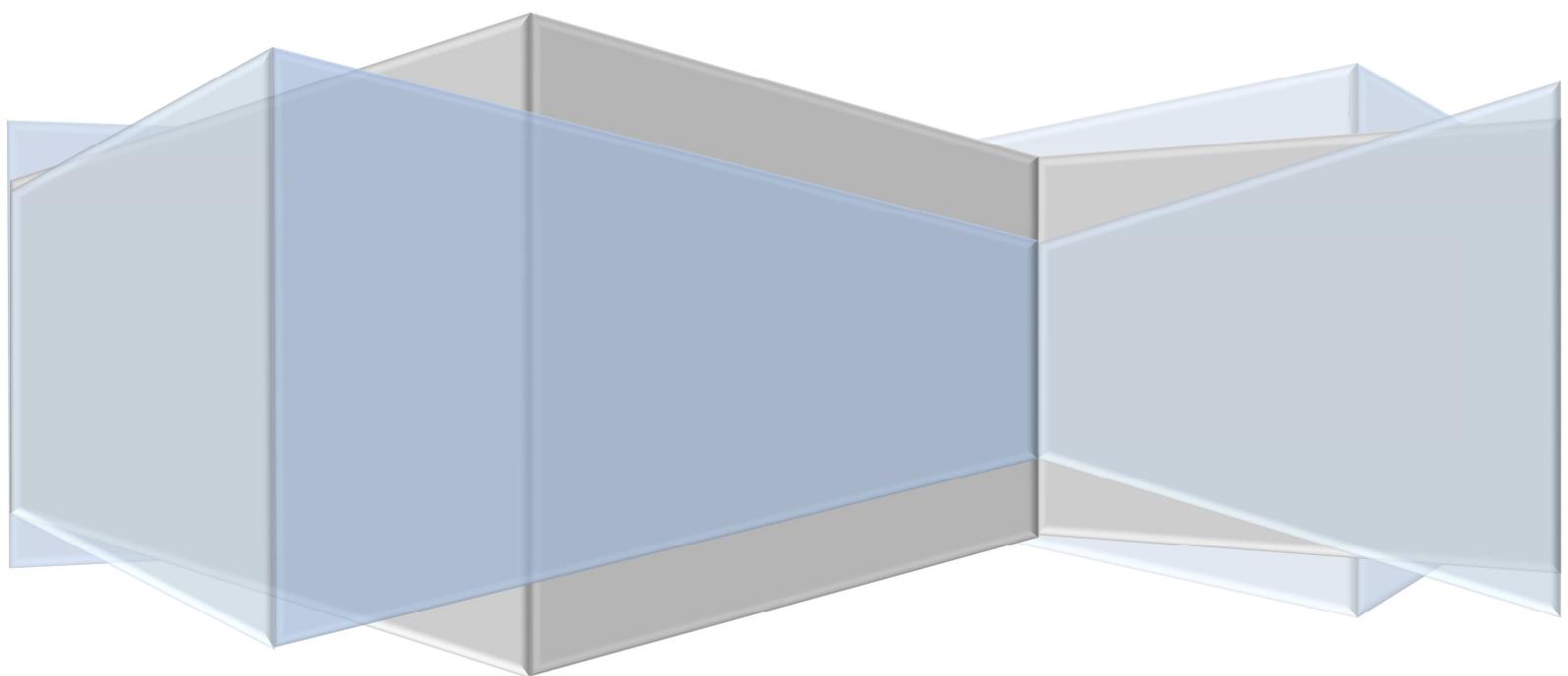




Macro-regional Strategy for the Carpathian Region



Carpathian Strategy

Presented Macro-regional Strategy for the Carpathian Region (hereafter referred to as the Strategy) is the result of common work and conducted consultations with all Carpathian countries (the Czech Republic, Hungary, Slovakia, Moldova, Serbia, Romania, Ukraine, Poland). It includes proposed suggestions and remarks proposed by the Carpathian countries. The Strategy will benefit from the active role of the Carpathian regions and experience from cooperation structures already operating in the area to provide effective solutions to common challenges of the Carpathian Region. Strengthened coordination between the existing structures is necessary and would benefit the area.

It should be stressed that the Carpathian Mountains treated as a single supranational, diverse but a compact region require its own strategic plan targeted at solving specific complex economic, environmental, social and spatial issues. Therefore a common consistent vision of its development and creation of the strategy, which will be a mechanism of collaboration and coordination of activities at macro-regional level is required. The Strategy will be an excellent collaboration instrument serving the purpose of coordinating the efforts undertaken by all players involved in building the potential of the Carpathian region. The focus of Strategy is on the issues benefiting from joint actions of the partners from several countries.

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INTRODUCTION

The harmonious development of all countries and regions of the European Union and Neighbouring States is one of the most important factors determining future shape of the Europe. The phenomena that affect the socio-economic situation of countries and regions and constitute a growing challenge for political and economic leaders, include progressing globalization, on-going climate and demographic changes and issues related to the uncertain international situation. The largest extension in the EU history in 2004-2007 and strengthening cooperation within the framework of the EU Neighbourhood Policy which created conditions for a number of new initiatives that bring new ways of thinking about the socio-economic development of the EU and adjacent European countries. Such initiatives might offer opportunities for the creation of new strong impetus to the development of the enlarged EU, especially in the territorial dimension. The four macro-regional strategies carried out by the EU are examples of such activities.

The process of European integration is both an opportunity and a challenge, especially in terms of building European area of equal opportunities, safety and prosperity. To achieve these objectives, it is particularly important to correctly diagnose the characteristics of these countries and regions, which – in terms of standard of living of the residents and level of socio-economic development – fall short of the EU average. The Carpathians are an example of such territory. Despite its unique territorial capital, strategic importance for sustainable development of the EU and neighboring countries (immense positive externalities for entire EU), and many of the existing agreements and forms of international cooperation, Carpathians as mountain area and border zone still face numerous socio-economic challenges.

Currently, there are four macro-regional strategies functioning in the EU which are dedicated to the following regions: Baltic Sea (2009), Danube (2011), Adriatic and Ionian Seas (2014) and the Alps (2015). It seems that their development and implementation have been successful to a certain degree; evaluation of achievement of the objective will be carried out within the next years. Adopting the macro-regional approach in thinking of strategic development of European countries and regions constitutes an important element of functioning of these strategies; it is the level situated between the national and EU development management schemes, based on consideration of common features, challenges and potentials specific for the areas of supranational range. Support for the strategies provided by the European Commission is also of importance. The Carpathians show numerous similarities to the areas covered by already functioning macro-regional strategies, including among others these related to special location, historical heritage and joint supra-national social or economic challenges. Moreover the area of Carpathian Mountains are endowed with unique development potential that might be un-locked by transnational cooperation. Therefore covering them with a subsequent, fifth strategy of such type, is reasonable.

The Carpathians are a mountain range system stretching 1,500 km across Central and Eastern Europe, which makes them the second-longest mountain range in our continent. The mountains form a unique territorial asset in terms of ecological and natural values but also impair accessibility and internal regional connectivity. A major part of the Carpathian region are the poorest regions in the countries of the EU that have developed most dynamically in the recent years, i.e. regions remaining at the periphery in relation to the center of the EU and national centers. GDP per capita in 2015 in most of them did not exceed 50% of the EU average. This is due to the fact that the enormous potential of the macro-conditions associated with the development of many economic activities, farming systems of high quality and a strong tourism sector is currently not used sufficiently in most parts of the Carpathian region. Internal resources of the Carpathians, such as rich biodiversity, numerous ecosystem services, the occurrence of a variety of renewable energy sources, high tourist attractiveness, unique cultural heritage, both tangible and intangible, and human resources and shared cultural identity create great opportunity for joint actions toward more dynamic and sustainable socio-economic development of this area.

Carpathian region includes member states of the EU and Serbia, Ukraine and Moldova but its impact is much wider. It offers the shortest connection between Northern Europe and Middle East and important linkage between the Baltic Sea and the Black Sea. Acceleration and intensification of the development of this area will have a positive impact on the entire European community. In addition to the actions on the level of individual countries, initiated both by local and national authorities, in order to achieve the best developmental effects it is necessary to create a development plan for the entire macro-region, going beyond the national perspective.

The impulse for undertaking integrated actions across the administrative borders of states, with regard to the functional area of the macro-region is an initiative of development of the strategy dedicated to the Carpathian region. This functional area was delimited in this document on the basis of the mountainous character that determines and sets both key joint challenges and development opportunities for the Carpathians. For this functional area, the priorities and actions have been proposed in line with its specificity and for that reason this functional area is referred in this document as to Strategic Priorities Area (SPA). SPA is smaller than the Carpathian region itself in order to better concentrate actions on the typical problems for the mountain areas. The focus on SPA puts the Carpathians in the center of all activities and initiatives proposed in this document. It also helps to avoid overlap with the Danube strategy encompassing very similar set of countries.

Macro-regional cooperation is an opportunity to unlock the development potential of the Carpathians, which due to the specific character of the geographical conditions should be treated as an integrated territory in order to increase the efficiency of development policy's activities. Macro-regional strategies are a tool for effective coordination of activities, a catalyst for cooperation across administrative borders, and vehicle to strengthen local economies. The implementation of the macro-regional strategy for the Carpathian region will serve the objectives of social, economic, environmental and territorial cohesion complementing actions undertaken at international (e.g. Carpathian Convention), national or regional level, in particular by addressing the challenges and needs common to most or all regions of the Strategic Priorities Area. Further strengthening the long-term and stable cooperation of the Carpathian countries through a new macro-regional strategy, it would be possible to further preserve unique natural and cultural heritage of the Carpathians, overcome existing barriers of development of the SPA and to strengthen existing capacities to reach unlocked potential. In this sense, the convention focuses on the protection of the natural heritage of the Carpathians. The strategy treats this heritage as a resource and endogenous potential for development. Improved accessibility and enhanced connectivity between cities and small and medium size settlement centers of the SPA will form critical mass for self-sustaining sustainable growth in line with the findings of new economic geography and place-based development paradigm. The greatest added value of the Strategy will be social and economic consolidation, which will strengthen the stability and security of the European Union's south-eastern borders.

The Danube Strategy and the Carpathian Strategy

Creation and implementation of a macro-regional strategy for the Carpathians will allow for joint planning and carrying out activities tailored to the specific needs and capabilities of the Carpathians. Only setting the Carpathians in the center of the strategic document will give full attention to the problems of this area and give the opportunity to exploit the unique potential of this macro-region. That is why it is necessary to create a separate development strategy for the Carpathian macro-region and not, for example, to include them in the Danube Strategy area. A key reason is that the existing Danube Region Strategy has been designed as a policy for the very wide Danube area in line with its ecological, transport and socio-economic characteristics. Whereas the proposed strategy should meet ecological, transport, economic and territorial needs of the Carpathian area in particular its core i.e. SPA. Both strategies have therefore different focus, rationale and the starting point.

The Carpathian and Danube Regions have different development priorities, problems and mechanisms. Mountain borders stronger favor isolation than the rivers and sea ones. All these and location at the EU frontier speak for bigger importance of accessibility issues and development opportunities offered by non-EU neighborhood in the SPA of the Carpathian region in comparison to its Danube peer. Another specific problem is low settlement density hampering creation of critical mass for growth. In terms of unique opportunities, Carpathians are among the most pristine European ecosystems. Only joint transnational actions can preserve it while turning it into attractive tourist destination and high quality sustainable settlement zone. At the moment strategic planning for the entire Carpathians understood as resource-based planning does not exist. Finally, the Carpathians mountainous culture should also be seen as a development asset in particular in terms of social cohesion. This culture is entirely different to the one taking its origin from the proximity of the one of the biggest European rivers. Therefore, it is obvious that key aspects of territorial capital are different in both macro-regions in question despite their territorial overlap.

Close inspection of the Danube and Carpathian macro-regional cooperation reveals also diverse implementation dynamics. Carpathian macro-region (with SPA as its core), similar to the Baltic Sea one, is a functional region formed by the common challenge how to use and preserve for future generations ecosystem of Carpathians (and same time improved trans-mountain accessibility and created new opportunities for economic development). The role of Danube in ensuring similar level of cohesive functionality of the entire Danube macro-region is less obvious resulting in diversity of interests of the macro-regional stakeholders. In

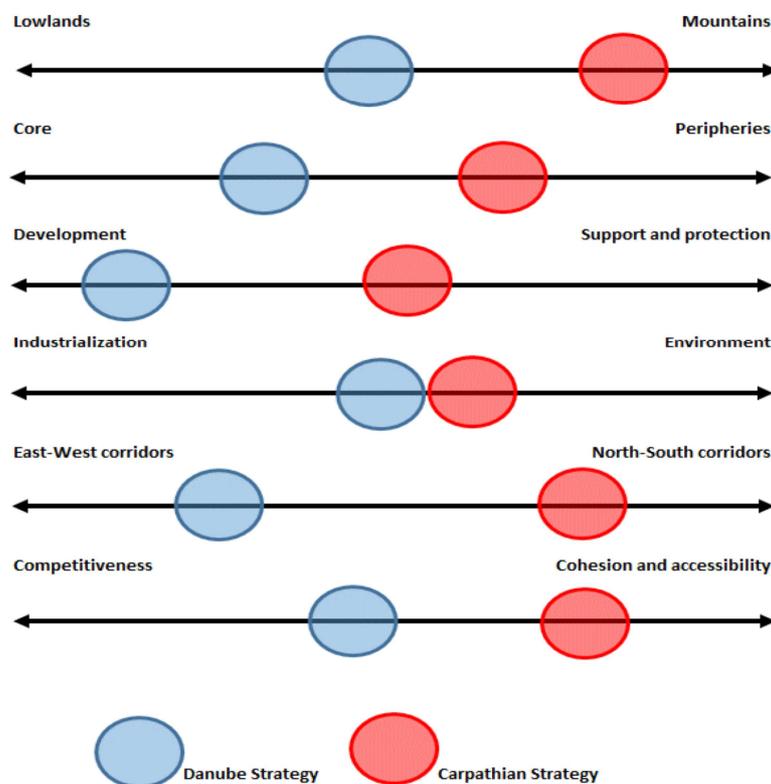
fact priorities specific for mountainous areas form only minor part of the latter Strategy. All these supports the need of creation of a separate development strategy for the Carpathian region, complementing the existing Danube one that has been tailored to the needs of much bigger and more diverse Danube macro-region. The macro-regional strategy for the Carpathian macro-region will give a holistic picture of the various thematic areas of cooperation for which the Carpathians form a logical frame and will indicate major long-term directions for development of the macro-region in line with its mountainous specificity so obvious in the SPA.

The above-mentioned differences cause that there are diverse challenges for the Danube and the Carpathian macro-regions. The former region concentrates on important growth poles (including state capitals) whose substantial potential could be strengthened through macro-regional cooperation. Thus, the objectives of the Danube Strategy correspond with the goals of so-called European “Pentagon” deglomeration (reducing the still existing differences in development between Danube metropolises and regions and the core of Western Europe). The Carpathian Strategy is, to a larger extent, orientated toward searching for hidden endogenous potentials in the peripheral areas of SPA, as well as toward overcoming spatial, cultural and institutional barriers. In that sense, both strategies are mutually complementary, and not competitive.

Both strategies will offer important synergetic effects. Ecological priorities of the Carpathian Strategy will contribute to the good environmental status of the Danube river, whereas the Danube Strategy Priority Area 2 (Sustainable Energy) efforts related to coordination of regional energy policies and the integration of the energy markets of the non-EU countries might create more favorable conditions for development of hydro-energy from Carpathian rivers. Similar examples are numerous. Therefore, for efficiency reasons, a comparative analysis of both strategies: underlying their mutual benefits, interactions, specificities and unique role and tasks is attached to this document in the Attachment 3.

It should be noted that the Carpathian Convention has developed Memoranda of Cooperation with several Priority Areas (PA) of the EUSDR, which could form a good basis for furthering coordination and cooperation between a new macro-regional strategy and the existing EUSDR.

Figure 1. The differences between the Carpathian Strategy and the Danube Strategy



Source: own elaboration

Figure 1 presents key differences between the Danube Strategy and the Carpathian Strategy with regard to the nature of challenges to be tackled and internal structure of the priorities. The challenges are related to key geographical conditions of both macro-regions such as mountain versus lowland terrain, presence versus absence of key economic national centres or differences in types and location of key accessibility barriers. As a consequence the Carpathian Strategy is paying (in comparison to the Danube one) more attention to economic cooperation and environmental actions. This means focusing on reconciliation of protection with development or environmental approach with industrialisation. The Carpathian Strategy also enhance North-South and not only East-West transport links, and strengthen the regional cohesion and accessibility as a precondition of its economic competitiveness (for unlocking untapped local potential). It can be noted that some of the specific challenges of the Carpathian region versus the Danube region, such as “mountains” and “environment”, are covered as key priorities by the provisions of the Carpathian Convention.

Carpathian Cooperation Structures

The Carpathian Strategy will support the implementation of the Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention). The Convention aims at protection and sustainable development of the Carpathians with a view to inter alia improving quality of life, strengthening local economies and communities, and conservation of natural values and cultural heritage. The strategy will integrate the priorities of the Carpathian Convention, will give additional impetus for their implementation (in a similar way as the EU BSR Strategy did for the Helsinki Convention) whereas it will simultaneously add territorial, social and cultural layers on the top of the activities and initiatives already initiated within the Convention

Even though, the Carpathian Convention provides an effective framework for cooperation and multi-sectoral policy coordination in the region, the Carpathian Strategy should become an overarching platform supporting the Carpathian Convention embedded in a broader thematic scope presented in the Strategy. It will ensure better interregional consultation when investing EU funds, more effective coordination of international initiatives, as well as it will bring together the inhabitants of the macro-region, what would help to erase existing historical conflicts. In order to ensure effective coordination, the existing forms of cooperation should be used as base for the Strategy planning and implementation at regional level (e.g. the Carpathian Convention and the Euroregions - - see Attachment 2), while the Member States and the regional authorities in those states, with the support of the European Commission, should be responsible for the implementation of the Strategy.

The Carpathian Strategy may also provide better framework conditions for transborder cooperation that has been developed for more than 20 years between countries in the region (at first mainly within the Euroregion structures, and next with the use of INTERREG and ETC funds). Considering a geographical scale, the Carpathian Strategy turns out to be not competitive in relation to bilateral programmes. In contrast to these programmes, it allows to identify common problems that occur in different parts of the macro-region. It provides also opportunities for development of large-scale projects (e.g. with regard to transportation, telecommunication and energy infrastructure). An institutional link to the Carpathian Convention could be established in particular for Priority Area 2 (Green Carpathians) but also relevant themes in Priority Areas Competitive and Cohesive Carpathians (e.g. sustainable transport, sustainable forestry, sustainable tourism etc.) which would provide great benefit to a Carpathian Strategy drawing on already available transnational cooperation networks.

CARPATHIANS – A UNIQUE AREA

The Carpathian Mountain Range covers an area of around 190 000 km², curving on the territory of Central and Eastern European countries and, after the Alps, it is the second most extensive mountain system in Europe. The area that would be covered by the Carpathian Strategy encompasses 8 countries: Poland, Czech Republic, Slovakia, Hungary (V4), Romania and non-EU: Serbia, Ukraine and Moldova. The national authorities with the cooperation with regional authorities will decide which regions in given country would be included in the area covered by the Strategy. The significance of the Carpathians understood as part of territory and a place of concentration of demographic and economic potential differs in the particular countries. This determines the provisions of Strategy, since in the countries where the Carpathians cover the majority of territory (Romania, Slovakia) their socio-economic functions has to be more diversified.

In the past, the Carpathians used to be an important area of Europe; specific culture developed there, affected by historical and natural conditions. They were a destination at the times of migration of peoples, where

different ethnic and national groups co-existed; an area that drew on this diversity. Today, it is commonly believed that the Carpathians are more of a barrier than a help for the development, that often tragic history of this area is an almost inextricable obstacle, and that the common problems associated with the socio-economic development divide the countries and the citizens of the Carpathians rather than unite them. A common challenge is to achieve situation where the Carpathians will again unite instead of dividing and where the Carpathian cooperation will contribute to the integration of Europe in the spatial, political, social, and economic aspects.

The Carpathians possess specific challenges, but they also offer unique cooperation potentials. The identification of the latter ones should support overcoming developmental barriers, with which this region has been struggling. What is important, apart from potentials of universal values for the Carpathians, including the forests, clean natural environment and landscapes, each locality or region has its specific potentials gaining weight in result of cooperation with the other units and succeeding thanks to the scale or density effect and quality of such cooperation. In turn, competition of cities and regions can delay their development if they lack the resources to benefit from it. Therefore, well-planned and carried out cooperation bringing bilateral benefits is of particular importance.

GEOGRAPHICAL SCOPE¹

The wide geographical scope of the Strategy (Carpathian Region) includes 4 regions in the Czech Republic (Moravskoslezsko, Střední Morava, Severovýchod, Jihovýchod), Moldova - whole country, 5 regions in Poland (Podkarpackie, Małopolskie, Lubelskie, Świętokrzyskie, Śląskie), Romania - whole country, 4 regions in Serbia (Belgrade, Vojvodina, South and East Serbia (Region Južne i Istočne Srbije)), Slovakia - whole country, Hungary - whole country and regions in Ukraine (Lviv, Zakarpattya, Ivano-Frankivsk, Chernivtsi). Actions and measures will be mainly focused on mountainous area featuring specific for this territory challenges and opportunities.

As it shown in the Figure 2. red line represents proposed Carpathian Region delimitation. On such basis it was possible to clearly indicate objectives for common actions and instruments that are necessary for their implementation. For these delimited area the more in depth analysis have been conducted and finally it was agreed to formulate the tentative strategic priorities for a narrower functional area sharing mountainous characteristics and featuring similar challenges and opportunities (Figure 3). This narrow area is named Strategic Priorities Area (SPA). Units qualified for SPA area are presented in table 1. Total population of the SPA area is 30,4 mln.

The delimited SPA region is a geographical approximation of the Carpathian areas concentrating both problems (peripherality) and potential development resources. The precision of determining the boundaries was limited by the arrangement of NUTS3 units. SPAs consisted of units, most of which are mountainous, and, in addition, some neighboring units with a clearly peripheral character (socio-economic characteristics similar to the strictly Carpathian areas). SPAs that consciously disregard the metropolitan areas neighboring the Carpathians (such as Bratislava or Krakow). In the strategy objectives, they will play an important role as growth poles stimulating the development of the surrounding areas. However, they are not the main subject of possible external intervention. SPA do not include Moldavian units as being located outside the geographical Carpathians. In addition, there is no clear division into NUTS3 units in Moldova. Nevertheless, due to the cultural closeness and peripherality of the location, part of the Moldova territory should be subject of the Strategy goals.

Table 1. Units of the SPA area (NUTS3 level)

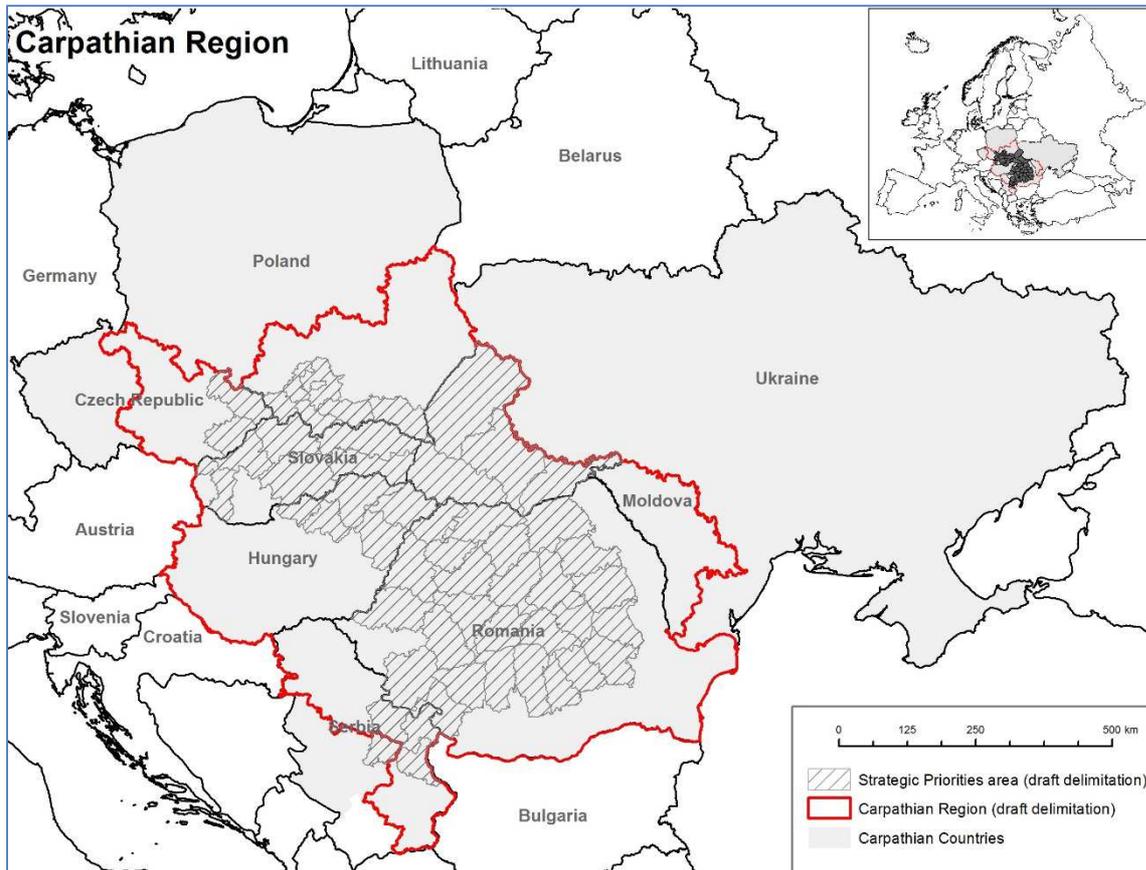
Statistical number	Name	Country
CZ072	Zlínský kraj	The Czech Republic
CZ080	Moravskoslezský kraj	The Czech Republic

¹ Delimitation at macro-political dimension involve (analogical to the Baltic Strategy) either the entire countries (in case of the Carpathian region, Romania and Slovakia), or in the countries where Carpathians cover only a part of the territory, adequate units at the NUTS2 level (Poland, Czech and Hungary) or their equivalents in the non-EU countries (Ukraine, Moldova and Serbia).

