



**DOLNY
ŚLĄSK**

**ANALYSIS OF SELECTED SOCIAL, ECONOMIC
AND SPATIAL CONDITIONS OF THE DEVELOPMENT
OF THE CARPATHIAN MACRO-REGION**

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SUMMARY

The location of the Carpathian Macro-region is of significant geopolitical importance, as it constitutes, inter alia, the eastern border of the European Union. It covers all or a part of 8 countries of Central and Eastern Europe, i.e. the Czech Republic, Hungary, Poland, Romania, Serbia, Slovakia, Moldova, and Ukraine. Of the countries listed 5 are members of the European Union and the remaining 3 countries (Serbia, Moldova and Ukraine) remain outside the EU block.

The Carpathian macro-region represents an essential part of the Danube Region covered by one of the four European macro-regional strategies. Of the 14 states that make up the region, 7 countries belong to the Carpathian Macro-region (in whole or in part). Poland is the only country located completely outside the Danube Region.

The analysed area is characterised by outstanding natural features and landscapes and cultural heritage values on a European scale. The Carpathian Macro-region constituting a vast mountain system of Europe, being one of the richest ecosystems in the world is characterized by a great biological diversity. About 4000 species of plants, 300 species of birds can be found there, as well as numerous species of other animals including brown bears, deer, wild boar, roe deer, lynx and wolves while the higher parts are inhabited by chamois and marmots. In the Carpathians, in addition to numerous habitats in wetlands, there are about 500 mountain lakes most often of post-glacial origin. The natural potential of the macro-region is formed among others, by 94 areas covered by the Ramsar Convention with a total area of 1 669 369 ha accounting for 2.6% of the total area of the studied territory. There are also 21 areas designated as biosphere reserves (UNESCO MaB) which constitute approximately 5% of the analysed area. The high values of the natural environment are emphasized by numerous Natura 2000 sites which currently constitute 14.2% of all Natura 2000 sites in the European Union. Another advantage is the presence of 50 national parks. In addition, the Carpathians are one of the largest forest ecosystems in Eastern Europe representing habitat for many endangered animal species and are an important element of the system of ecological links on a European scale. The Carpathian Macro-region is also characterized by significant resources of mineral and thermal waters. The largest resources of those waters belong to Hungary (1 500) and Serbia (1 000 sources). It is worth noting that despite the outstanding values of the natural environment in the Carpathian Macro-region the protection index is lower than in the Alpine Macro-region. Adequate protection of these resources will guarantee the preservation of the natural wealth and their proper management.

The resources of the cultural heritage of the Carpathians include 43 sites inscribed on the UNESCO World Heritage List, including 39 cultural and 4 natural sites which together account for approximately 11% of Europe's resources. These objects include both architectural monuments, building complexes and natural monuments, geological and physiographic formations, as well as historic sites, representing combined works of nature and man. In relation to individual countries of the Carpathian Macro-region the area is characterized by a rich cultural heritage. There are numerous monuments of historic architecture, parks and gardens, as well as many archaeological monuments located here, which make the analysed area so unique.

The Carpathian Macro-region has a dense network of transport corridors within the TEN-T core network conditioning the further infrastructural development of the area. In addition, an important factor of regional development is the functioning of the Danube Waterway representing an effective and efficient alternative to road and rail transport. Apart from the advantages associated with



transport and communication, the Carpathian region is characterized by many development barriers including, in particular, the inconsistent network of highways and expressways, and main railway lines (different track width, different power systems, and lack of electrification). What's more, the Carpathian Macro-region is distinguished by a low density of the highway network compared to the EU's standards (developed countries), and other macro-regions of a similar mountainous nature, e.g. Alpine Macro-region. It should also be emphasized that there is no coherent transport development policy for the Macro-region which results, inter alia, in difficulties in planning cross-border transport routes between EU countries and other countries making up the analysed area.

In recent years, in the Carpathian Macro-region, a number of favourable changes have been observed in the area of transport and communication. In particular, there has been an improvement in the coherence of the motorway network (especially in the western and south-western parts of the studied area), as well as an increasing number of passengers using air transportation. In the aspects related to telecommunication, the development of the broadband network and improved access to telecommunication technology (in particular in the western part of the Carpathian region and in metropolitan areas) was observed, which contributed to the increase in the number of people using commercial and administrative services via the Internet.

