rural areas

Urbanization rate



http://www.aglomeracja.slask.eu/urzadkatowice.php?aglomeracja/mapa_aglomeracji

General aspects of Upper Silesia's settlements

One of the values that define the cultural and landscape identity of a region is the structure of its settlements. The current physiognomic form of the settlements system is an outcome of changeable historical and economic processes. Such variable nature of the processes was, every single time, reflected in the spatial structure of regional settlements, leaving durable traces. An expression of old structures, created in the course of cultural processes, are settlement complexes with their services network, fittings, transportation systems, sometimes including huge industrial complexes very resistant to changes. The region is a conglomerate of old structures, shaped by cultural layers, as well as newly emerging forms. They may be described as a dynamic system between the two realities: the one that is already gone and the one that arrives. Upper Silesian settlements developed in two basic forms: those concentrated in the urban spatial systems, or those of small rural estates. In the majority of cases, the rural zones lost the definite character of their spaces: clearly demarcated and visible boundaries of the village or the housing estate, beyond which arable lands spread. The structures making up the settlement complexes were dispersed. The main reason behind such dispersal was uneven and unsustainable construction projects undertaken in response to growing industrialization, without any respect of traditional forms specific to community life patterns. Some neighboring cities were transformed into a conurbation and, losing their spatial integrity, have now become amorphous organisms. Thus, the historic network of settlements has been extended, not only at the cost of increased urban investment areas around the old towns, but also due to the construction of new settlement units, which, in quite a few cases, were transformed from primarily rural estates to sites of materials processing industry facilities.

The economic activation of the area and the decentralist, patronage of industrial establishments over their workers and their dwellings, led to such congestion of settlement areas, that the primary clearly granular layout was transformed into a strip arrangement, where spatial separateness of particular cities blurred. The central zone and the eastern zone of Silesia agglomeration are amorphous. None of the settlements are surrounded by big free areas; instead, they are filled up with smaller settlement forms, constituting a mosaic-strip like organism. The genesis of their origin in Upper Silesia dates back to the middle 1970s. The concept, at least as far as the design assumptions were concerned, referred to the "Garden City" and satellite towns inhabited by several thousand of people according to German planning solutions used before World War Two, based on rail transport. New locations were designated to facilitate unhindered extraction of coal. In 1976-78 multi-spatial housing complexes were designed. The new locations were supposed to take in the inhabitants of central areas which had been devastated by industry. It was assumed that the new housing estates would serve the function of "cities-dormitories", for those who were destined to commute to work in heavy industry. Thus, a system of roads was designed to accommodate increased traffic. In those years the mining industry was flourishing, together with associated branches of coal processing and metallurgy; accordingly, the demand for flats required by incoming workers was growing. At the end of the 1970s the national central social and economic plan¹ was devised, under which about 300 000 people were to be relocated in connection with the construction of 30 new coalmines. In 1981-1990, local town planning and spatial management plans were revised, increasing the number of the new locations rose from 21 to 35, to reconstruct the centre of the agglomeration and congest its inhabitants. The same spatial standards were assumed for all inhabitants of Poland and particular geographic regions, irrespective of the customs and traditions of specific local communities. The outcome of such approach has been the degradation of not only space and landscapes but also of social values. Currently, the most serious threats to the order of space in open areas are: instances of reconstructing exit roads from towns- leading to the dispersion of settlements, incursion of housing estates (the scale and form of which ruin the landscape), housing estates being overgrown with new houses and buildings, unmanageable storage sites and uncoordinated industrial zones, the emergence of wastelands. Although the forms of industrial buildings may, in some cases, be regarded as valuable and in line with the traditional nature of Silesia region, the industrial activity conducted in open areas has definitely contributed to the degradation of the landscape, reflected in the deformations of the land or the contamination of the soil, the disappearance of vegetation specific for given sites, other in other changes manifested on the surface of the land.

Industrial restructuring sites and suburbanization zones

The central part of Silesia Voivodeship is characterised by big dynamics of demographic processes, including: disproportions in the structure of population ages and genders, big number of people at post-working age (18 % rise in 1995-2001), and, at the same time, depopulation of central sites and relocation of people, and, to a certain extent, relocation of industry and services to the peripheries of cities and towns (regional shopping malls). The suburbanization process initiated by the development of transport systems that were to facilitate the separation of the workplace from the dwelling place is nowadays enhanced by the decentralising forces active in the city centres: decline of traditional industries located at downtown sites, pressure for space, congestion and pollution. These phenomena, in

¹ It was possible in the socialist regime economy!