HU311	Borsod-Abaúj-Zemplén	Hungary
HU312	Heves	Hungary
HU313	Nógrád	Hungary
HU321	Hajdú-Bihar	Hungary
HU323	Szabolcs-Szatmár-Bereg	Hungary
PL214	Krakowski	Poland
PL218	Nowosadecki	Poland
PL219	Nowotarski	Poland
PL21A	Oswiecimski	Poland
PL225	Bielski	Poland
PL323	Krosnienski	Poland
RO111	Bihor	Romania
RO112	Bistrita-Nasaud	Romania
RO113	Cluj	Romania
RO114	Maramures	Romania
RO115	Satu Mare	Romania
RO116	Salaj	Romania
RO121	Alba	Romania
RO122	Brasov	Romania
RO123	Covasna	Romania
RO124	Harghita	Romania
RO125	Mures	Romania
RO126	Sibiu	Romania
RO211	Bacau	Romania
RO214	Neamt	Romania
RO215	Suceava	Romania
RO222	Buzau	Romania
RO226	Vrancea	Romania
RO311	Arges	Romania
RO313	Dâmbovita	Romania
RO316	Prahova	Romania
RO412	Gorj	Romania
RO413	Mehedinti	Romania
RO415	Vâlcea	Romania
RO421	Arad	Romania
RO422	Caras-Severin	Romania
RO423	Hunedoara	Romania
SK021	Trnavský kraj	Slovak Republic
SK022	Trenciansky kraj	Slovak Republic
SK031	Zilinský kraj	Slovak Republic
SK032	Banskobystrický kraj	Slovak Republic
SK041	Presovský kraj	Slovak Republic
SK042	Kosický kraj	Slovak Republic
-	Bor	Serbia
-	Braničevo	Serbia
-	Pomoravlje	Serbia

-	Zaječar	Serbia
-	Chernivtsi Oblast	Ukraine
-	Ivano-Frankivsk Oblast	Ukraine
-	Lviv Oblast	Ukraine
-	Zakarpattia Oblast	Ukraine

Figure 2. Carpathian region including Strategic Priorities Area (SPA)



Source: own elaboration (S. Goliszek)

Figure 3. Carpathian region including Strategic Priorities Area (SPA)



Source: own elaboration (S. Goliszek)

Table 2 and Table 3 present the situation of the strategic priorities areas (SPA) as well as the situation of the Carpathian region draft delimitation area, in relation to the national level in terms of three indicators: GDP per capita, road accessibility and population density (Table 2 also the share of the population 65+). They show the specificity of the Carpathian region. In each country the Carpathians NUTS3 regions are relatively poorer and economically underdeveloped. This is particularly evident in non-EU countries (Ukraine, Serbia). Road accessibility is also generally lower than the national average. In Poland, Romania and Ukraine however, the situation is reversed due to the poor accessibility of the northern and eastern parts of these countries respectively. In the Czech Republic, Poland and Ukraine, the population density of the Carpathians is relatively high, in other countries it is clearly lower than the average. Given the population, accessibility and economic potential, the Carpathians are a distinct peripheral zone, particularly in Hungary, Slovakia and Serbia. In other countries, the main reason for the peripheralisation is the low level of economic development. Thus development patterns are different in various parts of the Carpathian region. This strengthens the role of the territorial approach in defining strategic priorities.

Table 2. Comparison of the country total, Carpathian region and SPA in each Carpathian country – basic indicators

SPECIFICATION	GDP per capita 2014 (euro)	Population density 2015 (per 1 sq km)	Share of the population 65+ (2015)	Road potential accessibility indicator 2015 (European)	First sector employment (%; 2014)	Crude rate of net migration plus statistical adjustment 2015
The Czech Republic						
Country TOTAL	14 902,37	136,6	17,84	57,804	3,25	1,5
Carpathian region	12 859,07	137,0	18,09	54,869	3,67	-0,3
Strategic Priorities Area (SPA)	12 731,93	192,0	17,79	51,009	2,10	-1,6
Hungary						
Country TOTAL	10 625,61	105,8	17,90	41,083	6,75	1,4
Carpathian region	10 625,61	105,8	17,90	41,083	6,75	1,4
Strategic Priorities Area (SPA)	6 738,14	88,6	16,80	37,121	10,90	-2,3
Poland						
Country TOTAL	10 810,45	124,1	15,42	40,532	11,47	-0,3
Carpathian region	9 377,84	162,0	15,69	42,878	12,39	-0,9
Strategic Priorities Area (SPA)	8 020,11	161,6	14,50	43,448	13,62	0,5
Romania						
Country TOTAL	7 537,71	86,1	16,99	21,251	29,29	-2,3
Carpathian region	7 537,71	86,1	16,99	21,251	29,29	-2,3
Strategic Priorities Area (SPA)	6 268,45	72,6	17,19	22,346	28,74	-3,0
Slovakia						
Country TOTAL	14 022,66	110,6	13,96	45,520	3,26	0,6
Carpathian region	14 022,66	110,6	13,96	45,520	3,26	0,6
Strategic Priorities Area (SPA)	11 302,13	101,3	13,59	43,469	3,55	-0,6
Serbia						
Country TOTAL	10 191,56	91,6	18,73	27,333	20,68	No data
Carpathian region	11 336,15	100,5	18,63	28,065	No data	No data
Strategic Priorities Area (SPA)	6 539,84	59,1	20,42	25,651	No data	No data
Moldova						
Country TOTAL	2 175,53	105,0	10,34	13,621	33,69	0,1
Ukraine						
Country TOTAL	4 262,44	74,5	No data	16,379	17,10	0,3
Carpathian region	2 706,50	107,5	No data	23,798	No data	0,4
Strategic Priorities Area (SPA)	2 706,50	107,5	No data	23,798	No data	0,4
TOTAL						
European Union	27 619,95	117,1	18,88	49,957	4,9	3,6
Carpathian region	8 876,68	106,8	16,45	33,309	16,61	-0,6
Strategic Priorities Area (SPA)	6 892,34	91,1	16,51	29,803	19,34	-1,4

Source: EUROSTAT, IGSO PAS accessibility data bases; Ukrainian Statistical Office, Ukraine without Crimea (due to lack of data); Moldova with Transnistria; Ukrainian GDP for 2013

Concentrating the delimitation of the Carpathian region to the SPA area highlights the main problems of the Carpathian macro-region (Table 3). At the level of the entire Carpathian macro-region, they are statistically invisible due to the inclusion of many metropolitan centers (including the capitals of some countries). This is particularly evident not only in case of countries included as whole in the Carpathian region, but also in Poland and in Serbia. Table 3. shows that wealth of the SPA regions is below national average even despite some advantages in terms of accessibility and demography at least for some of them. This diversity of initial situation combined with desire to diminish existing economic disparities gives a strong foundations for their transnational cooperation. The comparison of absolute data values (Table 2) allows to indicate the basic differences between SPA territories in individual countries. By far the wealthiest units are located in the Czech Republic, and secondly in Slovakia and Poland. On the other hand, the clearly lower level of GDP per capita is recorded in the Ukrainian regions and in Moldova. The difference in development between SPA in the Czech Republic and Ukraine is 5:1. The Czech and Polish units are also characterized by a generally high population density. It is about two times lower in Romania, in Serbia and Hungary. Spatial accessibility indicators naturally decrease along with the distant location of the European Union core (Pentagon) to the east and south. However, their value is also influenced by new transport investments. The highest index values are recorded in units in the Czech Republic, Poland, Slovakia and Hungary; lowest in Serbia, Romania and Moldova. Due to investments in Poland, Slovakia and Hungary, the accessibility of the Ukrainian Carpathian regions is relatively good. The presented data also confirm that apart from development problems, SPA is also characterized by a relatively good demographic structure. The share of population in post-productive age (Table 2) is generally similar to the average recorded in individual countries (in Poland the situation in SPA units is even better than the national one). A good situation in terms of age structure is the effect of a higher birth rate. It does not change the fact that the SPA area is subject to a strong migration outflow. In most countries, the SPA area is characterized by a greater migration outflow than recorded at the national level. The exception is the Polish Carpathian regions. Except the Czech Republic and Slovakia, the entire SPA area is characterized by above-average participation of the labour force in agriculture (sector III). The index values are particularly high in Romania and Moldova.

Table 3. Comparison of the Carpathian Region and SPA in Carpathian countries with those countries averages

Countries	Carpathian Region (draft delimitation) (whole country =100)			Strategic priorities areas (SPA) (whole country =100)		
	GDP per capita 2014	Road potential accessibility 2015 (European)	Population density 2015	GDP per capita 2014	Road potential accessibility 2015 (European)	Population density 2015
The Czech Republic	86,3	94,9	100,3	85,4	88,2	140,6
Hungary	100,0	100,0	100,0	63,4	90,4	83,8
Moldova	100,0	100,0	100,0	No data	No data	No data
Poland	86,7	105,2	130,6	74,2	107,2	130,2
Romania	100,0	100,0	100,0	83,2	105,2	84,3
Slovakia	100,0	100,0	100,0	80,6	95,5	91,6
Serbia	111,2	102,7	109,7	64,2	93,8	64,5
Ukraine	63,5	145,3	144,4	63,5	145,3	144,4

Ukraine without Crimea (due to lack of data); Ukrainian GDO for 2013

Source: EUROSTAT, IGSO PAS accessibility data bases; Ukrainian Statistical Office

POTENTIALS AND DEVELOPMENT CHALLENGES FOR THE CARPATHIANS

The Carpathians have various development potentials, part of which however remains unused. Therefore, macro-region faces the challenge to transform these potential, which are presented below, into advantages of the intensive socio-economic development. For the detailed analysis of socio-economic situation of the macro-region and its strengths, weaknesses, opportunities and threats (SWOT), see Attachments 1.

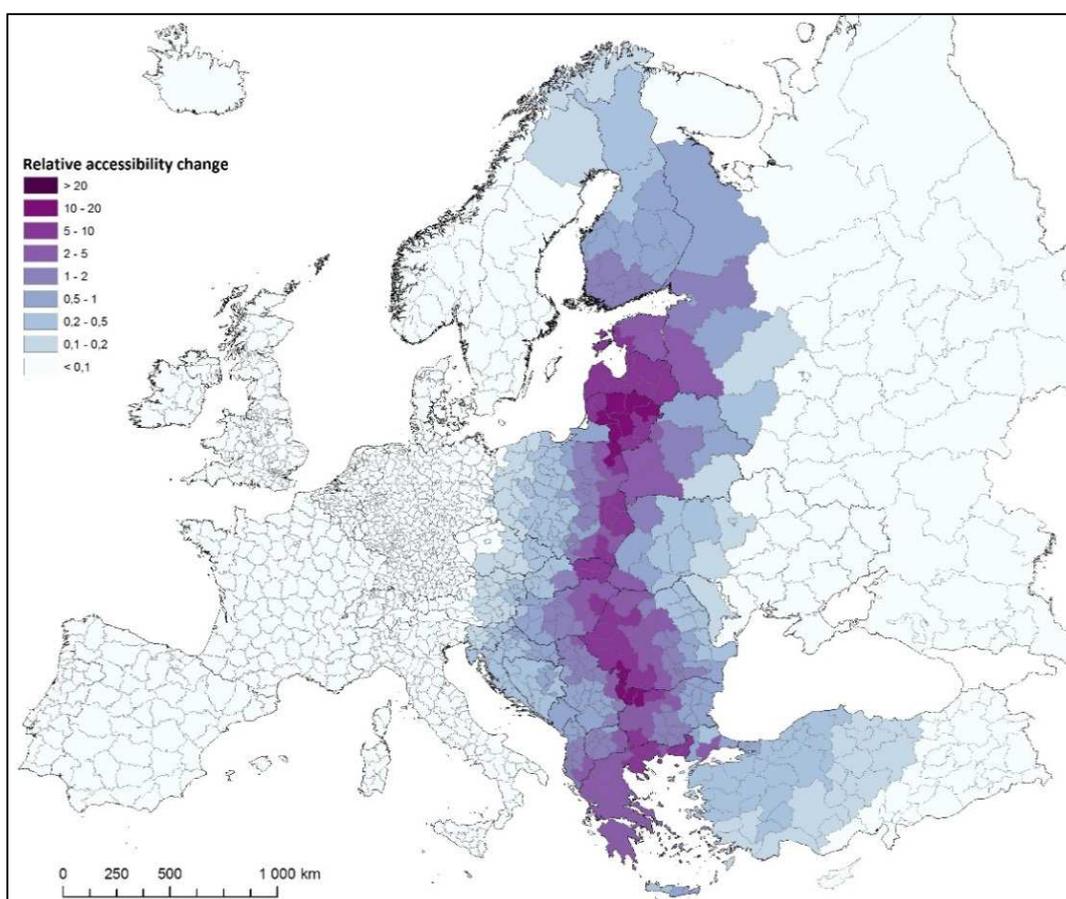
CHALLENGES AND PROBLEM AREAS

- **At the moment, Carpathian regions are among the poorest regions in the least developed countries of the EU.** In the majority of these regions, the GDP per capita in 2015 did not exceed 50% of the EU average. The Carpathians belong to the less developed areas, even compared to the Central Europe, due to the fact that a **significant part of the workforce is employed in the agricultural sector with low labour productivity, as well as due to hidden unemployment.** Important and well-developed industrial and/or services centres are often located on the outskirts of the mountainous areas of the Carpathians as well as in the Carpathian valleys. However, their impact on the surrounding areas tends to be often limited because of poor accessibility to labour markets (inadequate level of infrastructure, quality of public transport), as well as due to their structural incompatibility (lack of workforce with adequate qualifications). In addition, mountainous areas are hardly suitable for agricultural purposes. The shortage land for cultivation is also associated with the risk of deforestation, whereas improper use of the mountain slopes for agricultural purposes increases the risk of flood, drought and soil degradation and significantly reduces the possibility of using it for tourism, including, but not limited to, winter sports. In the peripheral areas the markets and large cities are far away, and getting to them is difficult and expensive, is an unfavourable factor that affects the socio-economic development of this area. Long-term neglect is one of the reasons why **small and medium-sized towns situated at the foot of the mountains or in its valleys lost their role of a trading spots and a place where products from the mountains and the lowlands are processed.** Many small and medium-sized towns are dependent on a single industrial plant. In addition, the **small and medium size enterprises (SMEs)** sector in the Carpathian region is often undeveloped in comparison to the lowland peers.
- **The Carpathians are characterized by low transport accessibility both in the European and intra-national scale.** This is proved by results of studies conducted on a European scale, according to which the lowest indicators of potential accessibility (both rail and road) are noted, among others, in south-east Poland, north Slovakia, east Hungary and north Romania. The values of these indicators are improving owing to investments developed within the framework of cohesion Policy. However it is primarily effect of projects that connect main peripheral centers (regional capitals) of given countries with their core areas and with Western Europe. At the same time the territories of the Carpathians remain the **peripheral areas** in their countries (except parts of Romania and Slovakia):. These areas are peripheral in view of the regional capitals, centres of individual states, as well as EU economic centres. Large areas of the mountain ranges constitute the state borders and are located in a great distance from large municipalities. **Crossing the border is difficult and time-consuming,** what influences economic integration and cooperation. Despite the fact that the Carpathians are lower than the Alps, they are also more difficult to cross. The mountain range is 1450 km long and crossed by only 12 railway lines (five of which are located at the border between Czechia and Slovakia) and many of them built in XIX century have not been properly maintained and are now out of operation or used only for cargo purposes (e.g. railway Muszyna- Plaveč or Nowy Zagórz-Komańcza- [Medzilaborce](#)). Railway network density in the Carpathian region countries is highly diversified (e.g. three times higher in Czechia than in Romania), which influences its economic cohesion. **The Carpathians are crossed by no motorway,** which is of particular concern for the North – South axis, on which both road and rail transport are hindered. Situation on the East – West axis is more favourable – the existing motorway sections in e.g. Slovakia are relatively long and form continuous connections with the country's capital, which is also the case for Hungary. In addition to that the Romanian trans-Carpathian motorway sections have been developed and connected with each other, however without the macro-regional cooperation scheme, these measures will be insufficient to achieve transport cohesion and accessibility in the region. Achievement of this objective requires continuous motorway connections and presence of a complete road network complemented with railway connections at the area of the entire Carpathians. Establishment of coherent road and rail network will allow at a far higher level for use of sections located in neighbouring countries which ultimately will improve accessibility on various spatial scales (especially to tourist

centres, but also in case of some public utility services). It is of great importance to develop roads and railways of the second order to better utilize the emerging motorways in the service of the peripheral and mountainous areas. The same problems apply to energy and telecommunications infrastructure.

- Lack of modernized transport infrastructure crossing the Carpathians in the north-south direction causes [poor] socio-economic interactions between north Europe (the Baltic Sea macro-region) and south-east Europe. Goods traffic (rail and road) in these directions, to a large extent, bypasses today the Carpathians from west direction, which contributes to transportation overload of existing infrastructure. The impact of the trans-Carpathian transport investment (ex. so called Via Carpatia road corridor - Figure 4) is extensive territorially and stretches from the north of the continent (northern Finland, and even Sweden and Norway) down to central Turkey. Such an investment can bring benefits to all countries covered by the Carpathian Strategy. The weaker effect in Ukraine results from the low permeability of the eastern border of the European Union. The Carpathian region is now the **eastern border region of the European Union**, what in part **strengthens its peripheral relation towards the economic centre of Europe**. Significant development disparities (economic, social and security gaps) along the external border of the EU can be an incentive for illegal activity on both sides of the border.

Figure 4. Change of road accessibility to population after implementation of Via Carpatia (long trips)



Source: Rosik P., Komornicki T., Goliszek S., Kowalczyk P., Duma P., Szejgiec-Kolenda, 2017, An impact of the Via Carpatia transport corridor on the socio-economic development of Poland, with particular attention to Eastern Poland (in the light of possible support for the Via Carpatia provided from the EU funds), Report for the Ministry of Infrastructure and Construction, 2017

- In addition to the poor accessibility in terms of transport and the low level of development, the area is also characterized by the relatively **low level of economic activity of the residents**. The low employment rate, compared to the rest of Europe, indicates limited opportunities or prospects for development. Most Carpathian regions are also characterized by the **lowest resources in Europe with regard to strengthening the innovation**. Poor career perspectives of the inhabitants contribute to intensification of **labour out-migration** to better developed countries of Western Europe, which brings negative demographic and economic consequences for the countries and regions of origin. (According to 2015 CEED Institute report: 'A one-way ticket? Migration in Europe from the perspective of CEE countries', in

the years 2004-2013 migration from Romania increased by 330%, from Poland by 225%, from Slovakia by 150% and from Hungary by 140%). The relief of the area (mountains) and often poor shape of transport infrastructure and organization result in the fact that local urban centres of medium size cannot be treated as an alternative for migration outflow. Improvement in this respect could lead to spatial increase of local labour markets (also on a transborder scale) by allowing to commute greater distances to work.

- **Difficulties to effectively use the development potential of the Carpathians are vastly related to the historical and political conditions.** In the last century, some state borders at this area have changed many times, similarly as – at part of it – the ethnic composition. This resulted primarily in lack of stability of population, borders, development models (including spatial development) as well as administrative and state sustainability. Moreover, the mountain ranges divide the Carpathian area and impose (in particular in Romania and Slovakia) an “island” topology of development, which has a negative impact on national and supraregional integration and development.
- **Long-lasting mutual isolation of some regions** (poorly permeable borders in the period of centrally-planned economy) continues to result in the absence of complementary socio-economic development of transborder regions. This concerns *i.a.* tourism, forest economy, energy production and logistics. Thus an integration of local economies and labour markets at the internal EU borders as well as further enhancement of linkages through the external one, poses a major challenge for the regional development of the area.

DEVELOPMENT POTENTIALS

The Carpathians have numerous development potentials which – when properly used – may be translated into its sustainable and dynamic development. Apart from the potentials universal for the entire macro-region, the Carpathians and in particular the SPA show also the regional or local potentials specific for a certain, smaller areas. Cooperation in the scope of their use will contribute to achieving the benefits by both the Carpathian states and by the EU as a whole. The identified potentials refer to such domains as cultural, environmental and tourist attractiveness, economy based on local resources, renewable energy production, education and bio-science, demography and society with its mountainous way of living, and spatial development (e.g. city and settlement network, zonal development system).

CULTURAL, ENVIRONMENTAL AND TOURIST ATTRACTIVENESS

The Carpathians have unique natural and cultural assets. Central location in Europe, a climate good for health, good conditions for sports and unique natural and cultural heritage offer a chance for success similar to that developed by the Alpine countries. The Carpathians have numerous advantages, among others:

- Numerous national parks, e.g. Bieszczady, Gorce or Tatra National Parks in Poland, Derdap National Park (Iron Gates) in Serbia, Parcul Național Munții Rodnei (Rodna National Park) in Romania, as well as Primeval Beech Forests of the Carpathians at the territory of Slovakia and Ukraine, Caves of Aggtelek Karst and Slovak Karst included on the UNESCO World Heritage List.
- Plenty of healing mineral water springs, bath spas and various tourist attractions. The most important health resorts include e.g. Krynica, Muszyna, Rabka, Rymanów or Iwonicz Zdrój in Poland, Piešťany and Teplice in Slovakia, Borsec, Sovata, Băile Tușnad, Covasna and Băile Herculane in Romania, Sokobanja in Serbia, Miskolc-Balngfürdo, Gyula and Eger in Hungary
- The Carpathian forests inhabited by the European bison, bears, wolves, lynxes, wildcats and beavers. This creates a significant tourist potential. However, particular attention should be paid to not destroy this potential by the tourism development due to excessive exploitation. Simultaneously with the expenditures on tourism, natural resources should be preserved e.g. by constructing wildlife corridors.
- Attractive and valuable cultural heritage based on long-term multi-ethnicity and multi-culturalism of this region related to its mountain character. The value of this heritage is confirmed on one hand by including the numerous sites on the UNESCO World Heritage List (e.g. wooden orthodox and catholic churches in Polish, Slovakian and Ukrainian Carpathians, wooden churches of Maramureș in northern Transylvania in Romania, orthodox church of St. Nicolas in Bodružal in Slovakia, the Horezu Monastery in Romania, Residence of Bukovinian and Dalmatian Metropolitans in Chernivtsi in Ukraine, the ruins of Spiš Castle in Slovakia or picturesque Vlkolínec village in Slovakia, old village of Hollókő and its

surroundings in Hungary, villages with fortified churches in Transylvania in Romania, well preserved medieval towns of Banská Štiavnica or Bardejov in Slovakia or Sighișoara in Romania) and on the other hand by a large number of heritage parks and cultural landscapes willingly visited by the tourists (e.g. open air museum in Sanok in Poland or in Curtisoara in the Romanian Parang mountains, Tokaj wine region in Hungary and Slovakia, the architectural and park landscape complex and Pilgrimage Park in Kalwaria Zebrzydowska in Poland, palace and garden around Kroměříž Castle in Czech republic). The Carpathians are also one of the European regions in which old rural folk architecture, design and handicraft are the best preserved in Europe, which may be a factor attracting a wide group of visitors.

- Potential for organization of services related to winter sports service. Despite the fact that the recent winters were milder, the sports centres in the Czech, Slovakian, Polish, Romanian or Ukrainian Carpathians continue to develop their infrastructure, what with adequate support may lay the foundations for cross-country and alpine skiing as well as winter tourism development.

This means that **based on well-preserved and protected natural and cultural values one may build an innovative and competitive tourism economy and the Carpathians may become one of the most attractive target locations of sustainable tourism in Europe.** Good cooperation between different actors, local management and partnership may contribute to establishment of high-quality and responsible tourism.

ECONOMY

The Carpathians, as the area populated by app. 68,9 million of people and strongly diversified, has **a potential for innovative industries from various areas of economy.** Key attention should be paid to the sectors based on local assets and resources. On one hand, with regard to greater share of agriculture comparing to the other regions, development of agri-food processing, including organic farming, is possible. On the other hand, innovations can support development of more environment-friendly technologies in the conventional economic sectors that might be put at the environmental friendly track. Carpathian offer immense potential for development of circular economy due to obvious benefits of such type of development in this macro-region.

- **The Carpathians are rich in woods**, which is of a great importance for Central Europe characterized by rather poorly afforested area (e.g. 60% of all afforested territories of Ukraine are located in the Carpathians and the average forest ratio of the whole Carpathians is estimated at the level of 60%). **This could form a basis for competitive wood processing furniture industry and wood construction** (competitiveness may be increased by cooperation of enterprises from different Carpathian states). It can be also used as a starting point for bio-mass energy production.
- The Carpathians may also strengthen the energy security, by establishing the connections between power and energy infrastructure on the North – South axis and improving effectiveness of the transmission grid. **At the area of the Carpathians there is also a relative high saturation in rivers and water courses observed that may be used for hydroelectric power production** – thanks to height differences, the mountains are suitable for construction of dam or power-storage hydroelectric power stations. However, vast majority of river beds runs along the state borders and therefore such initiative will require supranational coordination.
- Part of the Carpathians has also the **extraction potential** that may become an area of cooperation, primarily in the oil and natural gas prospecting and extraction. The activities in this field may include joint scientific initiatives and promotional activities, sharing the experience and knowledge on among others environmental aspects of prospecting and production of hydrocarbons and cooperation at the regional and EU level.

