



VASICA

Visions And Strategies In The Carpathian Area

Protection and Sustainable Spatial Development
of the Carpathians in a Transnational Framework



VASICA

Visions and Strategies In The Carpathian Area

PUBLISHED BY THE CARPATHIAN PROJECT

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This publication has been produced in the framework of the Carpathian Project under the INTERREG III B CADSES Neighbourhood Programme and co-financed by the European Union.



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PRINTED BY:

Printeam s.r.l., Viale Europa 53, I-39100 Bolzano;
Printed on Revive pure natural offset paper 100/300g
For and on behalf of the Carpathian Project

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PREFACE

The results of the EU CADSES Carpathian Project have demonstrated that environmental and developmental objectives can be balanced, if the future is built upon the region's advantages and potentials and typical mountain challenges are addressed in a coordinated manner.

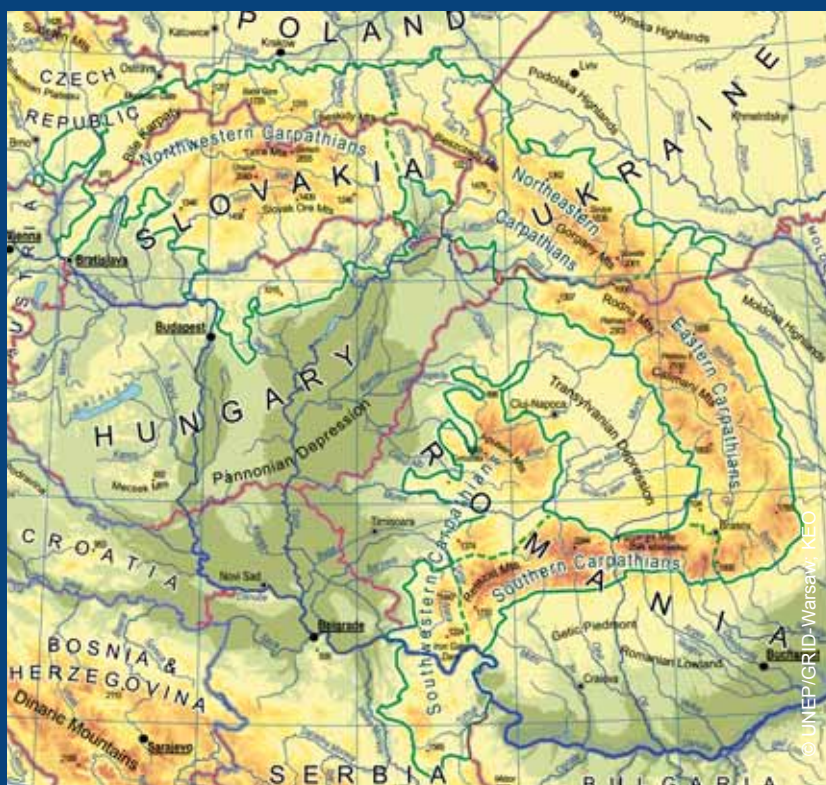
VASICA (Vision and Strategies in the Carpathian Area) is a trans-national spatial development document and a key result of the EU CADSES Carpathian Project. Similar synthetic documents have been prepared for several large cooperation areas in Europe in the last decade. The first and best known of these documents was the "Visions and Strategies around the Baltic Sea, (VASAB)", prepared in 1994, constituting a source of inspiration in form and content.

The Carpathians are Europe's largest mountain range, shared by seven Central and Eastern European countries: the Czech Republic, Hungary, Poland, Romania, Serbia, Slovak Republic and Ukraine. The diversity of the natural heritage is one of the biggest assets of the Carpathian region. The Carpathian area is a living environment inhabited by millions of people, but is subject to a variety of threats and adverse impacts from land abandonment, habitat conversion and fragmentation, deforestation, climate change, and large scale migration to industrialization, pollution, and exploitation of natural resources.

The Carpathian Convention, signed in 2003 in Kyiv, enshrines a common vision, integrates developmental and environmental goals, provides objectives for action and constitutes the strategic framework for cooperation to address these challenges in a transnational context. It is calling for the development of coordinated spatial planning policies aiming at the protection and sustainable development of the Carpathians. The Carpathian Convention is, at present, the only multi-level governance mechanism covering the whole Carpathian area, allowing for cross-sector integration and broad stakeholder participation.

No common regional development strategy has been prepared on the complex economic, environmental, social, and spatial problems of the Carpathian area. Therefore, the Carpathian Project had to face a pioneering task. VASICA deals with the specific development opportunities and problems of the Carpathian area and its mountainous regions.

VASICA calls for the establishment of a support mechanism for the "Carpathian Space" in European Territorial Cooperation following the success of the Alpine Space; shifting this trans-national area from the periphery to a region of sustainable development in the heart of Europe based on its exceptional cultural and natural heritage.