conjunction with the availability of relatively cheap and easily accessible suburban sites of high environmental amenities, plus the tendency for unrestricted location of commercial and industrial functions, have together contributed to increased number of people migrating to external zones of the agglomeration, which, in turn, exerts a negative impact on the urban space, as it drives typical urban functions away from the downtown sites and poses threats to the city as a form of culture. Culture understood, in a broad sense of its notion, as a multitude of forms unified by specific values that shape the spatial structure and the landscape of the region, should provide the foundations of social and economic growth and competitiveness of Silesia Voivodeship on European scale. However, identified values are largely affected by negative outcomes of industry which still occupies a lot of downtown sites. Air pollution caused by industry, impacts from mining (mining damages), as well as changes in spatial structures due to motorization, the scale of which exceeds the absorption capacity of historically formed urban tissue, all accompanied by incompetent management of spatial changes, have resulted in worsened living conditions, especially in big cities and agglomerations, and in lowered quality of public spaces. In recent years industry has been subjected to restructuring measures, generating both green areas and brownfields. The southern areas of Silesia Voivodeship have acquired a status of bio-centres, ecological corridors, or wildlife refuges of the national, or, even international rank. The globalization of the Polish economy entails the need to open up to the world, to be competitive, efficient and innovative. In view of an increasing role of urban regions due to the changes occurring in European spaces, enhanced by the metropolitan nature of the global economy and metropolises being organizers of political and social life of their countries, it is essential to recognize the formative role of Silesia's cities and agglomerations.

The social and economic changes in Silesia have a direct influence on the processes occurring in cities: depopulation, degradation of urban space (especially of the central quarters), sub-standardisation of housing resources and lowered quality of public spaces. Many cities and towns should undergo the modernisation of their urban structure, revitalisation of their centres and historic quarters, and the provision of conditions promoting leisure and recreation activities. Another factor contributing to the degradation of urban space is a big congestion of transit vans and long vehicles in the streets of city centres. Furthermore, most Silesian cities and towns still contain both industrial sites well as brownfields. The renewal of urban space and reclamation of post-industrial sites may exert a positive influence on shaping a specific character of Silesian landscape.

Regional cooperation and coordination

The planning of metropolis zones containing towns surrounded by rings of peripheries, filled up with shopping malls and multiple-space parking lots is burdened with a significant risk of enhanced *urban sprawl* and social divisions. Regional cooperation and coordination is essential for creating the development of cities and solving urban and rural spatial problems. Modern cities are interconnected in metropolitan regions by means of concentric rings of peripheral housing estates – often in the state of decay, derelict inner cities, old peripheries, new peripheries and, last but not least, spatially autonomous towns that have become parts of the metropolis.

It seems that a system of green belts areas in an effort to improve both the ecosystems and the landscapes could help to change the impacts of urban sprawl. On the grounds of the existing protection areas, demarcated areas of ecological value (i.e. ecological corridors, core islands, etc.) and local climate green zones can be created. Such ecological zones play a role in making urban development more environmentally friendly. They also help to improve rural standards of living, coordinate developments in both urban and rural areas, and, in

consequence, enhance urban quality of life. As a part of this project, green belts can be created along roads and rivers, at first in central urban areas, through urban roads and landscape borders, by adding green coverage. The rapid development of residential areas, combined with improved standard of living in cities, implies that more effort put into creating and protecting green areas. To this end, some established compounds have been renovated to improve the residential environment and create recreation areas for citizens. Green belts could strengthen the spatial and natural connections and create cohesive, legible urban spaces with their own identities, as worthy as the nature that they have replaced.

Post-industrial sites in Upper Silesia



Tereny poprzemysłowe w województwie śląskim

Rich cultural landscapes in Upper Silesia

http://www.silesiaregion.pl/przest_plan/pzpws.pdfhttp://www.silesiaregion.pl/przest_plan/pzpws.pdf



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REFERENCES:

- [1]. Batty M., 2001, *Polynucleated Urban Landscapes*, Urban Stud. vol. 38, no. 4.
- [2]. Bruegmann R., 2006, *Sprawl: A Compact History*, University Of Chicago Press,
- [3]. Calthorpe P., Fulton W., *The Regional City*, Island Press, 2001
- [4]. Bruns D. F. W., Schmidt J. A., 1997, *City edges in Germany: quality growth and urban design*, Landscape and Urban Planning vol. 36, no. 4.
- [5]. Ewing R., Schmid T., Killingsworth R., Zlot A., Raudenbush S., 2003, *The study. Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity*, American Journal of Health Promotion
- [6]. Fishman R., 1989, *Bourgeois Utopias: The Rise and Fall of Suburbia*, Basic Books
- [7]. Geddes P., 1949, *Cities in Evolution*, London
- [8]. Garreau J., 1991, *The Edge city: Life on a new frontier*, Doubleday, New York.
- [9]. Hall P., 1997, *Modelling the post-industrial city*, Futures vol. 29.
- [10]. Herrschel T., Newman P., 2002, *Governance of Europe's City Regions. Planning, Policy and Politics*, Routledge, Taylor & Francis Group, London, New York.
- [11]. Kaplan D. H., Wheeler J. O., Holloway S. R., Hodler T. W., 2004, *Urban Geography*, John Wiley & Sons, Inc., Hoboken.
- [12]. Kloosterman R. C., Lambregts B., 2001, *Clustering of Economic Activities in Polycentric Urban Regions: The Case of The Randstad*, Urban Studies vol. 38, no. 4.
- [13]. Phelps N. A., Ozawa T., 2003, *Contrasts in agglomeration: proto-industrial, industrial and post-industrial forms compared*, Progress in Human Geography vol. 27, no. 5.
- [14]. Suarez-Villa L., 1989, *Polycentric restructuring, metropolitan evolution, and the decentralization of manufacturing*, Tijdschrift voor Economische en Sociale Geografie vol. 80.