SCIENCE, INNOVATIONS AND EDUCATION

- Due to peripheral nature of the Carpathians, the area is neither scientific nor educational centre and the Carpathian regions, are not the centres of the respective countries. However, **numerous potentials requiring a new approach provide the opportunity for creating the innovative solutions.** Innovative enterprises have been already operating at the Carpathians' area (e.g. Dredom-Mețel from a tiny village Budzów in Poland) or they are emerging (e.g. Transylvanian Mechanical Engineering Cluster). There are also universities and academic centres (mainly regional universities located in e.g. Zlin and Ostrava in Czech Republic Nowy Sącz in Poland, Lviv in Ukraine, Brasov, Sibiu, Cluj-Napoca, Harghita in Romania, University of Miskolc in Hungary) producing a human resources potential which also provides the

opportunity for development of the science and innovation sector if kept in the region. The SPA research potential is also supported by the larger research centres from outside the SPA that strengthen the macro-regional innovation ecosystem. Development of vocational education providing human resources to the economic sectors of high development potential, such as sustainable tourism, traditional design and handicraft or forms of agriculture adjusted to the mountainous conditions (e.g. herding) would constitute a valuable complementation.

- Human resources potential and the existing research infrastructure (financed mainly from the cohesion policy funds) provides the opportunity for carrying-out the R&D activities, such as e.g. pharmaceutical and pharmacological research or research related to health industries (e.g. balneology),
- Natural resources of the Carpathians provide a significant potential for innovation and R&D activities – it is possible to carry-out the works considering the uniqueness and value of natural environment of the Carpathians within the following sectors: bio-science, forestry (bio-preparations, mycelia), wood (e.g. wickerwork, wood-based materials, haberdashery, luthier's art) or agriculture (e.g. herbalism),
- The potential related to natural and cultural heritage may form the basis for innovative and creative endogenous industries based on use and promotion of the resources for such initiatives as e.g. environmental film, professional and amateur outdoor photography, plain air painting, furniture and industrial design.
- The unique biodiversity of the Carpathian region can also provide a frame for knowledge-intensive development applying bio-science and related research outcomes. However, this would require strengthening of the human capital and knowledge base in the entire region.
- In 2008 the scientific cooperation network S4C – Science for the Carpathians was established. The network connects scientists for the Carpathians, defines research priorities for the region and enhances international collaboration with partners from outside the Carpathians. The network developed and has been implementing the „Research Agenda for the Carpathians“ aiming at Integrating nature and society towards sustainability. Since 2010 the biannual Forum Carpaticum has been organized. The for a provide a platform for bringing together a broad spectrum of scientific disciplines from both, the natural and social sciences to enhance development of the Carpathians. The Science for the Carpathian initiative has been closely working with the Carpathian Convention, especially on the basis of the Memorandum of Understanding signed in 2012.

POPULATION AND SOCIETY

As of 2015, the Carpathian region was populated by app. 68 million of people. Although the diversity of their history, experiences and origin may, as indicated above, hinder or pose a challenge for development of the area, it is also a subject to well-managed cooperation by the Carpathian states and regions as well as the EU as a whole. What is important, the Carpathian territories have large and in some cases unused labour resources. Also natural demographic balance at least in some parts of the region is positive, which is very rare in contemporary ageing Europe. When considering the society aging processes in the most of Western Europe countries, these resources will be not only utilized, but contribute to counteracting the effects of demographic crisis. In this context, strengthening of cooperation with the non-EU Carpathian states – Ukraine, Serbia and Moldavia, will become the labour force reserve, is of particular importance. This phenomenon has been already noticeable – primarily due to out-migration to more developed countries and regions in recent years, population number of the Carpathian region decreased by more than 1.7 million i.e. by app. 3%. In the same period, EU-28 population slightly increased (by app. 1%). The effects of these actions will bring benefits both to the EU and the partner states and will help to work out the solutions which will not lead to depriving the Carpathians from their human capital, but will use it in a way profitable to all. However, from Carpathian point of view a key challenge is to be turned into an attractive labour destination in order to retain in the region well educated relatively young people.

With the improvement of transport accessibility, the Carpathian region can become an attractive place of residence due to the potential of the natural environment. This can be used economically, among others, as part of the so-called silver economy (on a national but also on a European scale)

TERRITORIAL CAPITAL

The Carpathians are located in the middle of the continent, what cannot be overestimated from the point of view of European politics, economy, environment and security. In addition, as a geographical space connecting countries and regions, diverse assets are centred around this space, what creates opportunities for the exchange of products under international trade. Development and improvement of the quality of roads and railway networks (spatial accessibility), as well as broadband networks (digital accessibility) in the Carpathians area gives the opportunity to benefit from international and interregional passenger and freight transport.

The following elements of the territorial capital of the Carpathian Region are instrumental for its growth and sustainable regional development:

- Medium size urban centers playing important role in regional economies. Their networking and cooperation might create a favorable conditions for innovation and R&D activities as well as for formation of a high quality human capital (including lifelong education).
- Smaller urban centres and settlements fostering local initiatives, supporting sustainable use of natural resources (e.g. sustainable high quality tourism, production of renewable energy, sustainable “green” agriculture), offering vocational training and acting as a local initiatives centres for adjacent rural areas. They can also host re-industrialization initiatives elaborated in cooperation with other cities and towns.
- Services of general economic interest fostering quality of life for the adjacent areas, being in the same time an important development challenge due to ongoing out-migration, and lack of conscious public policy guaranteeing their decent level.
- Already mention non-movable territorial assets such as mountainous culture, ecological values and cultural landscapes of unique character.
- Closeness and cultural proximity, mutual understanding and personal linkages and interactions providing ground for development of new ideas, absorption of existing good practices, extension of functional labour markets and creation of networked type of clusters and related products (e.g. tourist products).

However out of listed above elements of territorial capital only some non-movable territorial assets are at the level and of a quality allowing them already to contribute to the development of the Carpathian region. Smaller-urban centres and services of general economic interest provided by them require strengthening. Connectivity is among key barriers of the regional development. In particular small and medium-size cities and towns should become the natural development engines of the macro-region. This would require redefining their role, identifying new functions based on their endogenous potential, including territorial capital, and taking into account the benefits of agglomerations that urban networking and –urban rural cooperation can provide.

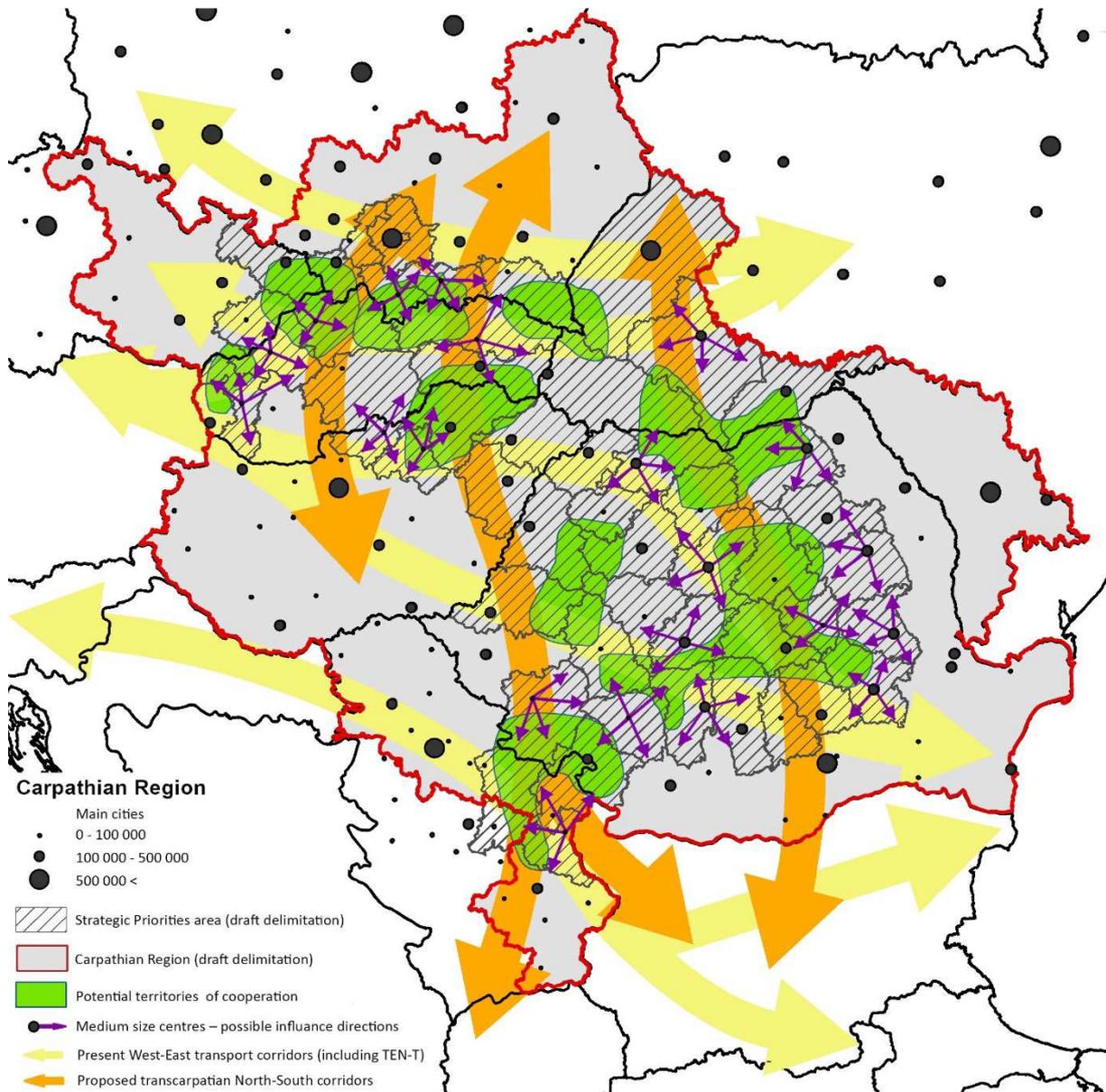
IDEA OF THE MACRO-REGIONAL STRATEGY FOR THE CARPATHIAN REGION

The idea behind the creation of the development strategy for the Carpathian macro-region is to strengthen its role, so that it becomes one of the Europe’s centres, instead of remaining a peripheral region. This should diminish the existing incentives for out-migration and strengthen the long-run developmental perspectives. To achieve this goal, it is necessary to create mechanisms that will allow for full development of the potential of the regions that comprise the macro-region and for using it to facilitate socio-economic development while respecting environment and natural and cultural values. This requires not only activities at the regional, national and supranational levels, but also skilful compilation and complementarity of the instruments used. The Carpathians, treated as a single transnational, diverse but coherent region, require their own strategic plan aimed at solving their specific complex economic, environmental, social and spatial problems while maintaining its unique cultural and natural assets in line with the objectives of the Carpathian Convention. Therefore, there is a need for coherent vision of their development and a mechanism of coordination at macro-regional level. A macro-regional strategy is a perfect instrument for coordinating efforts of all actors involved in the capacity building of the Carpathian region.

Figure 5. illustrates how the Carpathian Strategy can boost the development in the Carpathian Region. It shows directions of internal and external integration of the Carpathian macro-region (including the directions of the supported transport corridors). Moreover, it also indicates the areas of increased impact of some medium size cities. Besides particular territories of cooperation and developmental zones have been proposed due to the different functions and endogenous potential. The identification of medium-sized centers and

delimitation of cooperation zones is a proposal for further discussion among the countries participating in the development of the Strategy.

Figure 5. Vision of the Carpathian Region development



Source: own elaboration

PROPOSED OBJECTIVES AND AREAS OF COOPERATION

MAIN OBJECTIVE

Proposed main objective of the Carpathian Strategy is strengthening the competitiveness and attractiveness of the Carpathian macro-region based on unique natural and cultural heritage, internal development potential and creating competitive advantages to increase the level and quality of life of the inhabitants of the Carpathian region while maintaining unique ecological values of the Carpathians. This goal will be achieved by

by further strengthening the frameworks for cooperation of Carpathian countries and regions (especially within SPA) through common actions within the framework of macro-regional strategy.

The objective of the Strategy is to bring the Carpathians to the path of sustainable development, based on the analysis of socio-economic situation, thorough definition of potentials and taking the actions ensuring their use. The benefits from such planned development should be drawn both by the Carpathian countries and regions and by the EU as a whole.

COMPLEMENTARY OBJECTIVE

Maintaining and preserving cultural and environmental values of the Carpathians and establishing the conditions for their sustainable socio-economic development.

AREAS OF COOPERATION

The implementation of these objectives requires action in the following areas:

PROTECTION OF THE ENVIRONMENT,

- Protection and sustainable use of natural resources and natural values/ecosystems,
- Protection of biodiversity,
- Counteracting natural disasters and minimizing their negative effects.
- Climate change adaptation and mitigation,
- Protection of the transborder ecological corridors
- Increased energy security of state signatories to the Carpathian Strategy and their regions, by sustainable development of indigenous energy sources, use of Renewable Energy Sources and enhanced energy efficiency among others by development and modernization of transmission grids.

MACROREGIONAL PLANNING AND TERRITORIAL DEVELOPMENT

- Joint actions in the field of spatial planning as a tool for creating the spatial order and the platform for coordination between the states signatories of all actions reflected in the area of the Carpathians,
- Improvement of the cooperation of mountainous regions at its core and surrounding areas
- Strengthening the role of regional and subregional development poles,
- Developing cross border functional areas,
- Supporting development of cities, including small and medium-size urban centres, which lose their functions due to depopulation, collapse of enterprises on which these towns have based their economy.
- Creating a common sustainable rural development framework, to be able to give a shared and complex context for the peripheries and small settlements facing negative socio-economic trends,
- Strengthening cooperation and networking of local and regional governments and other development agents in various fields such as safety, security or education.

SUSTAINABLE DEVELOPMENT OF LEISURE INDUSTRIES

- Integration of the transborder tourist regions and tourist products (based on the complementarity not competition)
- Enhancing tourism, culture and national heritage understood both as their preservation and promotion of traditional production methods (e.g. handicraft) or agriculture (e.g. herding),
- Development and promotion of tourism services – for the most sustainable rural tourism, including professional tourism (e.g. gliding services, horse-riding, geological routes, etc.),
- Development of *slow* tourism, based on non-invasive presence of humans, such as rural tourism, eco-tourism, health resort tourism, social tourism, etc.
- Exploring possibility of creating Carpathian own, unique brand based on among others the network of small local accommodation and catering sites, lack of technologically advanced and multi-storey hotels enabling undisturbed and non-commercialized contact with natural values of the region,

ECONOMY

- Actions for sustainable economic development, among others in the following sectors: bio-science, forestry, wood industry, agriculture and agri-food sector – establishing the connections, development of

cooperation, support for cutting-edge, effective and more ecological technologies in light and heavy industry,

- Joint actions related to mining industry, among others scientific initiatives supporting its development, enhancing innovation and enabling exchange of experiences on the environmental aspects of prospecting and production of hydrocarbons, advanced metallurgy and infrastructural support for industry.

RENEWABLE ENERGY

- Joint actions in the field of programming development and deployment of a network of small-scale environmental friendly hydroelectric plants, and other environmental friendly sources of energy,
- Joint development of cross-border networks of transmission of electric energy in order to secure electricity supply for the Carpathian region,
- Joint development of the cross-borders programmes for implementation of the concept of prosumer energy and energy from dispersed sources (including wind and solar energy).

R&D/ INNOVATION

- Strengthening cooperation between the research and education centers and business,
- Support for cutting-edge technological solutions facilitating the life of inhabitants, e.g. *e-government*, *e-commerce* or distance education and counteracting the effects and preventing peripherality – investment support and attracting the investors are necessary,
- Development of pharmaceutical and pharmacological studies, ecosystem studies, balneology, etc.,
- Exploitation of innovative niche services based on the local endogenous potentials, available thanks to new-generation technologies, e.g. bio-science, etc.,
- Installing and promoting social innovations e.g. innovative management of cooperation between the regional and supraregional (trans-Carpathian) networks,
- Innovative and sustainable use of the opportunities provided by natural environment:, forestry (bio-reparations, mycelia), wood (e.g. wickerwork, wood-based materials, luthier's art) or agriculture (e.g. herbalism),
- Creative use and promotion of endogenous potentials in the field of art, handicraft and design and related leisure industries.

INFRASTRUCTURE

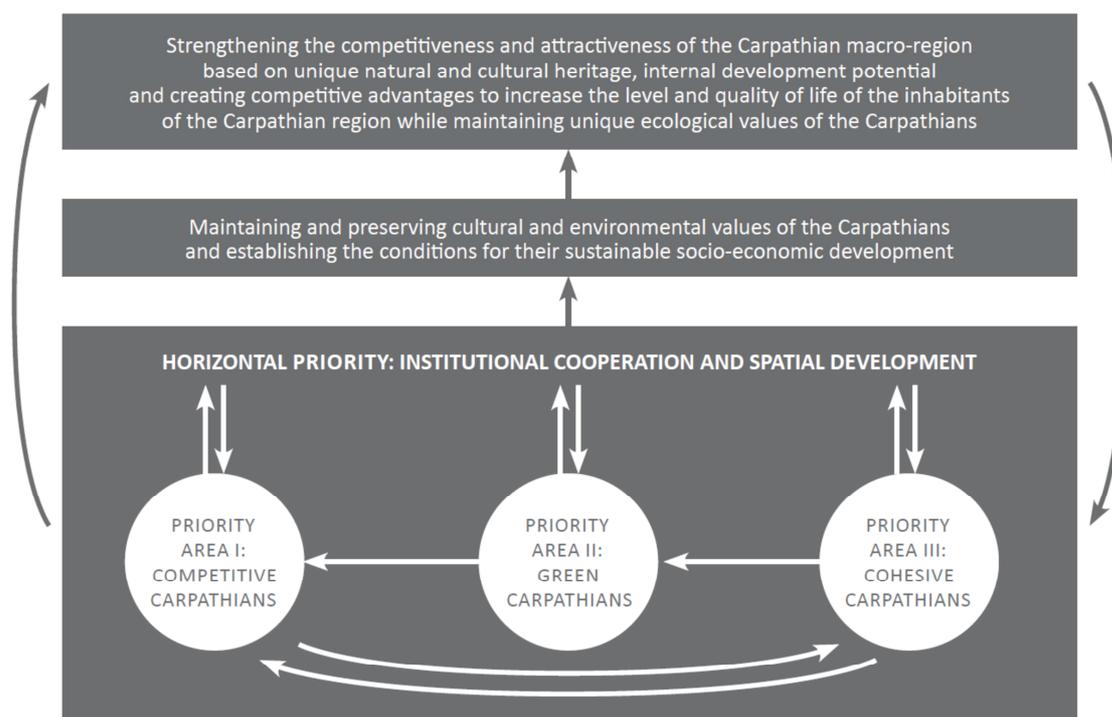
- Improved accessibility in the European, national regional and transborder (local) scales; development of public transport in the peripheral and border regions,
- Development of telecommunications infrastructure, including access to broadband Internet,
- Minimizing possible environmental impact from infrastructure, development of tourism infrastructure.

MACROREGIONAL STRATEGY FOR THE CARPATHIAN REGION – PROPOSED PRIORITY AREAS, AIMS AND ACTIONS

The Macro-regional Strategy for the Carpathian Region forms an important tool to support cooperation within proposed objectives. It is of utmost importance to involve the representatives of all Carpathian States and regions so that the strategic document will respond to their needs as closely as possible and support their development in selected common areas, and thus to the greatest extent improve the development of the Carpathians.

In line with the principle of an integrated approach to sustainable development, based on its three pillars i.e. economy, society and environment, four main priority areas are proposed (Figure 6).

Figure 6. Objectives and priority areas of the EU Macro-regional Strategy for the Carpathian region



PRIORITY AREA I: COMPETITIVE CARPATHIANS

The activities proposed by the Strategy will be aimed at **strengthening economic collaboration in strategic macro-regional sectors: clean industry, sustainable tourism and competitive agri-food sector** through development of the **Carpathian clusters, value chains and macro-regional innovation ecosystem**. Proposed actions should be focused on the effective use of local resources and joint potential of the Carpathian states and regions and enhance inclusion in the development of areas with less favourable social-economic conditions in order to improve the competitiveness of the macro-region.

PRIORITY AREA II: GREEN CARPATHIANS

The environmental-cultural values of the Carpathians are the integral element of the development of the macro-region. The establishment of macro-regional collaboration, whose major objective will concern **the protection and preservation of natural environment, natural risk management and climate change mitigation and adaptation and its relation to the reproductive-material management by the sustainable forest management** as well as implementation of educational activities increasing the ecological awareness of macro-region's population combined with promotion of ecological attitudes will contribute to the improvement of quality of the environment in the region. Protection of natural and cultural heritage has to be treated as a factor increasing the settlement attractiveness.

PRIORITY AREA III: COHESIVE CARPATHIANS

Undertaking the initiatives increasing the competitiveness or innovativeness of the region needs to be connected with its accessibility improvement. The activities in other domains cannot be implemented without sustainable transport, digital or social infrastructure. The joint activities executed in area III of the Strategy will be focused on **improvement of accessibility of the Carpathian region** through implementation of the investments supporting the development of the network of roads, railways, ICT infrastructure and provision of e-services system for the population of the macro-region. Joint activities proposed within this area will help not just to open the region to the outside world, but will also lead to strengthening of its internal cohesion, including the transborder connections. *At the same time the joint actions should ensure that the new transport lines and connections do not affect adversely the existing local structures.*

HORIZONTAL AREA: INSTITUTIONAL COOPERATION AND SPATIAL DEVELOPMENT

An important element of comprehensive development of the Carpathian area concerns the domain of **spatial management** and **common functional connections** in the region. The quality of operation of the institutions, including local governments, is in many cases a determining factor of the quality of functional connections and therefore of the macro-region development perspectives. In this regard, the Strategy should include special reference to the specificity of the Carpathian settlement networks (*i.a.* large villages located in valleys, lack of larger cities). The horizontal area supports in its activities the Carpathian rural-urban collaboration and joint coordination of spatial planning management. The area also strengthens cross-border collaboration and security on the borders as well as enhancement of human capital building.

Priority areas have been identified with proposals of main objectives and actions that will facilitate their implementation. There are also examples of projects that can be implemented jointly by states involved in the EU Macro-regional Strategy for the Carpathian Region. Listed projects have been identified in a way to meet the real needs of the inhabitants of the macro-region and also to create added value, which will strengthen the competitiveness of the entire Carpathian region in European scale.

Objectives set for implementation should be jointly agreed with all Carpathian countries and obtain the same level of interest and commitment from all countries participating in the implementation of the Strategy. The listed below objectives form a long-list that might start this process.

PRIORITY AREA I: COMPETITIVE CARPATHIANS

OBJECTIVE I. STRENGTHENING ECONOMIC COOPERATION

The sustainable socio-economic development of the Carpathian SPA requires activities which will contribute to accelerating the economic growth, providing stable jobs in the sectors based on the internal potential of the macro-region and improving the prosperity of the residents with the respect to the environmental and cultural heritage of the Carpathians.

Common potentials and development challenges of the Carpathian countries and regions create an opportunity to strengthen economic cooperation to increase the competitiveness of **the economic sectors strategic to the macro-region, considering its unique endogenous resources and values deriving from its mountainous character**. Closer economic cooperation of the countries and regions located in the Carpathian macro-region may bring significant added value for the macro-regional economy with regard to:

- I. networking the activity in the common economic sectors such as the **industry, tourism and agri-food sector** based on **the development of clusters and common supply chains**,
- II. strengthening research and innovation sectors to identify the specific development needs of the Carpathians and to make better use of the endogenous potential of mountainous regions as well as more peripheral neighbouring areas (valleys, uplands) through the development of a macro-regional ecosystem of innovation,
- III. development of entrepreneurship among the Carpathian citizens, especially in the peripheries, based on the unique natural values and cultural heritage of the Carpathians, and creating new niches and directions for the development of their economic activity.

Closer economic relations based on the networking of the economic activity of enterprises operating in the area of the Carpathian Mountains, in particular SME sector, will help to achieve a number of benefits by allowing to:

- identify and support specific mountainous sectors and industries with the highest development potential in the macro-region of the Carpathian Mountains,
- development of the SME sector and providing new jobs in the area of the Carpathian Mountains, particularly in the mountainous and surrounding peripheral areas, through the joint implementation of large projects and building the collective competitiveness advantage,

- carry out joint marketing activities promoting the unique value of mountain products and services from the Carpathians on a scale exceeding the individual possibilities of economic operators,
- improve communication and cooperation among public administration, scientific institutions and the private sector, especially on the peripheral areas,

Macro-regional cooperation within the framework of clusters and supply chains in the areas of common economic specializations will not only strengthen the economic potential of the macro-region, but will also positively affect **social capital** and enhance entrepreneurship approach – it will foster building relationships and trust and encourage people to cooperate and exchange the information. The benefits of cooperation will be strengthened through the development of the **macro-regional innovation ecosystem**, conducive to establishing relationships between the sphere of research (innovation) and business.