► Figure 1: The Carpathian mountains and their sub-units;

1 INTRODUCTION

The Carpathians are Europe's largest mountain range, shared by seven Central and Eastern European countries: the Czech Republic, Hungary, Poland, Romania, Serbia, Slovak Republic and Ukraine. The biggest asset of the Carpathian region is its uniquely diverse natural and cultural heritage which provides a haven for wildlife and culture which acts as a cultural, ecological link with Europe. The Carpathian area is a living environment inhabited by millions of people, but is subject to a variety of threats and adverse impacts from land abandonment, habitat conversion and fragmentation, deforestation, climate change, and large scale migration to industrialization, pollution, and exploitation of natural resources.

The Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention) signed in 2003, enshrines a common vision which integrates developmental and environmental goals and provides objectives for action and constitutes the strategic framework for the cooperation to address these challenges in a transnational context. It is calling for the development of coordinated spatial planning policies aiming at the protection and sustainable development of the Carpathians.

The overall objective of the Carpathian Project is to develop the Carpathian Convention into an operational and truly transnational platform, allowing for the implementation of the most relevant EU policies across the Carpathian region. The project demonstrates that environmental and developmental objectives can go hand in hand, if the future is built upon the region's advantages and potentials, and typical mountain challenges are addressed in a coordinated manner.

Actions under the project cover an area, which has not been so far comprehensively examined by spatial factors, and for which no consistent vision of sustainable development has been created.

The long-term objective of the project is to protect diversity and accelerate the sustainable development of the Carpathian region by improving the European cohesion of the area and by preserving its natural and cultural heritage.

The Carpathian Convention was developed between 2005 and 2008 by UNEP Vienna – Interim Secretariat of the Carpathian Convention and RTI Polska together with Carpathian Convention Signatories and the broad project consortium of partners from 11 countries. The project builds on the intergovernmental cooperative platform of the Carpathian Convention. UNEP Vienna - Interim Secretariat of the Carpathian Convention leads the project with the support of the seven Carpathian Convention Parties and Signatories.

VASICA summarizes many actions developed within the Carpathian Project and forms the basis for further activities of the Carpathian Convention in the field of spatial development.



► Forest Sunrise in Domogled Valea Cernei National Parc, Romania;

2 ABOUT VASICA

VASICA is a trans-national spatial development document, prepared in the framework of the Carpathian Project. Similar synthetic documents have been prepared for several large cooperation areas in Europe in the last decade. The formerly prepared strategies developed a “standard” form and content of such documents. The first and best known of these documents was the “Visions and Strategies around the Baltic Sea, (VASAB)”, prepared in 1994. The idea for the title of the VASICA document was influenced from former transnational spatial planning documents. VASICA is unique from other similar documents because the Carpathian area is substantially different from other regions and because many improvements in the field of transnational spatial planning have been made since 1994.

The Carpathian Project was faced with the pioneering task of preparing planning documents catering to individual national economies. There are also cross-country studies and strategic papers dealing with some specific problems such as macro-economy, environment, and agriculture. The problems associated with environmental conservation have been better elaborated due to the Carpathian Convention. Nevertheless, no common spatial planning document, plan or strategy was prepared so far on the complex economic, social and spatial problems of the Carpathian area as a whole. There are many reasons for that failure. Since 1918, the region was characterized by small state conflicts and rivalries. Even if sometimes efforts of coordination were made, disinterest and great powers influence brought about their failure.

In the last decade, several Europe-wide spatial documents have been prepared. Among them are the Leipzig Principles of EU member states (1994), the European Spatial Development Perspective (ESDP, 1999), the Guiding Principles for the Sustainable Spatial Development of the European Continent (2000), the Community Strategic Guidelines 2007-2013 (2006), and more recently the Territorial Agenda of the European Union and the Territorial State and Perspectives of the European Union

(both May 2007). One should mention also the Vision PlaNet, an INTERREG IIC CADSES project initiated by Austria, Germany and Italy, comprising the Central European, Adriatic, Danubian and partly the Southeast European space. This project aimed at a better mutual understanding of spatial development processes, instruments and institutions in this part of Europe. Within Vision PlaNet, the challenging process of identifying Central and Eastern European transnational areas, including the Carpathian Development Region, has been elaborated. The Carpathian Development Region was identified there in 1999, as a transnational development area for future actions.

Furthermore, there are guidelines for specific European policies such as transport, tourism, water economy, management of cultural and natural heritage, and environment. The principles, guidelines and proposals contained in these documents are fully accepted and followed in the VASICA document. Nevertheless, these European documents do not fully cover the specific spatial development problems of the new member states generally, and those of the Carpathian regions specifically. On the one hand, a part of these documents were prepared before the accession of the Central European countries, consequently their specific problems were not dealt with.