The Carpathian Macro-region is characterized by significantly lower population density than the European average (107 people per km², and 118 people per km² respectively), as well as clear disproportions in population levels, i.e. in the northern part of the Carpathian region (mainly covering the regions of Poland, the Czech Republic and Slovakia) is far more populated than the southern part (including the regions of Romania, Serbia and southern Hungary). It should be noted that the analysed area is relatively evenly distributed in the space of the largest urban centres most of which represent strong academic centres offering a wide range of fields of study. An important group of cities with a scientific and research function include Bratislava, Bucharest, Budapest, Krakow, Brno, Lublin and Belgrade.

The Carpathian Macro-region represents the regressive area in demographic terms. In the last decade, there has been an annual successive decline in the number of inhabitants by a total of nearly 2.7, which accounted for 3.8% of the total population. The depopulation process takes place in the majority of regions belonging to the analysed territory (with the exception of Slovakia), and relatively high intensity of the phenomenon is visible in the southern part of the area (in Romania, Serbia and Hungary). It should be noted that this tendency is opposite to the direction of changes registered in the Alpine Macro-region and the European Union where a relatively large increase in the population is observed (by 4.5% and 2.3% respectively).

At present, Carpathian regions is characterised by the favourable structure of the population by age compared to Europe with a relatively high share of people of working age (66.8% of the population, 64.5% in the European Union, and 64.3% in the Alpine Macro-region), and a relatively low share of people in post-working age (17.8% of inhabitants, 20.0% in the European Union, and 21.1% in the Alpine Macro-region). This favourable structure can be found in almost all countries of the Macro-region in question (with the exception of the Czech Republic). However, a disturbing phenomenon was observed in the last decade, i.e. unfavourable transformations of the population structure by age expressed in a marked decline in the number of people aged 15-64 (a decrease by 8.5%, 1.6% decrease the European Union, and 2.0% increase in the Alpine Macro-region) with a simultaneous increase in the number of people over 65 (by 18.1%, 18.5% in the European Union, and 15.9% in the Alpine



Macro-region) recorded in all countries of the analysed area (the strongest negative changes occurred in Romania, the Czech Republic, Poland and Slovakia). The consequence of these phenomena is the progressive ageing of the society in most countries of the Carpathian Macro-region (except for Ukraine), especially visible in Poland, Slovakia and Moldova, and the accumulation of its negative effects will be revealed only in the future.

The deteriorating population situation in the Carpathian Macro-region is also evidenced by the negative birth-rate (-1.7‰) with values significantly different from the European average (0.3‰) and the average value recorded in the Alpine Macro-region (0.0‰), recorded in most Carpathian regions (a particularly high negative balance of births and deaths was observed in the regions of Romania, Hungary and Serbia). Moreover, the analysed area is characterized by a negative net migration (-0.2‰) observed in most regions in the Carpathian Macro-region (especially high negative migration growth was observed in the regions of Poland and Romania). It is worth noting that this trend is opposite to the changes observed in the European Union and in the Alpine Macro-region where a clearly positive migration balance is recorded (2.3‰ and 4.9‰ respectively).

The picture of the demographic situation in the Carpathian Macro-region will not be completed without mentioning of a very low level of fertility rate compared to the rest of Europe, recorded in most Carpathian regions not ensuring generation replacement. The regions of Poland, Serbia and Slovakia are distinguished by extremely low fertility rates.

The Carpathian Macro-region is characterized by a relatively low level of education attainment (the share of people with higher education in the number of people aged 25-64 in individual regions ranging from 12.9% to 45.5%) compared to the European average (33.2%) and the Alpine Macro-region (from 17% to 54%) found in most Carpathian regions (particularly poorly educated are the inhabitants of Romania). Moreover, one can observe the low level of development of the information society in relation to the level of the phenomenon recorded in other European countries expressed in a small percentage of people with daily access to the Internet (from 49% to 84%) observed in most areas of Carpathian region (very low access to the Internet especially visible in the regions of Romania).