Taking into account specific mountainous character of the Carpathian macro-region and specific resources and potential of this area, as well as considering current directions of EU development policy, i.e. territorial approach and economic specialization of the regions, proposed actions for SPA for the achievement of Objective I includes:

- 1.1. **Development of the clean, green industries,**
- 1.2. **Sustainable development of tourism,**
- 1.3. **Improvement of the competitiveness of the agri-food sector,**
- 1.4. **Development of the macro-regional innovation ecosystem.**

ACTION 1.1. DEVELOPMENT OF THE CLEAN, GREEN INDUSTRIES

A common characteristic of the Carpathian countries is relatively high share of the industry in the economy. In the European Union, it is about 20% of value added, while in five EU Carpathian countries this share is from 25 to 30%. The situation is similar in Serbia, Moldova and Ukraine, where the share of the industry is higher than the EU average by several percentage points. The large share of the industrial sector in the economy of the Carpathians Mountains creates an opportunity for the joint development of **a modern industrial base of the macro-region**, providing jobs and economic development and being less burdensome for the environment and the Carpathian landscape.

The economic growth of the Carpathian macro-region is possible by **increasing the efficiency of the existing potential of the industrial sector**, which in turn requires the application of new technologies. Thanks to the cooperation of the Carpathian countries and regions based on the process of re-industrialisation of the industrial base existing in the Carpathian Mountains, it will be possible to accelerate the process of economic transformation and develop modern, competitive and clean industries.

POTENTIAL AREAS OF COOPERATION IN THE AREA OF CLEAN, GREEN INDUSTRIES

- **cooperation in the common specialisations**

The structure of the Carpathian states' economies is reflected by the economic specialisations indicated by these states. The greatest potential for the economic development of the macro-region is held by these industries which give the chance for **the development of clean production technologies**, promote the implementation of innovations, are competitive on a European scale and create new, stable jobs. Therefore, the Carpathian states, in order to achieve the common economic benefits in SPA, may strengthen cooperation in such sectors as:

- modern extraction technologies, primarily in the oil and natural gas prospecting and extraction,
- sustainable wood processing and competitive furniture industry, better use of wood raw-materials due to implementation of innovative production technologies and improved cooperation resulting in higher effectiveness,
- green energy industry (especially Renewable Energy Sectors)
- development of environmental technologies with focus on bio-science,
- sustainable food industry and food processing, pharmaceutical industry based on the Carpathians' natural resources (e.g. thermal and curative brine waters, hydrotherapy, herbs).

- **challenging environmental impact of the industrial sites**

- The key asset of Carpathian region is in its valuable natural environment. This will require proper addressing of all environmental pressures including the human induced ones. Carpathian region has potential to become a testing ground for various types of technologies aiming at reduction of pollution and recycling the wastes in line with the concept of circular economy. Carpathian regions should be endowed with sufficient potential to become innovation adaptors in this field (moderate innovators). These would require cooperation of public administration, industries and centres developing solutions for diminishing negative industrial impacts on natural environment. The following cooperation actions can be envisaged: agreeing on joint standards and measurement techniques of environmental impact of industrial sites,
- pilot deployment of technologies for minimising negative environmental impact of industrial sites and their adjustment to the Carpathian specificity (e.g. economic activity located in the valleys etc.)
- joint elaboration of the Carpathian programme for turning existing industries into the circular ones,
- joint acquisition of new industries with limited environmental impact and supporting their location in the Carpathian region.

- **utilization of the industrial heritage, revitalisation of the post-industrial areas**

In the Carpathian regions there are several industrial sites being no longer in use. This is related to diminishing importance of extraction of oil, metallurgic industry but also to economic restructuring when transforming from central planned to market economies that resulted in closure of many industrial sites. Some of them have already been turned into tourist attractions like for example open air museum presenting oil extraction located in Bóbrka near Sanok in Poland but some others were abandoned or sold to private developers without taking care of their historical value and in consequence this has strengthened the risk of being even turned into dangerous waste grounds (as former oil refinery „Glimar” in Gorlice in Poland). Therefore there is a need of revitalisation of the post-industrial areas. This might encompass inter alia:

- revitalisation of the post industrial areas in line with the smart specializations of the Carpathian region such as bio-science, forestry, wood industry, agriculture and agri-food sector
- turning post-industrial sites into tourist attractions while properly cleaning first their surroundings, in order to enrich Carpathian tourist product,
- monitoring and exchanging experience among public authorities how to take care of joint industrial heritage of the Carpathian region and prevent degradation of the most important sites.

Proposed areas of cooperation will not only allow to increase the competitiveness of the Carpathian region, but also respond to the need of complex protection of the natural environment and creation of the better living and working conditions through:

- reduced emission of air pollutants, especially in the inter-mountain valleys characterized by hampered ventilation conditions,
- reduced leakage of hazardous substances,
- reduced noise and odours,
- more efficient recycling of the raw materials ,
- development of SMEs, start-ups and innovation,
- development of new jobs, particularly for young and educated persons, what may help to stop their outflow from the area of the Carpathian Mountains.

A common approach of the Carpathian states to the challenges related to the process of re-industrialisation will bring the benefits resulting from **better coordination** of the activities, will foster making decisions based on knowledge, experience and best practices of other countries and regions, and thanks to the economies of scale will affect positively the socio-economic development and the environmental quality of the entire macro-region, significantly increasing its competitiveness and attractiveness on the European scale. In addition, cooperation of the Carpathian States, enabling the exchange of knowledge and *know-how*, will allow the states which are currently facing the challenge of economic reforms and structural transformations to prepare better for **the process of economic change and restructuring**.

Region	Country	Smart specialisation
Severovýchod	CZ	(1) mechanical engineering
Jihovýchod	CZ	(1) information and communication technologies, (2) manufacturing and industry
Střední Morava	CZ	(1) mechanical engineering; (2) life science; (3) e-security; (4) electrotechnics
Moravskoslezsko	CZ	(1) mechanical engineering and nanotechnology; (2) mechanical engineering; (3) medicine and health; (4) climate and energy; (5) ICT; (6) security
Közép-Magyarország	HU	(1) ICT; (2) sustainable natural environment; (3) innovative agriculture; (4) clean and sustainable energy; (5) health society and wellbeing; (6) inclusive and sustainable society; (7) healthy local food
Közép-Dunántúl	HU	
Nyugat-Dunántúl	HU	
Észak-Magyarország	HU	
Észak-Alföld	HU	
Dél-Alföld	HU	
Małopolskie	PL	(1) creative and leisure industries; (2) electrotechnics and machine industry; (3) life science; (4) sustainable energy; (5) ICT; (6) chemistry; (7) manufacture of metals and metal products and non-metallic mineral products
Śląskie	PL	(1) medicine; (2) ICT; (3) power engineering
Lubelskie	PL	(1) bio economy; (2) medicine and health; (3) low emission energy; (4) IT i automatics;
Podkarpackie	PL	(1) ICT; (2) social innovation; (3) advanced materials; (4) biotechnology; (5) nanotechnology; (6) green growth; (7) agro food; (8) aviation
Świętokrzyskie	PL	(1) metal foundry industry; (2) ICT; (3) energy efficient building; (4) health tourism; (5) modern agriculture and food processing; (6) sustainable energy; (7) trade and congress sector
Centru	RO	(1) automotive and mechatronics, (2) aeronautics industry, (3) medicine and pharmaceuticals, (4) forestry, woodworking and furniture (5) agri-food sector
Nord-Vest	RO	(1) agri-food sector; (2) ICT; (3) biotechnology; (4) clothing and textiles sector
Nord-Est	RO	(1) pharmaceutical biotechnology, (2) agricultural biotechnology, (3) foodstuff industry, (4) textile industry,
Sud-Est	RO	(1) agriculture and food industry, (2) industrial engineering and transportation
Sud - Muntenia	RO	(1) agriculture and food industry, (2) biotechnology and biomedicine, (3) machine building, (4) components and production equipment
Bucureşti - Ilfov	RO	(1) mechanical engineering
Sud-Vest Oltenia	RO	(1) industrial engineering and transportation, (2) environment and sustainable Energy, (3) fundamental innovative medicine, (4) agriculture and food industry
Vest	RO	(1) automotive industry and ICT; (2) construction and ecological constructions
Bratislavský kraj	SK	(1) automotive and mechanical industry; (2) production and processing of iron and steel; (3) ICT; (4) electronics
Západné Slovensko	SK	
Stredné Slovensko	SK	
Východné Slovensko	SK	
Moldova	MD	(1) technological innovation; (2) cultural heritage and the development of society; (3) biotechnology; (4) health and biomedicine; (5) energetic efficiency

Region	Country	Smart specialisation
Beogradski region	RS	(1) medicine and health; (2) security; (3) ICT; (4) Energy and energetic efficiency; (5) agriculture and food; (6) environmental protection and climate change; (7) mechanical engineering
Region Vojvodine	RS	
Region Južne i Istočne Srbije	RS	

Data source: <http://s3platform.jrc.ec.europa.eu/>.

EXAMPLES OF POSSIBLE PROJECTS:

- **Carpathian incubator of the “green industry”** – cooperation of enterprises for the development of technologies to acquire energy from renewable sources,
- **Carpathian technology and industry parks**, taking into account the principles of sustainable development,
- **Carpathian cluster of the bio-science industry** – joint production of products based on specific Carpathian bio-endowments, building a common supply chain,
- **Carpathian cluster of food processing** – processing and joint promotion of local products, such as cheese, wine, organic food produced in the Carpathian Mountains,
- **Carpathian cluster of wood processing** – cooperation of the organisations from the industry, construction and industrial design sectors for the production of high-quality wood products,
- **Carpathian reindustrialisation strategy** – joint document being a vision of the development of the modern industrial base of the Carpathian states.

ACTION 1.2. SUSTAINABLE DEVELOPMENT OF TOURISM

The area of the Carpathian Mountains due to the unique and diverse environmental (landscape, natural) conditions, extremely interesting cultural heritage and central location in Europe is a place particularly predisposed for **the development of tourism**. Development of tourism and leisure industries is significant because it is linked to the creation of **small and medium enterprises** (SME sector) and **strengthening mountainous entrepreneurship** – especially in rural, peripheral surrounding areas and mountainous areas of the Carpathian region where new and permanent jobs can be created. According to that it is important to jointly strengthen role of the tourism sector in the macro-regional economy of the Carpathians.

In the Carpathian region tourism with regard to the environmental and cultural heritage should be understood **both as the protection and the promotion of natural assets, heritage as well as traditional production methods** (e.g. handicrafts or pastoralism). Such approach creates opportunity for development of new mountainous tourism products and tourism offer based on the endogenous potential and internal values already existing in the Carpathian region and its more efficient use for the purpose of economic development on the areas, which possess limited development opportunities (e.g. areas adjacent to the national parks, valuable cultural sites etc.).

In the same time, too intense development of the tourism may be threatening for the natural environment of the Carpathians. According to that, all actions should be carried out with a respect to the natural resources of macro-region. All activities should aim at obtaining neutral impact of the tourism on the natural and cultural environment in line with the effective and rational use of the economic potential of the macro-region. Primarily due to the mountainous nature of the area, dominance of agriculture, well preserved natural environment and the lack of mass tourism best perspective and potential of development in the Carpathian region has *slow tourism*, based on the non-invasive human presence, such as rural tourism, ecotourism, spa tourism, social tourism and other related types of recreation.

In the context of enterprises functioning in the tourism sector, it is important to support the year-round activity. The potential of the Carpathian Mountains should be exploited to develop new forms of tourism and make effective use of modern, innovative tourism products and services as well as information and

communication technologies for the benefit of tourists and guests. A significant potential lays e.g. in industrial tourism, digital tourism and cultural tourism with focus on local arts and crafts, design and creative industries of the Carpathian macro-region. Networking between providers of various tourism attractions can also enhance competitive position of Carpathian mountains as a top tourist destination.

POTENTIAL AREAS OF COOPERATION IN THE AREA OF SUSTAINABLE TOURISM

High efficiency, competitiveness and attractiveness of the tourism sector in the area of the Carpathian Mountains will be possible through the cooperation of the Carpathian countries and regions in such areas as:

- **macro-regional coordination and destination management**

The potential of the Carpathian region in terms of sustainable tourism development should be used as effectively as possible through implementation of joint activities, therefore cooperation, coordination and destination management seems to be essential. It will help to define macro-regional standards from the point of view of quality of equipment, accessibility or scope of services. Clustering initiatives, linking public and private actors operating in tourism and promoting cross-border cooperation of clusters can lead to higher synergies of the implemented activities for tourism development.

In addition to that, coordination and cooperation in the field of destination management will help to distribute the tourist flows in the Carpathian region more effectively. That approach will allow for development of tourism sector on the areas which are not well recognised by visitors so far. In the same time, it will reduce too intensive concentration of tourists on the other areas to mitigate negative impact of the excessive tourist traffic on the natural and cultural heritage of the Carpathian region.

To foster sustainable growth of the tourism sector in the Carpathian region there is a need to support development of certain types of tourism, which are based on the internal qualities of the Carpathian region while in the same time they are less harmful for the natural and cultural heritage of the area, e.g.:

- slow-type tourism, based on non-invasive human presence, such as rural tourism, ecotourism, social tourism, etc.
- qualified tourism (e.g. gliding, horse riding, geological paths, etc.);
- supporting the development of ecotourism, culinary routes of regions, beekeeping, pilgrim tourism;
- cooperation in the field of health tourism and touristic use of thermal and medical waters, spas.

More effective collaboration and coordination of various activities in the tourism sector will help to minimize the emergence of conflict situations and avoid duplication of tourism products in the Carpathian region, as well as it will strengthen the role of the tourism in development of the local economies, especially on more peripheral mountainous and surrounding areas, through better management of tourist traffic in the Carpathian region.

- **strengthening mountainous entrepreneurship and education in the tourism sector**

This action should include cross-border **cooperation of educational institutions** (secondary, vocational and higher education) aiming for increasing competences, improving occupational qualifications, preparing professionals in the field of tourism services on the labour market and providing staff for high growth sectors, such as e.g. tourist business management, sustainable tourism, innovative design and handicraft. Cooperation should be aimed at defining the requirements for the quality of education, exchange of the experience, transfer of best practices, and monitoring of the effects of the implemented projects.

Tourism can play key role in the policy for **vocational activation** and **social integration** of the certain groups, which are endangered by social exclusion i.e. citizens of the rural, peripheral areas of the Carpathian region. Tourism and connected services may become an area of macro-regional cooperation in the field of **active aging policy** and support for **career development and employability of women**. Particular attention should be paid to supporting and encouraging activity of women and older people in the field of direct marketing, tourism, trade in handicrafts and craft projects, as well as in sharing and continuing traditional rural occupations, skills and knowledge which are strongly connected to the cultural heritage of the Carpathian region.

Sustainable development of the tourism sector in the Carpathian region offer a possibility to foster **mountainous entrepreneurship** of the citizens in the field such as:

- hotel business and management,
 - production, trade and export of the mountain tourism products,
 - staff, instructors and didactic work for agro-tourism, spa tourism, qualified tourism, ecotourism etc.,
 - organisation of the cultural events,
 - promotion and transfer of the traditional knowledge and skills from the Carpathian region (mountain folk crafts and arts, wooden haberdashery etc.)
- **development of the Carpathian cross border tourism infrastructure**

The Carpathians are particularly predestined for development of the qualified tourism such as hiking, climbing, skiing, biking, or hang gliding, tourism. They offer very affordable form of active leisure, however they require suitable infrastructure. Due to that, joint development projects for **cross border tourism infrastructure** such as: **common hiking trails and routes, cross-country trails, bicycle paths and routes and equestrian trails, as well as accompanying infrastructure such as network of the Carpathian mountain shelters and cross border equipment rental points for leisure activities** in the Carpathian macro-region are of particular importance. Of particular importance is development and coordination of public transport in tourist regions, including especially transborder zones. The projects that promote tourist hiking, with offering simultaneous possibilities of getting back from hiking expeditions to accommodation places by public transport, require particular support. Also, intermodal solutions should be supported (park and ride facilities located at the entrance to mountain tourist centres and ski stations)

- To promote and protect cultural heritage of the Carpathians, development of the cross border tourism infrastructure may include construction and extension of the cross border cultural routes, based on e.g. Wallachian and pastoral culture, wooden buildings including sacral architecture, former Jewish heritage, industrial heritage, creation of cycling, pedestrian, educational routes and development of barrier-free tourism based on common cultural values and traditions of the Carpathian region.
- Cooperation within the field of development of cross border tourism infrastructure in the Carpathian region may also include existing rail lines/routes as a tourist destination of the macro-region and joint tourism products based on railway infrastructure, e.g. common international tourist guides for rail travelers. Positive example is one-off initiative in the form of special tourist trains from Krosno (Portius Express) and Rzeszów (Poland) through Slovakia to Hungary (Eger).

- **development of the Carpathian tourism brand and a common, recognisable tourism product**

An important task facing the Carpathian regions is to develop unique Carpathian tourism product, which is missing presently despite the excellent internal (natural, cultural) conditions. Great opportunity for that are especially common initiatives to create cross-border infrastructure such as hiking, skiing and cycling trails or cultural paths of various themes as well as common cross-border packages of offers for tourists, which will allow to explore and make a use of the various services in the area of the Carpathian Mountains such as clustering and promoting healing mineral water resources and spas or developing health tourism.

An important issue to be considered in the case of the tourism sector in the Carpathians is also the **impact of climate change on economic activity**. Climate change is a major challenge for policymakers, industry and the public. Changes in climate and global temperatures are likely to continue in the future. Climate change has already had significant economic impact and has destabilised societies around the world. The impact on biodiversity is also evident. Europe's mountain regions are particularly vulnerable to climate change. Although there could be some positive effects in the short term, most impacts are likely to be adverse. Conservation strategies have taken little accounts so far of the expected impacts of climate change. The EU has a clear vision for leadership on international action to address climate change. To this end, a far-reaching package of proposals has been put forward to achieve ambitious emission reductions. Climate change influences not only winter sport tourism but also endangers tourism in the summer period (e.g. floods, water supply,). Measures should be taken for a common strategy for the adjustment and diversification of services provided by businesses operating in the tourism sector as well as minimize negative impact of the tourism sector in the

Carpathian region on the climate. By identifying possible future impacts of climate change, as well as current ones, and undertaking appropriate measures, conservation efforts will become more effective.

Inter-regional and transnational collaboration between the Carpathian countries for sustainable development of tourism will contribute to **better recognition of the Carpathian macro-region on the European scale**, as well as it will facilitate the balance between the socio-economic development and protection of the natural and cultural heritage of the macro-region.

In the field of tourism, cooperation with the **Working Group Tourism of the Carpathian Convention** is highly recommended since the Working Group is working on the implementation of the *Protocol on Sustainable Tourism* adopted in the framework of the Carpathian Convention in 2011. Within a Convention framework several international projects were conducted, important strategic documents were prepared and agreed (such as *Strategy for the Sustainable Tourism Development of the Carpathians*, *Good Practices of Sustainable Tourism in the Carpathians*, *Innovation in Rural Tourism Transferability Manual*) and the the Carpathian Sustainable Tourism Platform has been initiated.

EXAMPLES OF POSSIBLE PROJECTS:

- **Carpathian guest card** –networking and cooperation system of economic entities operating in the sector of services and tourism (transport, hotels, shops, restaurants, museums, etc.) based on a single card for tourists, allowing them to use a card as a communication ticket, museum ticket or hotel voucher. Such a card will on one hand encourage visitors to e.g. use public transport and on the other it will enhance the extended stay of tourists in the macro-region,
- **Via Montana** - a comprehensive route leading along the Carpathian arch, leading to Sudety Mountains on the Polish-Czech border
- **The trail of Carpathian wooden architecture** - cross border cultural route leading to the most valuable historical buildings in the Carpathian macro-region (e.g. UNESCO wooden churches in Poland, Slovakia and Ukraine),
- **Carpathian cross border agro tourism cluster** – an organisation supporting cross border cooperation of the entrepreneurs and investors developing common offer in the field of agro tourism (e.g. cross border horse trails),
- **Clustering and promoting healing mineral water resources and spas in Carpathian region** for medical care and developing of health tourism and infrastructure.
- **Organisation of the transborder public transport (preferably electric bus) system around mountain hiking areas** (ex. Tatra mountains)
- **Integration of the ski station in neighbouring countries** (one skipass, joint park and ride infrastructure, public transport connections ex. Białka Tatrzańska)
- Elaboration, testing and implementation of joint solutions among tourist providers how to promote and secure eco-friendly tourism with no negative impact on Carpathian climate.

ACTION 1.3. INCREASING THE COMPETITIVENESS OF THE AGRO-FOOD SECTOR

In all countries of the Carpathian region agriculture plays more important role in the economy than most of the EU regions. In all those countries areas used for agriculture represent the greatest share (40-60%) in the land use structure. **Farming is important for the identity and culture of Carpathian regions and it may foster growth of employment both in mountainous parts of the Carpathian region as well as in surrounding rural areas**, contributing to other sectors of macro-region's economy, such as tourism, forest resources including reproductive material management within the framework of sustainable forest management as well as play strategic role in maintaining biodiversity and protection of the Carpathian natural heritage.

In the context of changing markets and prices, growing production costs, increased competitiveness and environmental challenges, it is necessary to **support agricultural production and the multifunctional role of agriculture** in order to maintain added value of agricultural sector in the Carpathian region and allow access to other sources of income. This will be facilitated by more effective coordination of activities taken at local and regional levels thanks to cross-border cooperation in the Carpathian SPA.

POTENTIAL AREAS OF COOPERATION IN THE AGRO-FOOD SECTOR

Activities enhancing competitiveness of the agro-food sector of the Carpathian region may be based on cooperation between Carpathian countries regions and other entities aimed at:

- promotion of traditional, regional and ecological products in the national and international arena;
- maintenance and development of traditional sheep grazing in the hills, protection of traditional breeds of livestock and support of pastoral tradition in order to protect biodiversity and traditional cultural landscape of rural areas;
- support for the niche and pro-ecological specializations, e.g. pastoralism, horticulture, herbalism, wickerwork, product value-added and marketing, e.g. certification of organic products, creation of regional products, cooperatives of producers;
- development of agro-food processing, also based on organic farming and production of high quality mountain food (such as cheese, wine, meat and others);
- cooperation with the biotechnology and pharmaceutical industry, genetic protection of the native breeds;
- development and implementation of the "Mountain" EU agricultural policy – joint position of the Carpathian countries in the area of the EU regulation concerning development of the rural areas in the mountainous regions.
- development of the **entrepreneurship and alternative business models in rural areas**, such as cooperatives, consortia, producers groups and associations, scientific institutions, administration and NGOs that would enhance social inclusion;
- creation of the **additional incentives to preserve small processing enterprises and small and medium-sized mountain farms**, which are an important source of employment and manufacture products of special quality but their costs are on average higher and they are less profitable than intensive farming or breeding
- **diversification of the functions of rural areas and of agricultural production** in the Carpathian region, development of comprehensive agricultural production along with development of tourism, handicrafts, educational activities, biomass production and environmental protection measures.

Thanks to such focused actions the Carpathian region may become a competitive player in the agro-food industry, important on the European scale.

Measures taken for the development of the agro-food sector should ensure **sustainability, competitiveness and diversification of agricultural production** as well as more effective cooperation with the processing industry sector in the Carpathian macro-region. Such measures will contribute to „**rural renaissance**” by supporting projects aimed at creating multifunctional farms generating high added value, and also thanks to innovations, encouraging agricultural investment or development of the SME sector.

Actions implemented within the framework of the Carpathian Strategy in the field of agriculture and rural development should be consistent with the initiatives implemented under the Carpathian Convention. Therefore, the objectives of the Carpathian Convention that overlap with the priorities of the proposed Carpathian Strategy should be turned into concrete projects. In the newly adopted (in October 2017) Protocol on Sustainable Agriculture and Rural Development seventeen areas of co-operation were named and the parties committed to jointly work on them. An overarching objective is to maintain the management of land, traditionally cultivated in a sustainable manner, bringing benefits to present and future generations.

EXAMPLES OF POSSIBLE PROJECTS:

- Supporting creation of **new agri-food sector clusters** which will strengthen producer groups;
- Development of **cooperation between R&D units and agri-food sector**;
- **Enhancing Carpathian high quality ecological food** - raise in concentration and specialization of the farms in accordance with the principles of sustainable development in the agriculture free from GMO, prepared in a traditional way;
- **Building Carpathian food brands** based on local unique food products and promoting them at international fora.

ACTION 1.4. DEVELOPMENT OF MACROREGIONAL INNOVATION ECOSYSTEM

The process of restructuring and transformation of the economy in the Carpathian macro-region and better adjustment of business structure and models to internal resources of this area require measures to be taken to **encourage development of innovation**, and subsequently to **effectively implement such innovation to production processes**.

Cooperation for the **Carpathian innovation ecosystem** is an opportunity for more innovative development of macro-regional economy. The innovation ecosystem is a dynamically changing and intentionally created community of organisations and entities which compete and at the same time cooperate with each other- such community is being shaped by complex interactions based on cooperation, trust and joint creation of value based on complementarity of technologies or competencies ².

The Carpathian Area is characterised by low value of various innovation related indicators such as number of patents, share of persons employed in research and development (R&D) in the total working population and internal expenditure for R&D. However, the macro-region is endowed with unique development assets related to its nature, culture and natural resources. Those assets provide solid base for development of Carpathian specific innovations and its key strategic economic sectors and make the Carpathian development very distinctive in comparison to development of other European macro-regions.

In the Carpathian Area, the greatest benefits will be brought by cooperation for **innovation in areas and sectors which are strategic for the macro-region**. Such an approach will enhance better coordination of actions and involved actors (universities, research and development centres and entrepreneurs), and it will support more effective implementation of innovative solutions in the key sectors for the macro-region. It will also keep Carpathians on sustainable development track allowing for instance to prevent the disappearance of traditional cultural landscapes with the entailed loss of traditional knowledge systems. This challenge has been considered by Carpathian scientists (S4C) as a key concern for development of Carpathians in a long-run. The thematic scope of research focused on the **issues of strategic importance for economic development of the Carpathians** will allow to better exploit the potential of research centres in these areas which will generate the greatest added value for the macro-region. Participation of the research institutions from outside of the Carpathians in such type of cooperation is a well-established good practice in the Carpathians that strengthens macro-regional innovation ecosystem.

Key research priorities for the Carpathians have been identified in the Research Agenda for the Carpathians 2010 – 2015 prepared by the Science for the Carpathians (S4C) network . They include topical Carpathian subjects such as: climate change, air and water pollution, water as a resource and water management, natural hazards, land use and land cover change, forests, biodiversity, ecosystem services, regional policies and land management practices, urban and rural development, tourism and traditional knowledge.

Another key issue, which may be addressed through the cooperation of the Carpathian states in the field of macro-regional innovation ecosystem is also **social innovation**. In connection to that, an important role in the **development of the social and human capital in the Carpathian region** may be played by social economy, which has been developing dynamically in Europe since 2011, i.e. from the time of announcing the Social Business Initiative Communication 2011 by the European Commission. The majority of Carpathian countries belonging to the EU actively work on creation of necessary legislative and financial conditions, recognition of social enterprises and awareness raising fostering the development of **social economy** and **social enterprises**. The social economy development strategies are being created, the institutions are established which support the establishment and operation of social enterprises and networking them and the dedicated financial instruments are being created.

The activities of individual countries will be strengthened, if a network of social enterprises operating in the Carpathian region is created, which would facilitate the collaboration and sharing of experiences and would be a source of valuable information. The created social enterprises have enormous potential of **employing long-term unemployed individuals with low qualifications**, who through work, coaching and training would have the opportunity of returning to society. In poorly accessible and communicated mountain areas the social enterprises are capable of delivering **appropriate public services**, reacting flexibly to evolving needs of the

² Thomas 2014; Durst, Poutanen 2013; Gobble 2014

population. These businesses also have enormous potential in the **tourist services sector** and may contribute to building the image of environmentally friendly and socially responsible Carpathian tourism.

POTENTIAL AREAS OF COOPERATION IN THE FIELD OF INNOVATION

Areas of potential for scientific cooperation between the Carpathian countries include:

- **bio-science** (bio-preparations, mycelia, genetic banks of Carpathian species),
- **timber/wood processing** (modern and environment friendly wood processing technologies and forest reproductive management, research activities),
- **mining and extractive industry** (development of the extraction and processing methods safe for people and for the environment, methods of materials recovery, waste reduction),
- **medicine and pharmacological** (making use of medicinal thermal waters, herbs),
- **renewable energy** (geothermal, hydrothermal, solar energy, biomass based on wood remains),
- **environmental protection** and technology (circular economy, improved air quality, development of species resistant to climate change, ecological services, waste recycling, waste water treatment)
- **agro-food** (food quality, organic food, processing of agricultural products, precision farming, agroforestry)
- **sustainable tourism** (modern tourism services and products, tourism marketing, development of tourism infrastructure, new business models),
- **smart urban development** (green city, smart city)
- **social innovations** (related to social economy and social enterprises and combating long-term unemployment).

Actions toward the development of the **macro-regional innovation ecosystem** may include:

- development of the **common scientific framework, platforms and networks** as well as identifying common resources, potentials and challenges in the field of innovation, thus enhancing more effective cooperation between scientific units, universities and research institutes located in the Carpathian Area, as well as cooperation between scientific institutions and entrepreneurs;
- identifying key strategic resources/assets for development of the Carpathians (e.g. water, biodiversity, ecosystem services etc.) and preparation of jointly agreed research programmes for their maintenance, preservation and sustainable exploitation;
- closer **cooperation between scientific institutions** from the Carpathian Area (and from the outside), based on research networks, scientific consortia, joint projects, exchange of students and academic researchers, joint research in cross border areas or joint analysis of inter-regional and inter-national phenomena;
- creating a **network of links and contacts** allowing for exchange of information, transfer of technologies and production processes as well as for access to external funding sources and educational/training facilities,
- acquisition of **joint funds for the projects connected to the social entrepreneurship initiatives**, which will support involved partners especially on the local level,
- creation of **social economy network in the Carpathian region**, which will enable exchange of the knowledge, know-how, as well as building capacity through the cooperation with the experts,
- adoption of the **common social economy strategy of Carpathian region**, which will constitute common vision of the development of social entrepreneurship in Carpathian regions.

Joint planning of economic development of the macro-regional innovation ecosystem will encourage better coordination of the actions and actors involved in the process, such as universities, research and development centres and entrepreneurs; it will also foster more effective implementation of innovative solutions in key sectors for the macro region. Moreover, closer collaboration in the area of social innovation, based on the development of social entrepreneurship in the Carpathian region, will help to develop and strengthen support frameworks and action already in place at the national and regional levels.

EXAMPLES OF POSSIBLE PROJECTS:

- **Carpathian think-thank** supporting innovative development at local and regional levels, responsible for **creating cooperation and synergy networks** between business sector and Carpathian scientific centres and universities,
- **Carpathian Innovation and Entrepreneurship Support Centre** - supporting development of start-ups and laboratories operating e.g. in the field of bio-science, renewable energy, social economy and transport,
- **Research and Innovation Strategy for the Carpathian Area** - common vision of the development of the innovative environment in the Carpathian macro-region in a long perspective,
- **Development of innovative tourist services**, in particular in disadvantaged and peripheral, industrially underdeveloped areas, which are largely dependent on tourism (new business models, making use of new ideas, e.g., digital tourism),
- **Carpathian Platform for Technology Transfer - development of ICT products** connected with the Carpathian industry, tourism, agriculture, renewable energy, (applications, data mining, etc.),
- **Carpathian Strategy of Social Economy Development** – common document designing and implementing schemes and actions as well as establishing mechanisms for monitoring, impact measurement and evaluation of the initiatives connected to the development of social economy in the Carpathian region,
- **Carpathian Observatory of the social economy** – an institution which will serve for monitoring of the development of the social economy in Carpathians,
- **Development of demonstration facility for implementation of traditional Carpathian knowledge** for maintenance of Carpathian traditional landscapes and other key developmental assets.

PRIORITY AREA II: GREEN CARPATHIANS

OBJECTIVE II. HIGH QUALITY OF NATURAL ENVIRONMENT

The Carpathian region is an area with exceptional natural resources, which could become a pillar of sustainable social-economic development of the macro-region. On the other hand the threats such as environmental pollution, too intensive economic activity, risk of occurrence of hazardous phenomena such as wind-fallen trees, floods, droughts and the progressing climatic changes have a negative impact on the natural heritage of the Carpathian Mountains. **The high emissions of air pollutants** is a common challenge affecting the quality of life of macro-region's population and visitors. The dominance of fossil fuels in the energy sector structure, a settlement network dominated by small localities with single-family house developments and relatively lower temperatures in winter months compared to the lowlands areas decisively favour excessive emissions of dusts and gases.

The collaboration of states and regions based on a macro-regional strategy dedicated to the Carpathian region will allow to deepen and enhance the current cooperation and will foster the performance of further activities for the improvement of quality of natural environment of the macro-region. Clean, safe and sustainable environment is a guarantee of high quality of life and opportunity for development of diverse forms of economic activity like tourism or organic farming.

The collaboration in the area of natural environment protection has significant importance due to the cross-border nature of environmental pressures – the occurrence of a phenomenon in one area may also have the impact on an adjacent area or even on the entire macro-region.

The common actions which are being taken in order to improve the quality and conservation of the environment, finding alternative sources of renewable energy or natural disaster prevention can initiate a **“new quality”** in macro-regional cooperation. The environment cannot be treated as a separate resource of each of the States, on the contrary, it is an element that is common to the entire region. Macro-regional Strategy will not only convergent with the Protocols of the Carpathian Convention by supporting the conservation and biodiversity of the environment, sustainable tourism and forest management and transport, but also will provide the **added value** through the implementation of actual activities for the protection of the environment. A good example of new formats of cooperation can be for instance the creation of **ecological touristic centers networks** associating the households, which will offer the leisure infrastructure in line with the preservation of the natural environment along with offering the ecological nutrition, **development of ecological awareness** for people involved in agro-tourism, realization of workshops and seminars on how the

actions in the field of environmental protection can attract tourists flow into Carpathians. **Creating networks and contacts** between public services will permit to quickly react in case of any natural threats. **Common platform of knowledge and experience exchange** on climate change phenomena will simplify the contacts between experts from different fields and institutions and can lead to create the one and only forum of discussion on how to reduce the mountainous environmental risks.

Therefore, the Carpathian states and regions should undertake a long-term collaboration in the area of:

- I. protection of the valuable plant and animal species and their habitats, as well as counteracting water, soil and air pollution and threats resulting from excessive transformation of the landscape,
- II. restoration and maintenance of water resources both in mountainous area and its basins, along with riverheads and unique spring, healing mineral water and freshwater resources protection,
- III. rational use of existing environmental resources for the development of the macro-region and performance of sustainable economic activity along with sustainable tourism,
- IV. reduce the negative environmental, environmental and socio-economic impacts of tourism,
- V. joint counteracting negative natural events such as floods, droughts, avalanches, wind-fallen trees and elimination of their negative effects and undertaking activities for mitigating the climate changes,
- VI. diversification of energy sources in the area of macro-region, including significant increase of share of energy originating from renewable energy sources,
- VII. limitation, mitigation or compensation of the negative impact of transport and related infrastructure on the environment,
- VIII. establishment and protection of the transborder ecological corridors.

Collaboration in the area of protection of natural environment of macro-region will strengthen the role of natural and cultural resources of the Carpathian macro-region as a heritage contributing to high quality of life and will ensure more effective use of the existing natural resources for the sustainable social-economic development. Strong institutional cooperation with the Carpathian Convention is recommended, supporting the implementation of the Carpathian Convention and of the Carpathian macro-regional strategy

The following activities are featured for SPA for the achievement of Objective II:

- 2.1. Protection and sustainable management of natural resources,**
- 2.2. Diversification of energy sources,**
- 2.3. Management of environmental risk and natural threats.**

ACTION 2.1 PROTECTION AND SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES

Rich natural resources of the macro-region determine both opportunity and a challenge for its development. On one side, the diverse resources constitute the key element for development of many sectors and areas of the Carpathian macro-region economy thus supporting the region's economic restructuring process. However on the other side, non-rational use of natural resources of the Carpathian region may lead to pollution and overexploitation of the environment, whose results will be irreversible and would have significant impact on deterioration of natural values and consequently tourist values of this region as well. The need of proper maintenance and management of biological and landscape assets of the Carpathians as a precondition of long term sustainable development has been spelt out in many studies and documents e.g. in the report of the BioREGIO Carpathians project (building on the Carpathian Convention) entitled, „Integrated Management of Biological and Landscape Diversity for Sustainable Regional Development and Ecological Connectivity in the Carpathian“ (published in 2014)

POTENTIAL AREAS OF COOPERATION IN THE AREA OF PROTECTION AND RATIONAL MANAGEMENT OF NATURAL RESOURCES

The key aspect of sustainable social-economic development of the Carpathian region accompanied by preservation of the values of natural environment of the macro-region concerns rational management of

natural resources of the Carpathian region based on:

- **protection of natural and semi-natural resources**

Collaboration in the area of protection, preservation, restoration of ecosystems and habitats, protection of biodiversity, prevention of introduction of invasive alien species and protection of indigenous species of the Carpathian region is required to ensure high quality of natural environment in the area of the Carpathian Mountains. The cooperation should also take place between the countries of Carpathian region according to more and more significant topic which concerns climate changes. Lack or insufficient actions in this direction may soon cause the average temperature rise in the Carpathian Mountains, which may result in intensification of, fires, hurricanes or avalanches. The activities should also include collaboration for ecological cohesion in the area of the Carpathian Mountains through development of a system of **cross-border ecological corridors**, creation of connections between the Carpathian and Alpine macro-regions and construction of wild-life crossings on the roads (especially for large carnivore mammals like: wolf, lynx or bear, inhabiting the area of the Carpathian Mountains). Additionally collaboration for protection of semi-natural habitats of pastures and meadows in the Carpathian region should be promoted and enhanced.

- **sustainable management of natural resources**

Activities for sustainable management of resources should include inter alia **collaboration for sustainable water, soil and forest management** in the Carpathian macro-region. On one side the forests constitute an important source of raw materials for wood processing industry and on the other side determine natural balance of the Carpathian macro-region which is extremely important considering their influence on climate changes. Forests regulate air quality, prevent floods, droughts and ensure habitats for many animal species. Carpathian forest produce positive externalities for entire Europe in terms of air quality of mitigation of climate change. An important additional practical challenge is that to an unprecedented degree forest managers must now consider the climate that a new generation of trees might experience in future, in order to select material that will thrive now, under the present climate, and also be able to withstand predicted climate. Therefore Carpathian countries may create and extend macro-regional collaboration frameworks for sustainable wood acquisition to reduce rate of the deforestation and strengthen afforestation and any other tree planting programs (e.g. in the framework of a National Forest Strategy) in the Carpathian macro-region. The establishment of woody areas is currently the only management system that can reduce anthropogenic impacts by climate change through the proper deployment and management of carbon dioxide absorption. Most countries of the world are trying to fight against climate change under the UN Framework Convention on Climate Change, in effect since 1992. Based on the Kyoto Protocol, each signatory country draws up an inventory of their emissions on an annual basis. In addition, due to the more difficult conditions of wood cutting in mountain area a significant increase of acquisition of wood resources material should not be assumed, but rather a better use of these resources within the current scope as a result of implementation of innovative production technologies and improved collaboration resulting ultimately in better effectiveness. Water is a key asset for the Carpathians and the adjacent regions and reducing the soil erosion is critical factor to prevent non-point organic and nutrition pollution in surface and subsurface water bodies. Therefore joint water-soil-forest management is among key preconditions of its long-term sustainable development. Key challenge is an appropriate water retention that in many cases would require cross-border collaboration due to a cross-border character of many Carpathian rivers. Equally important is water quality. The circular economy concept (wastewater reuse) might help in to this end offering possibilities of even more vigorous development of the water-dependent economic sectors: tourism, health-tourism, eco-agriculture (organic food) medicine and pharmaceutical industry based on Carpathians herbs. However circular economy would require not only investments in technical facilities but also awareness rising efforts and changing day-to-day habits of Carpathian inhabitants and visitors. Carpathian region belongs to the few macro-regions in Europe with affluent water resources. However, the available scientific projections shows important climate changes resulting in e.g.: and increases in winter precipitation, increased magnitude and frequency of extreme weather events, (minimum air temperature at night higher than 20 C) and extended droughts during summer. Flash floods and mud slides will become more popular and frequent. All these calls for wise management of existing water resources. Running water should be retained in the ground during the

intensive precipitation season while ground water resources should be prevented from an excessive use and pollution. This is of key importance for quality of life of the local citizens but also for development of renewable energy production, for agriculture and tourism development.

- **increasing ecological awareness of Carpathian population**

An important aspect of protection of Carpathian natural heritage concerns activities for increased **ecological awareness of macro-region's population** through easier access to information on the possibilities of using the green infrastructure and renewable energy sources in the households, fostering the replacement of obsolete boilers and furnaces in the households, encouraging waste segregation, rational use of water and electrical energy, use of public transport. It is also important to **increase ecological awareness of the tourists** by combining tourist attractions with didactical elements, ecological paths, promotion of sustainable tourism, development of tourist infrastructure on the areas poorly accessible for more balanced distribution of tourist traffic and reduction of tourist load in the places with the highest concentration of the tourists, promotion of sustainable transport through development of eco-friendly infrastructure along with reducing the negative influence of transport infrastructure on the natural environment. (for e.g. cross border pedestrian paths and bicycle routes). Taking into consideration the topic mentioned above the Strategy takes into account the assumptions of the Carpathian Convention

The Carpathian area being a mountain region, constituting a cohesive system connected internally and with the adjacent areas, is particularly sensitive to any changes taking place in the social, economic and ecological domain both within the macro-region and in its vicinity. As the Carpathian region is the area where **the social-economic development is strictly dependent on the quality of the natural environment and vice versa** – where human activity has a significant impact on the natural balance of the region, the active collaboration of Carpathian countries should be supported for the assurance of harmonious social-economic development of the mountain areas in the Carpathian region respecting their natural environment.

EXAMPLES OF POSSIBLE PROJECTS:

- **preparation and implementation of joint cross-border standards/guidelines** in the area of protection and preservation of natural heritage, including, in particular, the protection of forests, including beech forests of the Carpathians and natural beech forests and fragments of primeval beech forests (forests on the Polish-Ukrainian-Slovak border included in the UNESCO list),
- **promotion of natural values of the Carpathian region** through organisation of joint themed training and conferences,
- **providing access to places unavailable for the tourists** – creation of vantage points, setting and marking the pedestrian, bicycle and ski routes,
- **creating new and protecting and defining ecological corridors**, including the pan-European corridor running through the Carpathian Mountains
- **enhancing the protection of large predatory mammals** (wolf, lynx, brown bear) and cooperation in animal protection, e.g. in case of overgrowth of populations, transfer of individuals to other regions, exchange of individuals to increase the genetic pool of endangered species
- **preparation of the demo-projects combating water over-abstraction and the water stress**, this might include both technical solutions for wastewater reuse and behavioral changes in order to diminish existing pressures from water consumption related to e.g. irrigation and/or domestic demand, including tourism.
- **changing consciousness** of local population and preparation of proposals for a coherent **legislative, financial and administrative framework** with regard to water re-use and water retention in the Carpathians.

ACTION 2.2. DIVERSIFICATION OF ENERGY SOURCES

Compared to other European areas the Carpathian region is characterised by **high share of energy generated from fossil fuels** and low level of use of renewable energy sources, while obsolete power infrastructure contributes to low energy effectiveness, which in turn reduces the chance of rational use of energy necessary for provision of products and services. A real challenge for Carpathian countries is **high emissions of air**

pollutants (especially particulate matter PM 2.5) originating from combustion of fossil fuels and municipal waste in domestic furnaces and boilers.

This phenomenon is particularly dangerous due to the negative impact on the health and life of the Carpathian population and significant reduction of tourist attractiveness of many localities. Moreover, the air pollutants may move from the place of their generation to areas of other regions or countries causing there negative health and environmental consequences and also have a great influence on climate change in the region. Additionally, the issue of improvement of energy security in the Carpathian region is also very important. This area being geographically isolated, especially needs the provision of its own internal energy sources and thus independence of energy supply from external suppliers, which due to unstable energy markets might be limited.

The aim of this action is to improve the **diversification of energy** supply sources to prevent dependence on single-source energy supply and enhance energy production from renewable sources especially in the small settlements and rural areas. It is particularly important from the Carpathian region perspective that the assurance of energy security cannot be achieved without increasing transmission and storage capabilities and modernisation of frequently obsolete infrastructure.

POTENTIAL AREAS OF COOPERATION IN THE AREA OF DIVERSIFICATION OF ENERGY SOURCES

Following the path of sustainable development, the diversification of energy sources based on renewable energy sources in the Carpathian region is particularly important. Due to the mountain character of the territory there are opportunities regarding:

- increase the share of renewable energy **of renewable energy sources**, i.e. the solar and hydro energy as well as biomass. In addition the significant resources of geothermal energy are available in the Carpathian region, which already are used both as an energy source and a tourist attraction. The Carpathian region has a relatively dense network of rivers and water courses, which can be used to generate hydroelectric energy – the highly efficient small scale dam hydro power plants or pumped storage power plants can be built in the mountains thanks to the difference of heights. However many of the riverbeds runs along the state borders and therefore such initiatives also require macro-regional coordination. It needs to be emphasized that hydro-energy is touching a very sensitive field of ecology. Smart approach is needed in these developing actions due to both energy and ecology/river management policies. Also the upstream situation means a responsibility for possible downstream effects.
- **rational waste and improved waste water management** in the macro-region based on more efficient recycling and waste segregation and processing methods and their reuse, which would enable the Carpathian macro-region to become a model area for development of a circular economy, supporting waste utilisation for generation of energy.
- **maintenance of continuity of energy delivery**, which is affected inter alia by efficient distribution system and provision of reserves. The improvement of energy security in Carpathian macro-region will have a positive impact on the security of the entire European Union, creating a uniform and competitive European fuel-energy market. The Carpathian region can improve energy security, specifically by creating the connections of the power infrastructure along the North-South axis and improving the efficiency of the transmission network.

Given the significance of the issue concerning the water and air pollution in Carpathian countries and its **cross-border impact**, such direction of activities should become a priority of macro-regional collaboration. Therefore proposed activities refer both to the better use of renewable energy sources and improvement of effectiveness of waste management and water-sewage management. In addition the transformation of high-emissions economy into a low-emissions economy cannot be achieved without effective management and monitoring of energy demand.

Joint activities for the modernisation of energy infrastructure and reduced use of energy originating from fossil fuels in favour of renewable energy sources will allow to improve energy effectiveness of the end users, lower energy losses during its transmission and reduction of emissions of hazardous dusts and gases both by the households and enterprises operating in the area of the macro-region.

EXAMPLES OF POSSIBLE PROJECTS:

- **Development of cross-border transmission and distribution systems of natural gas, oil and petroleum products and the system of storage facilities.**
- **Development of cross-border electrical energy transmission systems, including international power lines;**
- **Development/adaptation testing and deployment of new technologies for energy generation, such as e.g. a network of modern, environment friendly waste incinerators in the Carpathian area;**
- **Support for entities interested in investments in renewable energy sources and/or circular economy in the area of the macro-region.**
- Exchange of the **good practices** in the field of public energy supply savings and circularly economy
- Elaboration and implementation of joint programme for **management and monitoring of energy demand and enhancement of energy diversification** with focus on renewable sources of energy production.

ACTION 2.3. MANAGEMENT OF ENVIRONMENTAL RISK AND NATURAL THREATS

The mountain areas, including the Carpathian macro-region, belong to ecosystems, which can be exposed more than other to the negative effects of both natural factors – associated with endogenous (earthquakes) and exogenous powers (mass movements, storms, gales, fires, floods, avalanches, droughts, wind-fallen trees, draughts) and anthropogenic factors – associated with direct (intensive farming, raw materials mining, mass tourism, felling) or indirect (CO₂ emissions) human activity. Especially the increasing CO₂ emissions into the atmosphere is a factor contributing to climate changes, which intensify the occurrence of threats in the mountain areas of the Carpathian region.

All those factors may have the impact both on the occurrence of so called “environmental risk” defined as the probability of occurrence of an event causing the degradation of natural environment and natural disasters affecting not only the natural environment, but human health and life as well.

POTENTIAL AREAS OF COOPERATION IN THE AREA OF MANAGEMENT OF ENVIRONMENTAL RISK AND NATURAL THREATS

To prevent negative phenomena, which may occur in mountainous area - such as fires, droughts, avalanches, landslides, floods, wind-fallen trees, draughts, to enhance better adaptation of the macro-region to climate changes and to mitigate the negative impact of the human activity on climate, appropriate actions and measures need to be undertaken to **stop and reduce the risk of their occurrence**, such as:

- performance **of appropriate, comprehensive risk assessment of the Carpathian region – map with hot spots of major emergencies and disasters** and creation of a common threats warning system,
- **implementation at macro-regional level a risk management policy** associated with natural disasters,
- **collaboration in the field of climate change adaptation** as stipulated by the Carpathian Convention Article 12bis on Climate Change,
- **common monitoring** (an agreed set of indicators informing about the condition of the environment) and exchange of data on the impact of climate changes on ecosystems,
- **sharing the knowledge and good practices** in respect to coping with the climate changes,
- **collaboration of emergency services**, which react to any environmental threats.
- **building cross border- civil, economic and scientific network with the objective of awareness.**

The collaboration in this area within Carpathian countries will help to stop **the negative phenomena**, which particularly affect the mountain areas, may also create new possibilities of cooperation framework in respect to the impact of the climate change on the environment. The solutions developed as a result of this collaboration could be used not only in the mountain area of the Carpathian macro-region, but due to the similarity of the ecosystems in other mountain areas as well, e.g. in the Alps. The joint initiatives associated with management of the environmental risk would **make the Carpathian area safer.**

EXAMPLES OF POSSIBLE PROJECTS:

- **development of macro-regional strategy of adaptation to the climate change**
- **virtual observatory of the Carpathian macro-region** forecasting and envisaging adaptation activities associated with climate changes in the mountain region;
- **development of a system of early warning, monitoring and assessment of natural and anthropogenic** (associated with human activity) **types of risks and threats** to the environment (e.g. forecast of flash-floods);
- **training of emergency services for the entire macro-region**, which are involved in responding to threats;
- development of preventive protection systems and **cross-border contingency plans**;
- building cross border civil, economic and scientific network with the objective of raising awareness on climate change;
- **performance of joint information campaigns** and determination/mapping of the special risk points.

PRIORITY AREA III: COHESIVE CARPATHIANS

OBJECTIVE III. INCREASING THE FUNCTIONAL ACCESSIBILITY OF THE CARPATHIANS

Measures aimed at **increasing the economic growth rate** and **improving the quality of life** in the Carpathian region must go hand in hand with the improvement of the physical accessibility (individual and public transport), e-accessibility and related infrastructure, as well as with securing fair access to public services and services provided in general interest, such as education, social services, health care, transport and postal services for the citizens living in these regions and tourists visiting Carpathian Mountains.

Development of the transport network and digital accessibility in the macro-region of the Carpathian Mountains is therefore a **key area of cooperation of the Carpathian states**, because it will stimulate development of other areas, such as economic cooperation and tourism. Therefore, the activities undertaken to improve the accessibility of the Carpathian Mountains should focus on:

- I. improving the quality of road, rail and air transport at macro-regional scale by **creating new and modernising existing connections**, and enhancement of public transport services,
- II. identifying and reducing so-called bottlenecks in the border areas, as well as the development of border crossing points, including small border traffic with the countries outside the Schengen Zone, ,
- III. development and preferential treatment of public and intermodal transport (park and ride facilities), especially in the zones: a) of present and potential commuting to work; b) of tourist interest,
- IV. development of innovative forms (e.g. car sharing) supporting improvement of accessibility in the peripheral areas, including the areas experiencing significant depopulation, with distorted demographic structure (ageing),
- V. increasing **the digital accessibility of the most peripheral areas of the macro-region** through investments in infrastructure enabling broadband Internet access,
- VI. including the area of the Carpathian Mountains in the **development of the digital economy** and preventing social exclusion by facilitating access to services, especially provided in general interest.