The Carpathian region is characterized by a relatively low level of economic wealth and living conditions of its inhabitants, in particular:

- 1) Low income of households (12178 PPS) compared to the average European level (18809 PPS) and the Alpine Macro-region (21746 PPS) recorded in most of the analysed area;
- 2) Low level of affluence of the population expressed in a relatively high percentage of people at risk of poverty or social exclusion (from 12% to 34%, 22% in the European Union); the significant poverty problem corresponding to low household incomes is especially visible in Romania and south-eastern Hungary);
- 3) Relatively poorer housing conditions (the average number of rooms in residential buildings per inhabitant in individual regions ranged from 1.0 to 1.6 rooms) compared to the average level recorded in Europe (in Alpine countries it was from 1.2 rooms per inhabitant up to 1.8 rooms) occurring in most regions of the analysed area (especially in the regions of Romania, Slovakia, Serbia and Poland);



- 4) Low level of access to public services (279 doctors per 100000 inhabitants) compared to other European countries (in the Alpine Macro-region it was 398 doctors per 100000 inhabitants) is typical for almost all Carpathian regions (in regions of Romania, Hungary and Poland this phenomenon reaches very low level); however one should note the increase in household incomes recorded in recent years in all regions of the Carpathian Macro-region.

The Carpathian Macro-region is distinguished by a weak macroeconomic condition which is reflected in the persistently low value of gross domestic product per capita (20811 PPS) compared to the rest of Europe (31407 PPS) and the Alpine Macro-region (36782 PPS) despite the relatively high dynamics of its changes (by as much as 50%) recorded in recent years. Almost all regions of Carpathians (with the exception of the 3 regions covering metropolitan areas) are characterized by significantly lower GDP than the average in the European Union (extremely low GDP values are recorded, in particular, in the regions of Romania and Serbia, south-eastern Hungary, and south-eastern Poland). On the other hand, a positive development tendency is an increase in the value of gross domestic product per capita observed over recent years in all Carpathian regions with a relatively high dynamics of change especially in the regions of Romania which, so far, had the lowest GDP in the European Union, as well as in the regions of Hungary and the Czech Republic.

The Carpathian region is characterized by a relatively low level of employment (the employment rate stands at 67.8%) and remains below the average value for Europe (69.5%) and Alpine Macro-region (74.3%), which can be seen in almost all countries of the macro-region (with the exception of the Czech Republic and Hungary). Moreover, a significant feature of the analysed territory is a strong diversification of the unemployment level manifested by much higher unemployment in the regions of Serbia and Slovakia, as well as in the regions of south-eastern Poland, north-eastern Hungary, and south-eastern Romania. It should be noted, however, that in recent years there has been an increase in the level of employment (from 7.3% to 16.3%) with dynamics exceeding the average European value (increase by 5.4%) and the average value in the Alpine Macro-region (increase by 3.1%), typical for all countries of the Carpathian region (in particular, the high intensity of changes is evident in Serbia and Hungary). In addition, a decrease in the unemployment rate recorded in most Carpathian regions was visible (particularly favourable changes in the scope of this phenomenon took place in regions of Poland).

The most distinguished part of the economic structure of the Carpathian Macro-region is the persistent high share of the agricultural sector observed in most regions far above the European average (especially in the regions of Romania, Hungary, Serbia, Ukraine and Moldova the agriculture is the dominant sector of economic activity). At the same time, the analysed area has a low share of the service sector that is much lower than the European average which is typical of most Carpathian regions (with the exception of regions covering large cities in which service activities are concentrated).

An additional barrier to the economic development of the Carpathian Macro-region is the low productivity of the economy (the value of the gross domestic product generated by an employed person was 43730 PPS) in relation to the rest of Europe (65324 PPS) and the Alpine Macro-region (73658 PPS); almost all regions of the analysed area (except for 2 regions covering cities with metropolitan functions) are distinguished by a much lower economic productivity index than the average value in the European Union (extremely low productivity is observed especially in the regions



of Romania and Serbia). Moreover, the analysed territory is characterized by low innovativeness of the economy in individual regions expressed by a significantly smaller number of people employed in research and development (R&D) activities, as well as lower R&D expenditure than the average values recorded in the European Union (the regions of Romania are in a particularly unfavourable situation).

To sum up, it can be stated that the area of the Carpathian Macro-region is characterized by numerous development disparities, both in the social and economic spheres which are most clearly visible between regions including cities with metropolitan functions (with a higher level of economic development) and other regions with peripheral locations, and the northern part of the studied area (better developed in economic terms especially in the regions of the Czech Republic and Slovakia, northern Hungary, and some regions of Poland) and the southern part (mainly the regions of Romania and Serbia). At the same time, the studied area shows a number of deficits and development barriers that require taking actions within the framework of the development policies conducted on a national and regional scale or within European support instruments.