Taking into account the macroeconomic conditions on a European scale, it is necessary to **integrate the north with the south of the central-eastern part of Europe** by building convenient transport routes. This direction of building the EU cohesion may bring high additional economic benefits by connecting the Baltic Sea with the Adriatic Sea and the Black Sea, which, in turn, will enable **developing new sectors of the economy of the Carpathian states**. These benefits will be multilateral and will also apply to the Scandinavian states and the countries of the South – Greece, Cyprus or EU partners – Turkey and Israel as well as Ukraine, Serbia and Moldova. The Carpathian Mountains, which are currently a barrier to cooperation along the north-south axis, through the development of transport routes passing through the Carpathian chain will become **a gateway for the development of new relationships and connections under the process of integration of the European Union** among the Central and Eastern European states and Scandinavian states. The Strategy should contribute

to development of the new road and rail corridors crossing the Carpathians in the north-south direction (including: (a) The Baltic countries / Warsaw – Rzeszów – Košice – Debrecen – Timișoara – Sophia – Istanbul/Thessaloniki (so called Via Carpathia; see figure 7); (b) Warsaw – Krakow – Banská Bystrica – Budapest) as well as running along so-called Carpathian arc (Kraków – Lviv – Chișinău /Bucarest).

Figure 7. Via Carpathia – proposed routing scheme



Source: Rosik P., Komornicki T., Goliszek S., Kowalczyk P., Duma P., Szejgiec-Kolenda, 2017, An impact of the Via Carpatia transport corridor on the socio-economic development of Poland, with particular attention to Eastern Poland (in the light of possible support for the Via Carpatia provided from the EU funds), Report for the Ministry of Infrastructure and Construction, 2017

In addition it is necessary to build effective road network linking the district and regional towns. It will constitute an important element that enables dissemination of developmental process and also will allow for integration of the macro-region in terms of economic interactions and labour market.

Accessibility refers not only to the road connections but also to digital access. The development of e-services and better access to the internet in the Carpathian region will increase the internal availability of the macro-region and reduce the need for frequent or distant commuting, which is problematic for many mountain residents. Better digital accessibility of the macro-region will make rural communities less dependent on major

urban centers on issues such as education, public services (including health care) and access to cultural resources, which will significantly improve the quality of life in these areas. Special added value for the economy sector is development of new forms of business such as e-commerce or distance work. In addition, the role of Internet in tourism is constantly increasing, so better digital availability of the Carpathians will ensure presence of tourist offers on the Internet and the possibility to book accommodation online.

Within the framework of the Objective III, proposed actions for SPA for the achievement of this objective includes:

- 3.1. Increasing the transport accessibility of the Carpathian Region;**
- 3.2. Increasing the digital accessibility of the Carpathian Region;**
- 3.3. Developing e-service system.**

ACTION 3.1 INCREASING TRANSPORT ACCESSIBILITY OF THE CARPATHIAN REGION AND WITHIN THE REGION

The peripheral location and challenges related to slower pace of social and economic development, as well as the questions of security, call for good **transport coherence and accessibility**. Therefore, the social and economic development of mountainous regions as well as adjacent peripheral areas, depends on the transport connections between them and other regions in a given country or in the cross-border regions.

Moreover, for improving investment and tourism attractiveness of the macro-region there is a need to create an efficient communication system which link the macro-region with the main economic centers of national and international importance. It is particularly important to strengthen the integration of the road transport system of this area with the European TENT-T network and the network of motorways and expressways. These actions will significantly improve the accessibility of the region, its larger (regional) urban centers and sub-regional centers. Modernization of the road network and creation of intermodal nodes will provide convenient connections for various types of transport. It will improve trade conditions, which make better use of the opportunities created by the cross-border situation of the macro-region. Improving transport accessibility of the Carpathian macro-region is an important element in spreading development processes as well as the integration of the macro-region in the economic terms.

It is important to jointly agree and then to support the specific sectors of transport market, which are predestined for increased use of environmental-friendly rail. It may be concerned with: a) lines crossing the Carpathians (as an element of European network, the need for large-scale new investments); b) lines servicing the area of mountain valleys (including tourist traffic, necessity of modernization); c) lines that can be utilized for commuting to work in medium size urban centres; d) lines operating throughout the internal area of tourist regions and/or being in themselves tourist attraction (product). While developing transport infrastructure the provisions of the Carpathian Convention Protocol on Sustainable Transport shall be considered.

Air transport can also play an important role in the macro-region's transport system. Therefore, it is necessary to strive for greater internationalization of airports located in the area of the macro-region and make full use of their capabilities in the area of passenger and goods transport. Support should also be given to the development of local airports with specialized functions that improve transport accessibility and become a factor for the economic recovery of sub-regional centers. Airports situated in the borderland areas should be capable of being utilized by the region in both neighbouring countries. This could be facilitated by integration of local public transport providing services to the airports (rail land/or bus).

POTENTIAL AREAS OF COOPERATION IN THE FIELD OF TRANSPORT ACCESSIBILITY

The transport development in the area of Carpathian Mountains includes several dimensions:

- **pan-European infrastructural investments** – considering the current role of the Carpathian Mountains as the spatial barrier for closer cooperation of countries located on both sides of the mountain range, the priority of Carpathian cooperation should consist in implementing the investments in the framework of the corridors network, such as the Via Carpathia road (to find the report on barriers and successful implementation of the project see: Rosik P., Komornicki T., Goliszek S., Kowalczyk P., Duma

P., Szejgiec-Kolenda, 2017, An impact of the Via Carpatia transport corridor on the socio-economic development of Poland, with particular attention to Eastern Poland (in the light of possible support for the Via Carpatia provided from the EU funds), Report for the Ministry of Infrastructure and Construction, 2017), which will enable more effective inclusion of Carpathian Mountains into the trans-European transport network (TEN-T), and together with the TEN-T Baltic – Adriatic Core Network Corridor it will open the macro-region to new possibilities of cooperation related to the development of European policy on the North-South axis. In addition to Via Carpatia route, investments should also focus on other transcarpathian transport corridors that are not currently part of the TEN-T network: a) corridor Kraków-Banska Bistrica-Budapest; b) corridor Lviv-Suceava-Bucarest.

- **local solutions of macro-regional importance** (creating critical accessibility mass necessary for take-off), aiming at increasing the mobility in the framework of border traffic, linking smaller settlement centres with the main transport routes and regional urban centres, measures for increasing the quality and safety of traffic (especially in the mountainous areas, where, due to the elevation, the roads are very winding) as well as **creating new flexible forms of public transport***. The internal accessibility in the Carpathian Mountains macro-region will be improved also thanks to construction of **macro-regional hiking, skiing and cycling routes**, which will enable the development of new forms of sport-based tourism, increase the accessibility to landscape, natural environment, cultural heritage and facilitate the flow of tourists.

In this scope the Carpathian Mountains may use the knowledge from the **experience of Alpine Region, where various transport solutions are applied aiming at reducing the negative effects of the peripheral location of the mountain areas and diminishing the need to use private transport.*

- **modernisation and increase of the importance of the railway connections**, rapid passenger and freight transport (up to 120 km/h). The cooperation will consist in improvement of coordination of the infrastructure development, liquidation of local congestions in the railways, reducing the missing links and bottlenecks on the cross-border sections and modernisation of **cross-border loading, unloading and transhipment points** in order to increase the capacity of the railway border crossing points in the Carpathian Mountains area (Schengen zone border only). These actions will contribute to moving the mass freight transport towards the railway and the return to the growing trends in the railway connections, with the benefit to the decreasing burden for the Carpathian roads by the road freight transport. Also tourist flows should be moved to suitable railway lines (Cinque Terre can serve as an example).
- **measures for maintaining and modernising the narrow-gauge railway sections** in local Carpathian Mountains, which may significantly increase the **touristic attractiveness** of the area, by becoming the element of the cultural heritage of the macro-region of the Carpathian Mountains and can help in moving tourist flows from road to rail.

Development of the modern and integrated transport infrastructure in the Carpathian Mountains area **on the level of the cross-border traffic inside the macro-region** should take place in compliance with the following principles:

- **Interoperability** of the railway rolling stock – which means measures for uniform infrastructure standards, so that the trains could use the railway infrastructure without any barriers;
- **Integration of fares** in the public communication on the cross-border sections of Carpathian countries;
- **Intermodality** – effective integration of cross-border railway connections with urban and regional public transport communication, which will ease travel and enable faster and more efficient transportation of people in the macro-region as well as tourists visiting the Carpathian State.

EXAMPLES OF POSSIBLE PROJECTS:

- Preparation of socio-economic development plans of the macro-region taking advantage of development of new TEN-T infrastructure,
- Preparation and deployment of joint cross-border public transport services unlocking the local tourist potential, local airports and extending the labour markets of regional and district capitals,

- **Demand Responsive Transport** – bus services in the area of low population density, where the frequency of the bus journeys depend on the passengers, who request via telephone exchange the need for transportation. The routes of buses are irregular – every time the IT system indicates the shortest possible route, so that the bus collects all of the passengers and get to the bus stop through the shortest possible route.
- **Improved road and rail accessibility to places of special tourist interest**, better, complementary use of infrastructure in neighbouring countries,
- **Integrated environmental-friendly public transport in transborder tourist regions** (ex. Tatra mountains) – cross border bus service (also during evening hours – possibility to come back from transborder hiking), park and ride solution reducing car traffic in the mountains.

ACTION 3.2. INCREASING THE DIGITAL ACCESSIBILITY

In the Carpathian macro-region there are many places without access to the Internet, which results in lower competitiveness and attractiveness, digital exclusion of the inhabitants, as well as limited communication of the services operating under the rescue system and intervention. As a result the isolation of these parts of mountainous macro-region deepens.

Internet connectivity can be beneficial for the Carpathian macro-region because it helps to overcome geographic isolation, promote access to resources and opportunities, and encourage social interactions and community attachment, which would lower the possibilities of out-migration and stimulate economic development. It can also raise awareness of the economic and social opportunities outside the macro-region that can be exploited without moving-out and it makes easier for those who leave to stay in touch with their families and friends. Communication based on advanced digital solutions is also very important for the inclusion of people with disabilities, due to the systematic introduction of widely-used facilities, .eg. in contacts with the public offices. Improved digital accessibility can also help SME and rural business, allowing them to function more competitively, reach wider markets, collaborate with other companies and stay informed of developments in their sectors.

The appropriate ICT infrastructure decreases **the negative results of the peripheral location and isolation** and it provides opportunities for economic, educational, social and cultural activity. The **next-generation access** technologies (NGA) have the key role in responding to challenges of the mountain regions.

POTENTIAL AREAS OF COOPERATION IN THE FIELD OF DIGITAL ACCESSIBILITY

It is thus necessary that in the Carpathian Mountains area the actions for improvement of access to the broadband communication are conducted through development of the appropriate digital infrastructure:

- **satellite connections** constituting an alternative for areas with insufficient infrastructure or for the areas which are not in the scope of interest of investors;
- creating incentives for developing **public-private partnerships** in the area of connectivity infrastructure in the mountain regions, as due to the lack of economies of scale, providing services in these areas is not attractive from the cost-effectiveness perspective;
- **creating an appropriate outlet market** for the services provided for the development of the necessary digital infrastructure through obtaining the appropriate critical mass and using the scale effect to improve the accessibility of the macro-region;
- **creating public points of Internet access** in order to enable a quick access to network for people who are temporarily in the area of Carpathian Mountains.

The efficient construction of broadband networks and providing the necessary equipment is also of key importance for the functioning of the economic entities, public administration and scientific institutions in the macro-region of Carpathian Mountains.

EXAMPLES OF POSSIBLE PROJECTS:

- **System of vouchers for the broadband Internet access** in the most distant areas;
- **Map of the Internet access in the Carpathian Mountains area, indicating so called “white spots” and launching actions for the improvement of access to broadband networks;**
- **Providing free access** to the public access technologies (hardware, software, high-speed Internet connectivity) in the local communities;
- Enhancement of creation of a Carpathian system of **public-internet hot spots** (agreement on staging of public investments in various countries);
- **Digital literacy programs** using volunteers for one-on-one tech assistance and digital skills training – increasing digital competencies especially among inhabitants of rural areas, learn how to use e-services, internet and developing more advanced skills;
- Enhancement of **translation of the content of key web-sites into the Carpathian macro-region languages.**

ACTION 3.3. DEVELOPING E-SERVICES SYSTEM

The mountainous character of the macro-region generates challenges with transportation and with the access to various public services. Almost all regions in the Carpathian region area are characterised by the low degree of accessibility to the public services in comparison with other EU peers (especially the regions of Romania are characterised by the very low degree of this accessibility). Therefore the development of **e-services system** is of great significance in the Carpathian region. These services may contribute to the development of entrepreneurship, increase in the attractiveness of conducting economic activity in the macro-region and improve accessibility and recognition of the Carpathian region.

New information and communication technologies offer a wide range of possibilities for employment, social integration and for strengthening the position in the emerging digital economy. Therefore, to **improve the accessibility of the peripheral territories of the Carpathian region**, it is necessary to promote the teleworking, e-commerce and using the digital marketing channels in these areas in order to improve the cost management in enterprises. The low digital accessibility in the Carpathian macro-region may also be perceived as its potential. Development of digital infrastructure in the Carpathians may pave the way for strengthening **economic and scientific cooperation** in the IT sector between Carpathian regions and contribute to the development of new technologies and innovations.

POTENTIAL COOPERATION AREAS IN THE FIELD OF E-SERVICES SYSTEM DEVELOPMENT

- **increasing the amount of information available in digital format**, utilising modern communication channels to facilitate communication between an interested party and public administration and between client and entrepreneur,
- **streamlining the process of data management and of keeping data up to date** by creating macro-regional cooperation platforms for the purpose of establishing contact networks with public institutions, research centres and businesses,
- developing **modern information and communication tools** which facilitate communication and the transfer of data for example data exchange platforms, interactive customer support systems,
- in light of the increased use of the Internet for the purpose of gathering tourist information, **utilisation of technological factors in the context of conducting tourism-related activity** in the macro-region will be enhanced, while the products from the Carpathian region and trade of such products will be promoted,
- establishing **safe database systems** and safe channels for the exchange of information on-line.

As a result, development of e-services will allow the Carpathian regions to **reduce the distance** to more developed peers of the European Union. Development of e-services in the Carpathian macro-region will contribute to **eliminating barriers to growth** in this area related to digital exclusion of the society of the macro-region and the resulting low level of ICT knowledge.

EXAMPLES OF POSSIBLE PROJECTS:

- **Introduction of e-services in administration** (e-signature, e-culture, e-tourism, electronic document circulation);
- **Establishing electronic platforms at macro-regional level**, regional and macro-regional (trans-Carpathian) networks ensuring effective cooperation with partners from Carpathian countries;
- **Support for the use of digital technologies** by the public sector in the provided services - common platform for electronic public administration services;
- **Digitalizing culture and knowledge** resources to make them available to the inhabitants as e-culture;
- **Online advertising campaign** to promote and encourage people to use advanced digital technologies to handle matters in the public offices.

HORIZONTAL PRIORITY AREA: INSTITUTIONAL COOPERATION AND SPATIAL DEVELOPMENT**ACTION 4.1. SPATIAL PLANNING**

The area of the Carpathians and of SPA in particular is a **multifunctional, multicultural and eco-sensitive space** in which spatial problems and conflicts become very apparent. This area, which is a particularly valuable due to its environmental qualities, is characterised by important tensions related primarily to the conflict between the need to protect the environment and the cultural heritage versus economic development and investment needs (both at local, regional and national levels). Conflicts are also caused by the specific layout of the settlement network (mountain valleys) and the need for significant interventions in the environment and landscape in the implementation of infrastructure projects (tunnels, viaducts).

Spatial planning constitutes an important element contributing to the harmonious and sustainable space management in the functional area of the Carpathians. However, individual countries enjoy full autonomy in this regard and represent separate systems which remain significantly different in terms of legal solutions and the competences of authorities at different administrative levels. This situation contributes to the fact that currently, the appropriate cross-border **coordination in the field of spatial development** constitutes the most important modern challenge, which the Carpathian region has to face. The recommendations to strengthen an **integrated approaches** to land management have been made for a long time, as evidenced by e.g. documents of the Carpathian Convention, in particular the diagnosis entitled *Terminal Evaluation of the Project: Best practice of sub-regional cooperation: Partnership for the support of the Carpathian Convention and other Mountain Regions* of November 2014.

Spatial development provides an **integrated future oriented frame** for other actions envisaged in this strategy. For instance adaptation to environmental risk and natural threats requires farsighted spatial measures, development of clean green industries or macro-regional innovation ecosystem requires networking between the town and cities (in particular small and medium size urban centres) and finally sustainable urban-networking requires improved accessibility for forming some tourist functional regions. By integrating various socio-economic actions while taking care of Carpathian unique socio-ecological assets (territorial capital of the Carpathians) spatial planning ensures spatial order in the Carpathian region where the high quality jobs go hand in hand with leisure and recreational opportunities. Thanks to these Carpathians becomes an attractive settlement destination, with unique natural values, preventing the outflow of people and attracting those paying attention to high quality of life. One of the key vehicles for coherent spatial development of the region is **cross-border cooperation between competent public administration units** of neighbouring parties in the field of **spatial planning of bordering areas**. The essence of this cooperation is emphatically highlighted in the Carpathian Convention, which states that the Parties shall aim at coordinating spatial planning in bordering areas, through developing transboundary and/or regional spatial planning policies and programmes, enhancing and supporting cooperation between relevant regional and local institutions (Article 5(2)). Furthermore the document advises that for the purpose of facilitating sustainable tourism development Parties shall develop coordinated or joint management plans for transboundary or bordering protected areas and other sites of tourist interest (Article 9(2)).

A key territorial challenge is a **weak socio-economic and institutional profile of the Carpathian medium size urban centres** insufficiently performing their role as local and supra-local development engines in terms of formation of critical mass for human capital, being a hub for lifelong learning or providing a melting point for new development ideas, initiatives or networks. Therefore their ability to deliver those services as well as

other services of general economic interest should be strengthened. Also existing potential of public institutions need strengthening to better cope with complex multi-faceted development problems and pursue integrated policy frame. This is particular important at the local and regional level that is of key importance for efficient addressing joint Carpathian challenges and opportunities.

Strengthening rural, remote areas with unfavourable development potential could also be included in the horizontal objectives of the Strategy. Most of the measures previously designed to promote change in economic (tourism, food, agriculture, SMEs, etc.), social (general services, lifelong learning, etc.) and environmental development (local energy diversification, habitat protection etc.) can be coordinated most effectively within a rural development framework.

POTENTIAL AREAS OF COOPERATION IN THE FIELD OF THE SPATIAL PLANNING

In order to support an integrated development of the Carpathian region there is an urgent need to establish a **stable mechanism for the coordination of the spatial policy** of individual countries, regions and local governments, which may be based on:

- joint macro-regional spatial planning ensuring coordination in **cross-border dimension**, which would make it possible to better diagnose the developmental needs in the entire area, minimise the spatial conflicts and facilitate maintaining order and value of the scenery while contributing to carrying out important investment activities, safeguarding the most effective protection of resources, protection of the ecological corridors, minimising the impact of natural disturbances and contributing to the more effective utilisation of resources,
- **better integration of the European level transport networks inside and around of the Carpathian region**, new TEN-T corridors, better transborder access to the motorway, main railways and airports from neighbouring countries
- **networking and connectivity** strengthening territorial cohesion of the entire Carpathian region adding to its functional strength and creating necessary critical mass in terms of urban economies or ecological resilience,
- **functional cross-border regions** that might strengthen socio-economic base of medium size urban centres enlarging their functional hinterlands and improving quality of life of the rural population and the access to services of general economic interest,
- **functional cross-border tourist regions** that might create the base for new tourist products and minimalize the external costs,
- endogenous potential and role of **medium size-urban centres** as developmental engines at local and supra-local scale
- rural development framework for taking advantage of the economic and social potentials of the peripheries and small settlements,
- **urban-rural cooperation** as a necessary vehicle for formation of functional regions, securing accessibility to services of general economic interest, improvement of quality of life and creation of critical mass for development as well as addressing key developmental challenges such as ageing, out-migration and depopulation,
- **cooperation between mountainous** regions and surrounding areas in order to better exploit and preserve development specificity and endogenous potential of mountain regions (e.g. in terms of tourism or production of renewable energy) and better manage economic, and ecological flows as well as human mobility at macro-regional level,
- **modern monitoring and information systems** supporting in particular local and regional **cross-border spatial planning initiatives**, especially in specific functional sub-regions,
- **integrate planning resources**, in particular in the form of databases and cartographic materials. This is particularly well visible with regard to cross-border systems, in case of which – due to their institutional distinctness in terms of spatial management and geographical specificity – there is a need to establish standards of cooperation in the field of spatial data exchange and distribution based on

GIS (Geographic Information System). However, this requires technical and substantive preparation of all the partners involved in the spatial management process,

- **integrated information systems** in various fields, systematising and updating spatial databases and conducting joint spatial analyses supporting the decision-making process and methods of visualising spatial data
- **cooperation network of local and regional governments** facilitating identification of Carpathian development challenges and existing opportunities as well as joint elaboration of the most suitable actions
- **monitoring of the quality of life and migration motives of the people moving out and moving into the SPA of the Carpathian macro-region**

As a result of joint macro-regional spatial planning one can expect strengthening of the **preparedness** of the Carpathian macro-region to the actions proposed in the Strategy and enhancement of more integrated approach linking territorial and socio-economic measures in line with the requirements of the territorial cohesion. All these should in a long run increase ecological evolutionary resilience and diminish vulnerability of the Carpathian region to adverse socio-economic shocks.

EXAMPLES OF POSSIBLE PROJECTS:

- **Preparing macro-regional spatial development concepts** for Carpathians accompanied with implementation strategy including inter alia measures for development of the Carpathian network of regional capitals, for improving accessibility within Carpathian region and with other macro-regions, (focus on secondary transport networks), as well as for creation of coherent network of Carpathian ecological corridors ;
- **Elaborating Carpathian Urban Agenda:** examination and re-defining of functions and roles of medium size urban centers in a new economic reality, based on their endogenous potential, territorial unique assets, and taking into consideration increased importance of quality of life and increased e-accessibility, accompanied with a road map of joint implementation of such an Agenda;
- **Elaboration of the pilot concept of polycentric functional cross-border regions based on different functions** (e.g. tourism, commuter regions, etc) their testing and pilot implementation;
- **Establishment of some think-tanks** or action oriented working groups composed of regional and local public authorities, representatives of public sector NGOs and educational and research institutions with task to elaborate and implement horizontal spatial development concepts and accompanied measures such as urban-rural cooperation or cooperation between mountainous and other type of regions;
- **Testing of ways of introduction of new socio-economic and ecological functions in medium size urban centres** in order to improve their position of local and supra-local development engines, with focus on human capital formation, creation of institutional networking, social innovations etc.
- Elaboration of macro-regional standards and measures for improving accessibility to **services of general economic interests** in particular in the areas of low population density;
- **Establishing and integrated spatial information system** for the purpose of browsing the set of spatial data owned by national structures (spatial information system for the Carpathian region – component A);
- **Harmonising the system for the classification of forms of spatial management** – HILUCS, HSRCL for the Carpathian Area (spatial information system for the Carpathian Area – component B);
- **Capacity building of local and regional governments** allowing them to better identify and address joint Carpathian development challenges and existing opportunities as well as to apply tools of financial engineering in implementing the jointly agreed concrete solutions.
- **Capacity building projects for medium size urban centres** improving their ability and know-how to participate, initiate and lead joint transnational or cross-border spatial planning projects and initiatives
- **Establishing Carpathian observatory of local quality of life and standard of living** for measuring the quality of life in all Carpathian regions in the similar way and marketing Carpathians as a place of high quality of life and level of living.

Cross-border cooperation between the Carpathians states and regions in the field of the spatial planning is particularly important due to the fact that partners in the Carpathian region include also countries which are not members of the EU and which are not subject to the same framework directives regulating certain spatial issues (e.g. common EU environmental protection policy).

ACTION 4.2. CROSS BORDER AND TRANSNATIONAL COOPERATION

Cross-border cooperation contributes to the strengths of the Carpathian region also in the other fields. Activities taken in the context of macro-regional cooperation which support the principles of the free movement of persons, goods, ideas and capital and respect the applicable law constitute a precondition for further development of the Carpathian region as a safe area appealing for and friendly towards inhabitants and business. All of them require cross-border and transnational (macro-regional) collaboration in order to take the best advantages of their synergetic effects.

This is also evidenced by implemented cross-border initiatives and cooperation projects (*such as* cooperation in the Tisza river basin –the newly launched JOINTISZA transnational project is a promising initiative following TICAD project run between 2009-12. This is an example of more stable in time transnational initiative. The number of cross-border projects conducted in the recent years has been impressive thanks to funding from ENPI CBC Programme Hungary-Slovakia-Romania-Ukraine. Some of them were extremely relevant from the perspective of thematic priorities of this Strategy e.g. the project Open borders for bears between Romanian and Ukrainian Carpathians (run 2012-2014) and many others. However majority of them were onetime events which unfortunately have to be regarded as scattered and unsustainable actions due to the lack of stable funding. The Strategy might offer better alignment of available funding with the needs of the Carpathian macro-region. Carpathian Convention can serve as a good practice of such conscious approach. Under protocols of the Strategy several transnational project have been conducted logically following and reinforcing each other thanks to orchestration by the dedicated working group. Example can be Protocol on Sustainable Tourism and its working group. The Carpathian Project was used for developing a report on the situation of tourism and nature conservation in the Carpathians. This fueled the search for tools and innovative models for facilitating the development of sustainable tourism in rural areas, specifically in mountainous regions that were developed under the project “Innovation in Rural Tourism”. Finally the acquired experience enabled preparation of the „Sustainable Tourism Strategy for the Carpathians“ under the consecutive project.

There are numerous fields benefiting from cross-border and transnational collaboration and more intensive networking. This cooperation constitutes core of all actions listed in this strategy but there are some horizontal themes (supporting many actions and issues) requiring their own cross-border collaboration platforms and forums. For example for development of tourism or for re-industrialisation a cross-border cooperation of custom and border services seems vital. Equally important for the same reasons is cooperation of educational institutions in particular those active in the field of lifelong learning. A key challenge is reshaping the educational offer in line with the existing and future developmental perspectives, territorial assets (territorial capital) and other specificities of the Carpathian region.

Cross-border cooperation is also important for successful elaboration and implementation of some key horizontal development themes and engines such as urban-rural cooperation, cooperation between mountainous regions and surrounding areas. It will require involvement of broad array of stakeholders (beyond the public authorities) representing different know-how, expertise and experience in line with a triple helix model.

POTENTIAL AREAS OF COOPERATION IN THE CROSS BRODER AND TRANSNATIONAL COLLABORATION

Cooperation between the public administration of the cross border areas, custom and border services as well as police should focus on:

- improving the situation at the border crossing points (border of Schengen area) in order to eliminate bottlenecks, liberalise and unify the customs clearances and promote anti-corruption measures,
- training of staff, exchange of experiences or developing common patterns of behaviour in case of a threat of cross-border crime and establishing and strengthening monitoring systems (especially in mountainous areas),
- improving the monitoring of the flow of goods and persons at borders, especially in mountainous

areas, introduction of permanent electronic traffic counting system for the main Carpathian transborder, transport routes within the Schengen zone,

- organising training for borders guards to help them deal with threats,
- jointly developing electronic goods clearance systems,
- establishing rules harmonising veterinarian and public health regulations which hamper the free movement of goods and services.

Cross border cooperation between educational and cultural facilities and public authorities responsible for human capital formation should focus on:

- conscious improvement of human capital at local and supra-local scale including lifelong learning,
- adjusting educational offer to the needs and development perspectives of local and supra-local labour markets,
- improving monitoring of the career paths and long-run occupational mobility of the graduates of local and supra-local educational facilities on the Carpathian region,
- building Carpathian identification through educational measures and people to people contacts between youth (in order to diminish existing prejudices).

Joint elaboration and exchange of experience on horizontal development concepts and developmental vehicles might consider:

- joint Carpathian region investment outreach i.e. a joint work aiming at attracting key selected investors to the macro-region in line with its territorial capital,
- joint Carpathian region migration outreach i.e. a joint work aiming at attracting highly educated professionals and specialists appreciating quality of Carpathian resources.

Under action 4-2 co-operation is more important than the concrete outputs achieved. The added value arising from taking the above-mentioned measures will consist in the improvement of the macro-region's integration, creation of trust, and joint Carpathian identity that are the prerequisites for implementation of the thematic objectives..

Cooperation between the services and authorities of individual countries will facilitate the exchange of experiences and good practices in the field of their responsibilities related to various joint opportunities and threats. Similarly, promotion of compliance with applicable provisions and measures jointly agreed in the Strategy will contribute to building the image of the Carpathian Mountains as an appealing, well managed and predictable region. If the above-mentioned measures are implemented, the Carpathian region will be able to attract also external investors. Simple and transparent provisions regulating the establishment of economic activity as well as cooperation between various level of government will strengthen the cohesion of the whole region and will allow it to compete with other parts of the EU.

EXAMPLES OF POSSIBLE PROJECTS:

- Development of "Hot spot" IT system informing the law enforcement authorities about the locations most relevant in terms of criminal activities;
- Development of the "clearance before the arrival" system speeding up the customs clearance by providing the customs authorities the possibility of earlier preparation for the clearance procedure based on the data provided by the entrepreneur in the declaration prior to the presentation of goods;
- Common training for the services from the Carpathians in the field of preventing dangerous situations;
- Exchange of experience and joint preparation and cross-border testing the measures for improving human capital formation in the Carpathian region, preventing out-migration of the most educated labour force;
- Preparing and implementing joint Carpathian programme for attracting foreign investments to the key Carpathians regions including inter alia extension and networking of the local labour markets;
- Preparation and testing and disseminating the results of the demo-projects on attracting highly educated professionals and specialists to the Carpathians in particular those appreciating and enjoying high quality of Carpathian territorial capital;
- People to people cross-border cooperation between most active groups of young people and non-governmental organizations of youth focused on Carpathian identity and identification (e.g. Carpathian Youth Parliament);

ACTION 4.3. PROGRAMMING DEVELOPMENT AND CAPACITY BUILDING. CARPATHIAN INSTITUTIONS

All actions proposed in this Strategy will benefit from more future oriented conscious approach. This speaks for preparation of the more concrete operational programmes in the selected fields of transnational or cross-border cooperation complementing the strategy with more detailed thinking on implementation of its key objectives and ambitions. Example can be a transnational accessibility operational programme for the entire Carpathian region linking the Strategy actions 3.1, 3.2, 3.3. and 4.1. with available funding sources (national, regional, local EU) and anchoring them in multi-governance implementation framework. Another example can be operational programme programming creation of ecological corridors or a programme devoted to reindustrialization and enhancement of green clean industries. It is very important that such programmes are not prepared separately (under different actions) but in conjunction with each other and in relation to the spatial development concept. This will ensure their compatibility and necessary synergy links in line with the requirement of an integrated place-based approach to development.

It is also important to ensure constant monitoring and evaluation of the Carpathian Strategy implementation and channels for introducing necessary adjustments.

There is a positive feedback-loop between the Strategy and the development of the institutional potential of the Carpathians. The activities of the strategy will contribute to building the capacity of institutions at the macro-regional level, By networking, exchange of experience, personal contacts and concrete cooperation projects their ability and know-how related to planning and programming of development, acquiring external funds, implementing action through multi-governance framework will be enhanced. The better institutions in turn will lead to gradual improvement of the Strategy itself in the course of learning by doing. Achieving critical mass of macro-regional cooperation might result in development of new initiatives and ideas and cooperation networks at it was the case in the Baltic macro-region. It will built mutual trust and mutual understanding, leading to self-acceleration of macro-regional developmental processes.

The enhanced institutional cooperation is a key preconditions for success of the Carpathian development efforts. This is the right way for addressing key challenges and avoiding non-reversible failures that might be caused by non-cooperative attitudes (tragedy of the common is a very plausible scenario for development of the Carpathians). For example, the report "Integrated Management of Biological and Landscape Diversity for Sustainable Regional Development and Ecological Connectivity in the Carpathian" highlights the need for close cooperation between local governments, government and business for a responsible approach to the development of renewable energy, agriculture, forestry and fisheries, that investment and increased economic activity should not have a negative impact on the environment as a key development asset. Currently strategic development planning for the entire Carpathian area - understood as conscious planning based on resources and capabilities - does not exist. Each state and region have its own development priorities that are part of the EU cohesion policy. In this sense, it is the European Commission and the next financial perspectives of the EU that constitute the organizing factor for development of the Carpathians. The strategy may lead to the diminishing of competition between the governments of member states for EU funds and turn this competition into a cooperation based on joint development of Carpathians at a macro scale i.e. use of EU funds not only in line with local or regional rationale but also macro-regional. Such an intervention would lead to a synergy effects.

POTENTIAL AREAS OF COOPERATION IN THE JOINT PROGRAMMING AND BUILDING CARPATHIAN INSTITUTIONS

Macro-regional programming should prepare some selected integrated measures and provide frame (in terms of staging, assigning responsibilities and funding) for implementation of the strategy. While doing that it should pay attention to the:

- mutual coherence between functioning, outcomes and impacts of the existing international, national (and regional) operational programmes supported by EU funds (programmes reinforce each other),
- alignment of existing funding and its orientation for the needs and specificities of the Carpathian macro-region,
- if necessary undertaking joint actions for establishment of new funding sources (e.g. Carpathian transnational co-operation programme) tailored to the needs of the Carpathian macro-region,

- proper consideration of territorial assets and territorial consequences of the programmes (their impact on territorial capital of the Carpathian region) and wise use of the horizontal development concepts listed above.

Other important field of cooperation should be also:

- the strategy outreach, information about the results of joint actions and collecting feedbacks on their efficiency,
- capacity building and engagement of the Carpathian institutions in the Carpathian actions and initiatives, making best use of the existing institutional potential for the sake of the Strategy implementation and if necessary conscious filling-in the existing institutional gaps (establishment of co-operation platforms as it has been the case under Carpathian Convention)
- awareness rising among the general public, decision-makers and mass-media on the specific needs and challenges of the Carpathian macro-region and benefits of working together,
- monitoring of the results of the Strategy, evaluating the progress achieved and modification of the Strategy and its action programme if necessary.

The added value arising from taking the above-mentioned measures will consist in the conscious programming of the development of the macro-region and strengthening its voice vis a vis other macro-regions.

EXAMPLES OF POSSIBLE PROJECTS:

- Organizing and running the outreach transnational events supporting implementation of the Strategy;
- Establishment of permanent co-operation platforms for engagement of the key stakeholders for the sake of efficiency of implementation of the Macro-regional Strategy for the Carpathian Region.
- Elaboration of the guidelines and tools for assessment of territorial consequences of international. National and/or regional operational programmes and strategies complementing existing strategic environmental assessment procedures;
- Assisting existing financial programmes, policies and strategies in their adjustment to the needs and specificities of the Carpathian macro-region as agreed in the Strategy;
- Preparation (if feasible and deemed promising) of a new transnational programme covering important set of actions of the Strategy and assessment of its territorial consequences and providing synergetic links between Strategy and other funding programmes and strategies (existing or under elaboration mainly using EU funds);
- Monitoring, evaluation and amendment of the Strategy as a collaborative joint action of relevant Carpathian stakeholders.

SUMMARY - EU MACROREGIONAL STRATEGY FOR THE CARPATHIAN REGION

Currently, the **macro-regional strategies** become more and more important for the regional development policy of the EU. Planning and implementation of development policy at the macro-regional level, taking into account the specific character of the groups of countries or their regions and their specific potential and needs, gains a new quality, both in the ongoing development management, as well as in planning the future of the post-2020 Cohesion Policy.

The creation and implementation of the macro-regional strategy for the development of the Carpathians will offer this area the opportunity to undertake joint planning and conduct activities tailored to their specific needs and capacities. Placing the Carpathians at the centre of the strategic document will ensure full concentration on the challenges they face and will give this region a chance to take advantage of its untapped potential.

The creation and implementation of the Carpathian Strategy, which focuses on the specific needs and unique capacities of the Carpathian countries and regions will also promote re-establishing the role of East - Central European countries in the European Community anew.

The Carpathian Strategy should become a platform for cooperation for countries and regions involved in its implementation. In order to ensure effective coordination, it is possible to take advantage of the existing structures, e.g. the Carpathian Convention and the Euroregions in this area, while the Member States and the

regional authorities in those states, under the supervision and with the support of the European Commission, should be responsible for the implementation of the Strategy. An equally important task is to integrate its objectives in the post-2020 Cohesion Policy documents.

BENEFITS FROM DEVELOPING AND IMPLEMENTING THE CARPATHIAN STRATEGY

To sum up, the macro-regional strategy for the Carpathians may bring the following benefits:

- **Support in the decision-making processes for national and regional authorities;**
- **Supporting existing cooperation frameworks in the region and their programs/projects**
- **Intensification of cooperation** between regions forming the Carpathian macro-region and the countries to which they belong;
- **The opportunity to use the EU institutional and legal framework**, including:
 - legal, territorial and administrative instruments for mountain areas,
 - integration and coordination of sectoral and horizontal instruments;

The opportunity for mobilising resources also from other sources (co-financing)

- **The opportunity to use the EU methodology and standards**, including:
 - coordination and concentration of actions,
 - integration of public authorities levels,
 - simplifying the organizational and legal framework,
 - use of uniform packages of territorial instruments;
 - **The opportunity to use already developed good and best practices**, such as:
 - methods of using human resources, knowledge, experience, and both national and EU institutional practices,
 - methods of engaging and working with different actors and institutions, local and regional communities, as well as with volunteers and stakeholders,
 - processes of standardization and simplification of decisions and structures, determination and coordination of objectives,
 - use of uniform and coordinated communication and harmonization of communication methods,
 - methods of mobilizing partners and stakeholders, use of research, gaining support of the public.
- The opportunity to use the institutional and legal framework of the Carpathian Convention and its Protocols
- Using the already developed good and best practices of the Carpathian Convention
 - Using the existing transnational networks and working groups of the Carpathian Convention

CARPATHIAN STRATEGY – FOR WHOM?

An important aspect of the development strategy is to determine who will benefit from the positive changes resulting from the implementation of the strategic objectives. Who will be the beneficiary of the Carpathian Strategy?

- **First of all: the residents of the Carpathians and the people associated with the Carpathians** – the people, not the state, regions or even the entire EU, are the primary recipients of all actions. The primary objective is to improve the quality of life of the inhabitants across the European Union through "levelling up". Thus, the decision to start working on the Carpathian Strategy resulted from the diagnosis of the needs and problems faced by the population of the Carpathians and from the concept of systemic solution of these problems. In this context, the achievements of non-governmental organizations will be of utmost importance, thus the representatives of the third sector will be involved both in the stage of formulating the objectives and targets of the strategy, as well as in its implementation.

- **The Carpathian regions** – they are a direct place of living for the citizens of Carpathians. Identifying and resolving many emerging problems as well as recognizing that unlocking the development potential is possible by acting at the local level. The actions undertaken at the macro-regional level will facilitate integration, development, and improve convergence with the better developed part of the EU. It is not sufficient to have a good regional or national policy. Recognizing common features of regions from various countries will enable more efficient use of countermeasures, planning and implementing actions on a macro-regional scale, and will offer additional opportunities to share best practices among the regions. The Strategy will act as an integrator, thanks to it the actions will not be written down in a number of separate documents any longer, but they will form a single, coherent strategy that encompasses different areas of action that complement each other.
- **The Carpathian countries** – they are the entities that share the Carpathian macro-region. Joint planning of development of parts of their territories that face similar challenges and exhibit similar potential will accelerate also national development and will offer the opportunity for a more harmonious growth of each country.
- **The European Union, as platform of European integration** – a united Europe requires continuous integration. In this case, the relations in the groups of countries which are geographically, culturally and historically close, and have common interests and experience similar problems are important. Existing EU macro-regional strategies are the examples of such successful cooperation. Focusing the development strategy on the group of countries which share key characteristic (in case of the Carpathians – countries located in mountain areas, new to the EU, and also geographically and economically peripheral) allows for adjusting the modes of action to meet their specific needs. It allows to counteract false wisdom that one development model fits all. The development of Carpathian macro-region will contribute to more harmonious cooperation and integration not only in the Carpathian area, but across the EU. From the political point of view, the Strategy could also play an important role **in achieving the objectives of the Eastern Partnership.**

IMPORTANCE OF DEVELOPMENT OF THE CARPATHIANS IN A COMMON EUROPE

The establishment of the Carpathian Strategy is of major political significance, as it will have a great impact on all dimensions of development – social, economic, environmental and spatial. It will be conducive to the integration of Europe and will contribute to building common European security and prosperity. One important aspect of the strategic planning for the development of the Carpathians is its aim to overcome the effects of peripheral location of the Carpathian regions and their limited importance in the EU. This will allow for the full use of their untapped potential to achieve common development goals, it will make them full partners for other European regions and will give them the opportunity to make a new place for the East-Central Europe on the map of European networks, actions, and resources. The Carpathian strategy is important in terms of:

- **Socio-economic development.** Several common development challenges unite this area, which are expressed in the lowest GDP values per capita in Europe. The Carpathians belongs to the less developed areas, even compared to the rest of Central Europe solely. Therefore, one of the extremely important aspects of strategic development planning is an aim to address socio-economic changes, so that the structure of the economy would become more modern (based on the service sector as well as on small and medium enterprises), GDP per capita values would grow, and the Carpathian countries and regions would become a more attractive investment area.
- **Close cooperation between North and Southern Europe.** While the integration of East and West of the European Union is an important element of the undertaken actions (within the Cohesion Policy), the North-South axis has not been a priority of the integration policy until now. However, this direction of building cohesion in the EU might bring high economic benefits, e.g. by connecting the Baltic Sea with the Adriatic and the Black Sea, which in turn will facilitate the development of new sectors of the economy in the Carpathian countries and give impetus to their further development.
- **The external border of the EU and building a common security space.** The external border of the European Union runs through Carpathians. For this reason, building prosperity, transport cohesion, and a high level of development of the Carpathian macro-region is important not only for Carpathian regions and countries themselves, but also for the entire EU. Today, in the context of the difficult

situation in Ukraine – a neighbour of four EU Carpathian countries, this matter has become particularly important and must be a crucial point of reference for all development plans for this part of Europe and the EU.

- **Support for the development of regions situated on the outskirts of the EU, peripheral to the development centres.** Since the Carpathian regions are physically located on the outskirts of the EU, it is necessary to introduce changes so that their untapped potential would be better used and so that these regions would become attractive places as both tourist and business destinations, making out of their peripheral location an asset.
- **Building transport cohesion and digital availability.** Peripheral location, the above-mentioned problems associated with the slower socio-economic development, and the security issues require particularly good cohesion and availability of transport. Therefore, it is necessary to improve sustainable transport connections within the Carpathians, accompanied by improving access to this macro-region from other countries. It is important to integrate the North and the South of Central and Eastern Europe by building convenient transport routes. The planned road *Via Carpathia*, from the Baltic Sea to the Aegean Sea, is an example of such a route. Along with transport development also the access to broadband internet network should be further improved.
- **Building added value for the Carpathians and across the EU.** Harmonious development of all the regions of the European Union is one of its main objectives. Planning for further development of the poorest and slowest growing areas of the EU is important not only for these regions themselves, but also for the more affluent EU member states that invest in the Cohesion Policy. The development strategy of the Carpathian macro-region should give a boost to facilitate socio-economic changes, while taking action at the macro-regional level should serve as a leverage for further development. The intensification of the modernization processes will benefit all EU member states. Importantly, the development strategy, tailored to the specific challenges faced by the Carpathians, will enable the implementation of the objectives set by the EU, including but not limited to improving the quality of life of the residents, bridging development gaps, and fostering sense of equality among all members and citizens of the European Union.
- **Strengthening the sense of identity and identification with the development policies implemented in the macro-region.** The establishment and implementation of the macro-regional strategy for the development of the Carpathians will offer this area the opportunity of joint planning and conducting actions tailored to its specific needs and capacities. The regional scope of the Strategy creates conditions for the development of the actions and instruments of economic policy by the regional and the local authorities, skilfully supported by the national authorities and the European Commission. The partnership will result in feasible actions. This will strengthen the joint responsibility of all parties for the Strategy implementation.

Attachment 1: SWOT ANALYSIS OF CARPATHIAN AREA

Strengths	Weaknesses
<ul style="list-style-type: none"> - relatively big share of industrial sector in the economic structure, - big tourist attractiveness of the macro-region, - rich and variable heritage of material and non-material culture in Europe, - big share of the ultimate forms of natural protection (national parks, landscape parks) in the total number of protected sites, - high percentage of protected areas due to exceptional values of natural and cultural heritage, - unique and abundant natural resources (European forest abundance, with the biggest sites of virgin forest in Europe), - valuable spa tourism area due to a concentration of mineral and thermal water resources, - good conditions for introducing green and renewable energy sources: water energy, solar and wind energy, biomass, recyclable waste, - the presence of high quality soils and pastures for agricultural purposes, - low labour costs in comparison to the remaining part of Europe, - advantageous age structure of population – big share of people in pre-productive age in the total population of the macro-region, - - existing traditions and experience of international and trans-border cooperation, including the Euro-regions, - experience in the scope of international and economic cooperation, - huge demographic potential of macroregion 	<ul style="list-style-type: none"> - limited ability to attract investment capital, low level of external investment, - low level of implementing innovation, low level of technological know-how and ICT, - low intensity of research and innovation, - low GDP value per inhabitant of the macro-region , - big share of agriculture in economic structure and small share of service sector, - insufficient quality and size of road network connecting localities on the border of the macro-region, - poor technical infrastructure on borders, lack of border check-points for pedestrians and bikers, - poor network of motorways and express ways due to the mountainous character of the region, - poor network of main railways and lack of high-speed rail, - insufficient density of transport corridors within the TEN-T core network, - environmental pollution and degradation of forest resources due to irrational forest management, - uneven use of the potential of mineral and healing waters, - poor marketing and promotion of the Carpathian macroregion as a tourist destination, - unsatisfactory level of tourist infrastructure development, - low or very low level of population education in comparison with the EU average, - low level of human capital in comparison to Europe in general, expressed by a percentage of people holding university degrees and employed in science and technology, - poor level of information society development, - poor level of economic well-being and living conditions of the population, - depopulation of the Carpathian area
Opportunities	Threats
<ul style="list-style-type: none"> - major geopolitical importance due to strategic location in Europe, - use of modern technologies and renewable energy, sources/ geothermal energy: wind and solar energy, biomass, water energy, - development of specializations in the macro-region sectors, e.g. tourism, wood production, energy, robotics and automation, IT, creative sectors, green industry, - development of multimodal transport system in well-developed areas in terms of economy and tourism, - increase of employment level which exceeds the EU average, characteristic for nearly all the Carpathian countries, - decrease of unemployment rate recorded in recent years in the macro-region, - increase of the level of education in all regions of the Carpathians, - existence of higher education institutions which open opportunities for the development of scientific research, cooperation and students exchange, - development of sustainable tourism and tourist infrastructure, - more efficient marketing activities for the promotion of the unique natural and cultural heritage of the macroregion, - strengthening cooperation conducive to better coordination of carried out activities and greater involvement of the individual Carpathian countries 	<ul style="list-style-type: none"> - further deepening of the disparities in the economic and regional development of the macroregion, - threat to the environment of the macroregion, resulting from the strengthened human activity, - devastation and degradation of historic monuments as well as objects and places valuable in cultural terms, - deepening the peripherality and spatial isolation of the macroregion, - persistent low level of the socio-economic development of the macroregion, - no uniform formal and legal structure of cooperation that would guarantee coordination of activities and management of strategic tasks, - difficulties in crossing the borders among the countries which are not the members of the EU and of the Schengen Zone, - competing of the Carpathian regions due to a similar range of products and services (for example, in agriculture, tourism), - climate change, - deepening the adverse demographic trends such as the gradual ageing of the population or migration, - insufficient level of security on the eastern borders of the EU, - failure to use the tourism potential of the macroregion, - social tensions resulting from the deteriorating economic situation of the ethnic groups

Attachment 2: Forms of cooperation in the Carpathian Region

There is a number of documents and instruments of cooperation applicable to the Carpathian region. Although none of these documents discusses the problems specific to the Carpathian region as a whole, they should be remembered and elements of the documents and concepts listed below should be used while drawing up the Carpathian Strategy in a way that is adequate for the areas encompassed by the Strategy.

THE CARPATHIAN CONVENTION (Framework Convention on the Protection and Sustainable Development of the Carpathians)

The international legal agreement on the protection and sustainable development of the Carpathians (Carpathian Convention) was signed by seven Carpathian countries in 2003. The Convention has the status of an agreement between the governments of: Poland, Czech Republic, Slovakia, Hungary, Serbia, Montenegro, Romania, and Ukraine.

The cooperation within the Convention takes many forms, including work programmes under the Convention, joint bilateral or multilateral actions, international assistance, and coordinated national measures. The Convention is being successively expanded by way of thematic protocols that develop its provisions in relation to particular areas of interest, which include:

- 1) integrated approach to land resources management;
- 2) conservation and sustainable use of biological and landscape diversity;
- 3) spatial planning;
- 4) sustainable and integrated water/river basin management;
- 5) sustainable agriculture and forestry;
- 6) sustainable transport and infrastructure;
- 7) sustainable tourism;
- 8) industry and energy;
- 9) cultural heritage and traditional knowledge;
- 10) environmental assessment/information system, monitoring, and early warning;
- 11) awareness raising, education, and public participation.

The Convention is accompanied by five Thematic Protocols relating to specific issues. Even though the Convention plays a major role, its thematic scope is too limited and focused to become the basis for broad cooperation, e.g. in the field of economic development of the mountain regions and their social and civilization advancement.

CARPATHIAN EUROREGION AND ASSOCIATION OF THE CARPATHIAN EUROREGION POLAND

This association brings together local government units from the Podkarpackie Voivodeship (59 LGU) and the Małopolskie Voivodeship (1 LGU – Ropa municipality) as supporting members. The Association is the national structure of the Carpathian Euroregion Interregional Association operating in the border areas of Poland, Ukraine, Slovakia, Romania, and Hungary. Euroregional associations also operate in Slovakia (Association of the Carpathian Region Slovakia) and Ukraine (Association of Municipalities Carpathian Euroregion Ukraine).

The mission of the Carpathian Euroregion is to ensure the socio-economic development of the Euroregion by supporting development processes in terms of territorial cooperation. The Carpathian Euroregion organizes and coordinates activities for the development of cooperation between members in the fields of economy, ecology, culture, science, and education.

The Association served as the Implementing Authority for some components of cross-border cooperation programmes of the European Union: PHARE CBC, PHARE National Programme, INTERREG III A, and Neighbourhood Programme INTERREG IIIA/TACIS CBC, Priority 3 “Micro-projects” in the CBC Programme Poland-Slovak Republic 2007-2013. It seeks to implement the concept of the *Carpathian Horizon 2020* by developing a special Operational Programme, entitled *Carpathian Space Programme*.

EUROPEAN PARLIAMENT RESOLUTION OF 22 SEPTEMBER 2010 ON THE EUROPEAN STRATEGY FOR THE ECONOMIC AND SOCIAL DEVELOPMENT OF MOUNTAIN REGIONS, ISLANDS, AND SPARSELY POPULATED AREAS

Mountain regions, islands and sparsely populated areas are a unified group of regions with the same intrinsic qualities that distinguish them from other regions. It was noted that these areas deserve separate regional development programmes. The resolution calls for the introduction of a specific European integrated and flexible policy strategy for mountain regions, islands, and sparsely populated areas, based on their common characteristics, while considering the different situations and with due respect for the principle of proportionality. A belief was also expressed that the European policy strategy for mountain regions, islands, and sparsely populated areas may generate the desired added value in the form of overcoming the permanent handicaps faced by these regions and adapting the development model in such a way as to maximize their strengths.

The EP called on the member states and regional and local authorities to play an important role in the development strategies for mountain regions, islands, and sparsely populated areas, because in order to lead these regions on the right path of sustainable development, in consideration of other important sectors of the given region, they require vertical approach, which means the involvement and contribution of administrative bodies at all levels, while respecting the principle of subsidiarity. The EP emphasized that the potential of these regions, often disposing of substantial natural resources, may positively affect the achieving of the objectives, in particular the objectives related to energy policy, development, and research, set out in the EU2020 strategy.

VASICA STRATEGY (VISIONS AND STRATEGIES IN THE CARPATHIAN AREA – PROTECTION AND SUSTAINABLE SPATIAL DEVELOPMENT OF THE CARPATHIANS IN A TRANSNATIONAL FRAMEWORK)

The VASICA strategy is a transnational document for spatial development of the Carpathians. It was developed under the Carpathian Project under the leadership of the Carpathian Convention carried out within the Neighbourhood Programme INTERREG III B CADSES and presents its key findings. VASICA indicates that there is no common regional development strategy for the complex economic, environmental, social, and spatial problems of the entire area of the Carpathians. This document primarily concerns the development opportunities and problems specific to the area of the Carpathians, including mountain areas. VASICA calls for the creation of a support mechanism for the “Carpathian space” under the European Territorial Cooperation (ETC), modelled after the successful “Alpine space” scheme. VASICA lists the following strategic objectives for the area of the Carpathians:

- Strengthening the internal cohesion of the Carpathian region
- Strengthening coherence with other parts of the territory of the European
- Promoting economic growth and creation of new jobs in the Carpathians
- Improving the management of the environment and natural heritage.

The aim of the actions would be to improve the position of this transnational area and raise it from the peripheries to the rank of a sustainably developing region in the very heart of Europe, based on its unique cultural heritage as well as natural and social assets.

CARPATHIAN MEMORANDUM (DRAFT)

The document was developed during the “Europe of the Carpathians” conference, a part of the Economic Forum in Krynica held on 7-8 September 2011. The participants, the ranks of which included members of parliament and representatives of the ministries of the environment and regional development of the Carpathian countries, adopted the guidelines for the new EU programme for the Carpathians.

The need to combine the efforts of countries, the European Union, and various regional authorities aimed at developing a common strategy for the Carpathians, which would overcome the weaknesses of the region with the help of its strengths, is one of the most important actions mentioned in the memorandum.

COMMON SPATIAL DEVELOPMENT STRATEGY OF THE VISEGRAD GROUP COUNTRIES, BULGARIA, AND ROMANIA in the field of spatial development of the EU countries: Czech Republic, Hungary, Poland, Slovakia (Visegrad Group – V4), Bulgaria and Romania (+2).

The document was adopted at the informal meeting of ministers responsible for regional development and spatial planning on 16 April 2014.

The document was the result of cooperation undertaken by the representatives of cross-border working groups on spatial planning and development operating in all the border areas of the countries concerned. The Common Strategy is based on the Common Spatial Development Document of the V4+2 Countries, which resulted in the conclusions of the ministers responsible for regional development of the Visegrad Group, Bulgaria, and Romania, which were adopted on 30 March 2010 in Budapest.

EUROPEAN TERRITORIAL COOPERATION GROUPS (ETCG)

The European Territorial Cooperation Groups (ETCG) are the first cooperation structure defined by European law, which enables public entities originating from different countries to cooperate as a separate legal entity. To date 63 groups have been established in Europe, including 27 in the Carpathian area. The vast majority of ETCGs was established to support the cooperation of cross-border areas. A particularly large number of groups were established in the cross-border areas of Hungary (22) and Slovakia (17), but such groups do exist in all other countries as well: in Romania (7), Czech Republic (4), Poland (2), Serbia (1) and Ukraine (1).

INTERREGIONAL CARPATHIAN GROUP AT THE COMMITTEE OF THE REGIONS

In February 2016 Chairman of the Committee of the Regions Markku Markkula formally approved formation of Carpathian Group at the Committee of the Regions. The group consists of 33 members from 4 different countries. Creation of the group is an initiative initiated by the Marshal of the Podkarpackie Vovoideship.

The main objective of the group is to lead lobbying for strategic projects for the Carpathian region. One of the group priority is to create EU Macro-regional Strategy for the Carpathians. Representation of the Podkarpackie Vovoideship in Brussels acts as the secretariat of External Group. The group meets two times a year.

Attachment 3: Comparison of Strategies for the Danube Region and Carpathian Region

In general the results should be treated as the tentative ones since both strategies have different internal logic. The Danube Strategy is rich with a great number of various actions although some of them have not been implemented yet. On the other hand the Carpathian Strategy actions are formulated in more open and general way than more concrete but also more numerous actions of the Danube Region Strategy. The Carpathian Strategy is also more focused and more selective.

But the general outcome of this comparison shows no redundancy and frictions between the Carpathian Strategy and the Strategy of the Danube Region. The Carpathian Strategy is directly related and based on specific characteristics of the Carpathian Regions such as its mountainous character, peripherality, and specific natural and cultural endowments. Moreover, the Carpathian Strategy puts much more emphasis on spatial and macro-regional planning which make sense for more coherent and much smaller Carpathian Region and which could be a challenge for more diverse and larger Danube macro-region. General conclusion is that the Carpathian Strategy reinforces the Danube Region one whereas the latter provide a necessary framework for many actions to be pursued in the Carpathian region and complement the Carpathian Strategy with actions not related to mountainous specificity (like coordination of energy policies at national level).

Danube Region Strategy			Carpathian Region Strategy	
Priorities	Internal division of priorities	Actions	Actions	Difference with regard to similar type of actions of the Danube Region Strategy
Priority Area 1A — To improve mobility and multimodality: inland waterways of the EU Strategy for the Danube Region (PA1a)	Improvement of infrastructure and economic performance of waterway navigation	<p>To complete the implementation of TEN-T Priority Project 18 on time and in an environmentally sustainable way.</p> <p>To invest in waterway infrastructure of Danube and its tributaries and develop the Interconnections</p> <p>To modernise the Danube fleet in order to improve environmental and economic performance.</p>		The Carpathian Strategy has no specific actions related to inland waterways
	Improvement of the organisational framework and human resources for inland waterway navigation	<p>To coordinate national transport policies in the field of navigation in the Danube Basin</p> <p>To support Danube Commission in finalising the process of reviewing the Belgrade Convention</p> <p>To develop ports in the Danube river basin into multimodal logistics centers.</p> <p>To improve comprehensive waterway management of the Danube and its tributaries.</p> <p>To promote sustainable</p>		

		<p>freight transport in the Danube Region.</p> <p>To implement harmonised River Information Services</p> <p>To invest in education and jobs in the Danube navigation sector</p>		
Priority Area 1b - To improve mobility and multimodality -road, rail and air links(PA1b)	Improvement of access to and connectivity	<p>To bring to completion the TEN-T (rail and road) Priority Projects crossing the Danube Region,(...)</p> <p>To implement the Rail Freight Corridors forming part of the European rail network for competitive freight.</p> <p>To enhance cooperation between air traffic stakeholders in order to prepare a plan to implement shorter plane routes.</p> <p>To ensure sustainable metropolitan transport systems and mobility.</p> <p>To improve the regional/local cross-border infrastructure and the access to rural areas</p>	Action 3.1. Increasing transport accessibility of the Carpathian Region	<p><u>Synergy and complementarity but also different focus:</u> the Carpathian actions have focus on local solutions important in mountainous areas characterized by low population density and physical accessibility barriers</p>
	Development of Multimodal links	<p>To develop further modal planning for multimodality</p> <p>To develop further Intelligent Traffic Systems (...)</p>		<p><u>Synergy and complementarity but also different focus:</u> the Carpathian Strategy proposes some efforts related to multimodal links at local level. The Strategy for the Danube Region will cover the other multimodal problems in the Carpathian Region.</p>
Priority Area 2 — The Energy Priority Area (PA2)	Coordinating regional energy policies in various topics in order to exploit the full potential of an integrated energy market.	<p>To develop a joint position of the region regarding the changes which could be introduced in the framework of the TEN-E Policy review and the modalities of the new Energy Security and Infrastructure Instrument, (...)</p> <p>To ensure that actions are coherent with the general approach of the Energy Community and explore synergies between the Energy Community and</p>		<p>The Carpathian Strategy has no specific actions related to transnational coordination of energy policies. The Strategy for the Danube Region is sufficient also for the Carpathian Region in this field and Carpathian Strategy will benefit out of its actions.</p>

		<p>the Danube Strategy processes.</p> <p>To enforce regional cooperation with a view to develop and implement the North-South gas interconnection Project</p> <p>To develop gas storage capacities</p>		
	<p>Integration of the energy markets of the non-EU countries and supporting them in the implementation of the EU energy acquis.</p>	<p>To tap possible cooperation opportunities with the Energy Community</p> <p>To cooperate to implement the Regional network integration and the New Europe Transmission System (NETS) in line with the feasibility study.</p> <p>To build a working relationship with the Central Eastern European Forum for Electricity Market Integration; this could be enlarged to neighbouring countries”.</p>	<p>Action 2.2. Diversification of energy sources</p>	<p>The Carpathian Strategy has no specific actions related to integration of energy markets. The Strategy for the Danube Region is sufficient also for the Carpathian Region in this field and Carpathian Strategy will benefit out of its actions.</p>
	<p>Launching cutting edge technology developments, which will increase the energy efficiency of the region and enhance the use of renewable energy sources.</p>	<p>To extend the use of biomass (e.g. wood, waste), solar energy, geothermal, hydropower and wind power.</p> <p>To reinforce the Carpathian Convention to share best practices on using biomass for energy purposes</p> <p>To implement the National Renewable Energy Action Plans and to prepare a Danube Region Renewable Energy Action Plan</p> <p>To explore the possibility to have an increased energy production originating from local renewable energy sources to increase the energy autonomy</p> <p>To develop a comprehensive action plan for the sustainable development of the</p>	<p>Action 1.2. Sustainable development of tourism</p>	<p><u>Synergy</u>: Both strategies are compatible, the Carpathian Strategy reinforce the Danube Region Strategy with stronger focus on the problems of remote, rural and peripheral areas</p>

		<p>hydropower generation potential of the Danube River and its tributaries (e.g. Sava, Tisza and Mura Rivers)</p> <p>To develop and set up pre planning mechanism for the allocation of suitable areas for new hydro power projects</p> <p>To promote energy efficiency and use of renewable energy in buildings and heating systems including by renovating district heating and combined heat and power facilities (...)</p> <p>To encourage the Energy Community members/ observers in adopting and implementing the Renewable Energy Directive</p> <p>To facilitate networking and cooperation between national authorities in order to promote awareness and increase the use of renewable energies</p> <p>To provide local authorities, businesses and citizens in the Danube Region consultative support with issues relating to mitigation of climate change and energy efficiency</p>		
Priority Area 3 — To Promote Culture, Tourism and People to People Contacts(PA3) ³	Maintenance and wise use of cultural heritage	<p>To build on cultural diversity as strength of the Danube Region.</p> <p>To enhance cooperation and contacts between people of different origins,</p>	Action 1.2. Sustainable development of tourism	<u>Synergy</u> : both strategies are compatible, they work in the same direction, the Carpathian Strategy reinforces the Danube Region Strategy

³ Targets:

- Target 1. Develop a Danube Brand for the entire Danube Region based on already existing work
- Target 2. Support the implementation of a harmonized monitoring system, dedicated to tourism, able to provide complete and comparable statistical data in all the 14 states part of the EUSDR
- Target 3. Develop new and support existing Cultural Routes relevant in the Danube Region
- Target 4. Develop green tourist products along the Danube Region
- Target 5. To create a 'Blue Book' on Danube cultural identity
- Target 6. Ensure the sustainable preservation of cultural heritage and natural values by developing relevant clusters, and networks of museums, interpretation and visitors centers within the Danube Region
- Target 7. Promoting exchange and networking in the field of contemporary arts in the Danube Region

		to encourage creativity, and provide a driving force for cultural innovation and economic development, based on heritage, traditions and tourism.		with stronger focus on the opportunities and chances of the mountainous areas
	Development of tourism	<p>To develop the Danube region as a European brand</p> <p>To establish the Danube Region as important European tourist destination</p> <p>To promote short-stay weekend tourism and recreation, as well as longer stays</p> <p>To further develop and intensify Activity Tourism</p> <p>To further enhance interconnection and cooperation in education and scientific and research activities for tourism</p> <p>To improve planning and infrastructure for tourism</p> <p>To support the improvement of the quality of tourism products</p> <p>To promote sustainable tourism</p> <p>To promote wellness tourism in the Region</p> <p>To collect existing data on cultural activities and establishing a comprehensive data base giving an overview of cultural activities in the Danube Region</p> <p>To promote cultural exchange and exchange in the arts</p>		
Priority Area 4 — To restore and maintain the quality of waters(PA4)		<p>To implement fully the Danube River Basin Management Plan</p> <p>To greatly strengthen cooperation at sub-basin level</p> <p>To continue to invest in and support the information collection systems already developed</p>	Action 2.3. Management of environmental risk and natural threats	<u>Synergy and contribution:</u> The Carpathian Strategy contributes to the objectives of PA 4 with its action 2.1

		<p>by ICPDR</p> <p>To continue boosting major investments in building and upgrading urban wastewater treatment facilities across the Danube Basin, (...)</p> <p>To establish buffer strips along the rivers to retain nutrients and to promote alternative collection and treatment of waste in small rural settlements</p> <p>To foster and develop an active process of dialogue and cooperation between authorities responsible for agriculture and environment to ensure that measures are taken to address agricultural pollution</p> <p>To legislate at the appropriate level to limit the presence of phosphates in detergents</p> <p>To treat hazardous substances and contaminated sludge with the newest and best available technology and to develop and promote remediation measures for hazardous producing or abandoned industrial sites and waste deposits</p> <p>To assure the proper control and progressive substitution of substances that are considered problematic for Danube Region</p> <p>To reduce existing water continuity interruption for fish migration in the Danube river basin</p> <p>To promote measures to limit water abstraction</p> <p>To strengthen general awareness and facilitate exchange of good practice in integrated water management issues in the Danube Basin (...)</p> <p>To promote measures aimed at reducing knowledge deficits,</p>		
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		<p>developing and transferring tools, methods and guidelines concerning the safeguarding of drinking water supply</p> <p>To further strengthen Integrated Coastal Zone Management (ICZM) and Maritime Spatial Planning (MSP) practices on the Western shores of the Black Sea</p>		
<p>Priority Area 05 — To manage environmental risks(PA5)</p>		<p>To develop and adopt one single overarching floods management plan at basin level or a set of flood risk management plans coordinated at the level of the international river basins</p> <p>To support wetland and floodplain restoration as an effective mean of enhancing flood protection, and more generally to analyse and identify the best response to flood risk (...)</p> <p>To extend the coverage of the European Floods Alert System (EFAS) system to the whole Danube river basin, (...)</p> <p>To strengthen operational cooperation among the emergency response authorities in the Danube countries and to improve the interoperability of the available assets</p> <p>To continuously update the existing database of accident risk spots (ARS Inventory), contaminated sites and sites used for the storage of dangerous substances</p> <p>To develop rapid response procedures and plans in case of industrial accidental river pollution</p> <p>Anticipate regional and local impacts of climate change through research</p> <p>To develop spatial planning and construction</p>	<p>Action 2.1. Protection and rational management of natural resources</p>	<p><u>Synergy and complementarity but also different focus:</u> the Carpathian Strategy has focus on Carpathian specificity e.g. with regard to climate change or specific risks</p>

		activities in the context of climate change and increased threats of floods		
Priority Area 06 — To preserve biodiversity, landscapes and the quality of air and soils (PA6)	Preservation of biodiversity and landscapes”	<p>To contribute to the 2050 EU vision and 2020 EU target for biodiversity</p> <p>To manage Natura 2000 sites and other protected areas effectively</p> <p>To protect and restore most valuable ecosystems and endangered animal species</p> <p>To explore together the appropriateness of reviewing the Convention Concerning Fishing in the Waters of the Danube</p> <p>To develop green infrastructure in order to connect different bio-geographic regions and habitats</p> <p>To reduce the spread of invasive alien species</p> <p>To decrease the input of pesticides into the environment of the Danube Region</p> <p>To remove safely obsolete pesticides and other obsolete chemicals in the area of Danube Region</p> <p>To prepare and implement transnational spatial planning and development policies for functional geographical areas (river basins, mountain ranges etc)</p>	Action 2.1. Protection and rational management of natural resources	<u>Synergy and complementarity</u> but also different focus: the Carpathian Strategy has Carpathian specific focus on forests and Carpathian mammals like wolf, lynx or brown bear
	Preservation and improvement of the quality of soils	<p>To ensure appropriate treatment of solid waste</p> <p>To create standardized and compatible information on land cover on transnational basis</p> <p>To raise awareness about soil protection</p>		<u>Synergy and contribution:</u> The Carpathian Strategy in general promotes the protection of soils but as broader undertaking of protection of the Carpathian ecosystem. But the work on the Danube Region Strategy on awareness rising will be very beneficial also for the Carpathian Region
	Improvement of air quality	To decrease air pollutants	Action 2.1. Protection and	<u>Synergy and contribution:</u> the

			rational management of natural resources	Carpathian Strategy promotes clean air under circular economy concept and as a part of clean green industry. For the rest the Strategy for the Danube Region is sufficient also for the Carpathian Region
	Education of people on the value of natural assets, ecosystems and the services they provide	<p>To raise awareness of the general public, by acknowledging and promoting the potentials of natural assets as drivers of sustainable regional development</p> <p>To educate children and young people</p> <p>To build capacities of local authorities in the environment-related matters</p>	Action 1.4. Development of macro-regional innovation ecosystem	<u>Synergy and complementarity but also different focus:</u> the Carpathian Strategy has Carpathian specific focus on forests and mountains ecosystem
Priority Area 07 —To develop the Knowledge Society (research, education and IC) (PA7)		<p>To cooperate in implementing the flagship initiative “Innovation Union of the Europe 2020 Strategy” in the Danube Region countries</p> <p>To coordinate better national, regional and EU funds to stimulate excellence in research and development, in research areas specific for the Danube Region</p> <p>To strengthen the capacities of research infrastructure</p> <p>To strengthen cooperation among universities and research facilities and to upgrade research and education outcomes by focusing on unique selling points</p> <p>To develop and implement strategies to improve the provision and uptake of Information and Communication Technologies in the Danube Region</p> <p>To draw up internet</p>	Action 3.2. Increasing the digital accessibility	<u>Synergy and complementarity but also different focus:</u> the Carpathian Strategy has specific focus on themes and sectors prospective in Carpathian circumstances such as: bio-science (bio-preparations, mycelia, genetic banks of Carpathian species), timber/wood processing, mining and extractive industry or renewable energy, agro-food, organic food, processing of agricultural products, and tourism.

		<p>strategies</p> <p>To use e-content and e-services to improve the efficiency and effectiveness of public and private services</p> <p>To stimulate the emergence of innovative ideas for products and services and their wide validation in the field of the Information Society, using the concept of Living</p>	<p>Action 3.3. Developing e-services system</p>	<p><u>Synergy and complementarity but also different focus:</u> in the Danube Region Strategy the aim is to develop knowledge society whereas the Carpathian Strategy promotes IT development as a vehicle for decrease of the negative results of the peripheral location and isolation</p>
			<p>Action 1.1. Development of the clean, green industries</p>	<p><u>Synergy and complementarity but also different focus:</u> in the Danube Region Strategy the aim is to develop e-services in order to improve efficiency of the public and private sector and in the Carpathian Strategy is a vehicle for overcoming barriers of peripheral location and isolation</p>
<p>Priority Area 08 —To support the competitiveness of enterprises(PA8)</p>		<p>To foster cooperation and exchange of knowledge between SMEs, academia and the public sector in areas of competence in the Danube Region</p> <p>To improve business support to strengthen the capacities of SMEs for cooperation and trade</p> <p>To support enterprises through high performing training and qualification schemes</p> <p>To prioritise the effective implementation of measures provided for under the Small Business Act for Europe</p> <p>To improve the competitiveness of rural</p>	<p>Action 1.3. Increasing the competitiveness of the agro-food sector</p>	<p><u>Synergy and complementarity but also different focus:</u> the Carpathian Strategy has specific focus on themes and sectors prospective in Carpathian circumstances such as: sustainable wood processing, mining and extractive industry or renewable energy, agri-food, organic food and processing of agricultural products and some others.</p>

		<p>areas and in particular of the agricultural sector</p> <p>To eliminate cross border barriers and bottlenecks to people and business - Seamless Europe for a livable Danube Region</p> <p>To improve framework conditions for SMEs in areas where competitive infrastructure is missing</p>		<p><u>Synergy and complementarity but also different focus:</u> the Carpathian Strategy has specific focus on mountain farms, traditional, regional mountain food and products as well as niche and pro-ecological specializations, e.g. pastoralism, horticulture, herbalism, wickerwork etc.</p>
<p>Priority Area 09 —To invest in people and skills(PA9)</p>		<p>To enhance performance of education systems through closer cooperation of education institutions, systems and policies</p> <p>To foster cooperation between key stakeholders of labour market, education and research policies in order to develop learning regions and environments</p> <p>To support creativity and entrepreneurship</p> <p>To support the mobility of workers, researchers and students through implementing the European Qualification Framework</p> <p>To jointly analyse implementation gaps in lifelong learning (LLL) policies and exchange best practices in implementation</p> <p>To improve cross-sector policy coordination to address demographic and migration challenges</p> <p>To fight poverty and social exclusion of marginalised communities in the</p>	<p>Action 4.1. Spatial planning</p>	<p><u>Synergy and contribution:</u> the Carpathian Strategy promotes investing in skills under several actions but in relation to the mountainous specificity and needs of the local labour markets . For the rest the Strategy for the Danube Region is sufficient also for the Carpathian Region.</p>

		<p>Danube Region, especially the Roma communities</p> <p>To implement the actions undertaken in the Roma Decade and to establish further actions to be implemented</p>		
<p>Priority Area 10 —To step up institutional capacity and cooperation(PA10)</p>		<p>To combat institutional capacity and public service related problems in the Danube region</p> <p>To improve the trust of citizens and stakeholders in political authorities</p> <p>To establish a Danube Civil Society Forum</p> <p>To ensure sufficient information flow and exchange at all levels</p> <p>To facilitate the administrative cooperation of communities living in border regions</p> <p>To build Metropolitan Regions in the Danube Region</p> <p>To review bottlenecks relating to the low absorption rate of EU funds and to ensure better coordination of funding</p> <p>To support the development of local financial products for business and community development</p> <p>To examine the feasibility of a Danube Investment Framework</p>	<p>Action 4.2. Cross border and transnational cooperation and programming</p>	<p><u>Specific focus and added value:</u> Spatial planning is proposed in the Danube Region Strategy mainly with regard to smaller functional areas whereas in the Carpathian Strategy this is among the top priorities reinforcing implementation of other priorities. Specific for the Carpathian region is focus on small and medium size urban centers and their co-operation.</p>
			<p>Action 4.2. Cross border and transnational cooperation and programming</p>	<p><u>Specific focus and added value:</u> Macro-regional planning is not prominent in the Danube Region Strategy whereas in the Carpathian Strategy this is among the top priorities facilitating implementation of other priorities.</p>
<p>Priority Area 11 —To work together to tackle security and organised crime(PA11)</p>		<p>To support the Danube states in the administrative cooperation and improvement of qualifications of law enforcement, judicial authorities and other services</p>		<p><u>Synergy:</u> The Carpathian Strategy has only few actions to security and organized crime related to co-operation of border guards. For the other issues the Strategy for the Danube Region</p>

		<p>To improve target collection and share key criminal information; to draw a picture of the most significant threats in the countries involved(...)</p> <p>To strengthen the cooperation of Europol with Southeast European Co-operative Initiative – Regional Centre for Combating Trans-border Crime (hereinafter: SECI/SELEC)</p> <p>To develop further well-functioning border-management systems</p> <p>To intensify the prosecution of Internet crime (cybercrime)</p> <p>To explore possibilities to extend the current pilot project on exchanges of advanced customs information in the Region</p> <p>To address the topic of better managing migration issues in the Danube Region</p> <p>To continue demining in the mine-suspected areas of the Danube area</p> <p>To improve food security in the Region</p> <p>To establish standardised operational procedures for joint activities in case of transboundary technical-technological water traffic accidents</p>	<p>seems to propose adequate measures for the Carpathian Region.</p>
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