On the other hand, the problems of Carpathian countries and regions were not sufficiently emphasised and dealt with even by the more recent documents, because they are too specific to include them in a Europe-wide document. Problems such as the territorial impacts of mass re-privatization and de-collectivization of neglected city centres, mass poverty, and minority affairs are unique to the Carpathian and Southeast European countries and could not be fully enclosed in All-European governing documents.

Therefore it has been decided to not just repeat the All-European general strategic principles of sustainable spatial development in the Carpathian area. Documents governing over the Carpathian region must not only deal with the specific problems of Carpathian countries but more importantly the mountainous areas of the region. It means that in order to implement a successful spatial planning and policy in the Carpathian area, one should

keep in mind not only specific proposals and recommendations (contained in VASICA), but the general principles and guidelines contained in European documents as well. None of them are sufficient alone.

The Carpathian Convention (Framework Convention on the Protection and Sustainable Development of the Carpathians), which was adopted and signed by all seven Carpathian countries in Kyiv, in May 2003, was of special importance for drafting the VASICA document. The provisions of the Convention give reference to spatial planning, agriculture, forestry, industry, energy, tourism, and cultural heritage. It is, at present, the only transnational document, adopted and signed by the respective governments and referring to the whole of the Carpathian area. Therefore, its significance cannot be exaggerated.



► Conference of the Parties of the Carpathian Convention 11-13 December 2006, Kyiv, Ukraine

Carpathian Project Experience



Geoportal Carpathian is one of the most successful products of the Carpathian Project. It enables to see the maps concerning the Carpathian Region in different scales, to compare them and to make the user's own analyses. The maps produced by the Carpathian Project are also published in a traditional way – as the printed Carpathian Atlas. But the Internet version makes them accessible to a much wider audience.

How does it work? A map window is placed in the center of the screen. You can choose which elements should be visible on the map by using specified tools: data layer, scale slider, pan arrows, and special buttons/tools. You can see information about the objects when hovering over an icon. You can choose which elements should be visible on the map by using the following tools: data layer, scale slider, pan arrows and special buttons/tools. You can see information about the objects when hovering over the icon.

The map profiles (map themes) are placed above the map window, legend and database tabs are located on the right side (there is also a button for displaying a new miniature window). All navigation tools and functions are located under the map window.

The Data layer tab provides a list of available map layers. The user can check boxes enabling or disabling layers. After turning layers on or off, click the RELOAD MAP link to show the resulting map window. This allows the user to make several layer changes without having to wait for the map to update between each change.

The Countries tab provides a list of Carpathian countries. You can select a country from the list to see general information. The scale slider allows you to choose a value of scale by dragging the handle along the bar, or you could type in the desired scale into the box provided. Panning arrows are located in the upper portion of the map window. A miniature window displays all the information about the space including a location indicator.

The function of the VASICA document is different:

- It is not a document requiring high level official approval;
- It is not a comprehensive long term plan or programme for the Carpathian area;
- It is not an all encompassing document of the Carpathian Project. VASICA is the only deliverable documents prepared in the framework of the Carpathian Project, and it plays an undoubtedly specific role among the deliverables;
- It is a conceptual document based on a social-economic analysis, which is exploring some development opportunities in the Carpathian area and sets some priorities for development actions;
- It is focusing on problems and tasks specific to the Carpathian area.

This document addresses three levels of classification found in the Carpathian region. The first classification is the proper mountain area with a minimum elevation of 600 meters and a minimum slope of 20°. The second is the fore-land, or the foot of the mountains, which is in direct contact with the mountainous areas and where a large

portion of the services for mountain populations are located. The third level is the wider region, including the NUTS3 (in Ukraine NUTS2) level administrative units to which the mountainous areas belong. Most of the statistical data and analyses refer to these latter units. This is a rather large area of 446 km² and 53-54 million inhabitants. This classification of the Carpathian region is justifiable for several reasons. First, a substantial part of necessary data is available only for this level of territorial units. Second, if recommendations and proposals are to be implemented, the responsible authorities are acting on these levels; finally, economic, social, transportation, education, and environmental problems of mountain areas can be solved only in this wider spatial context.

The VASICA document has 13 chapters. With the exception of the first five, all chapters consist of two parts: the first part is the presentation of the problems; the second part contains the policy recommendations and proposals for actions.

During the preparation of VASICA the GIS databases and appropriate technologies were used to provide VASICA with maps and other cartographic materials, which were published on the Carpathian Geoportal. Interactive maps of development issues for the entire Carpathian transnational region (at a scale of 1:2000000)

have been prepared jointly for the whole area. The document takes into account the joint development potentials for cross border areas.

Presently, most of the Carpathian countries are reaping the first benefits of their accession to the EU. There is opportunity for faster technical and socio-economic stabilization as well as development potential for the transnational region. This must bring about a change in goals and strategies for development which would shift the transnational region from the role on the periphery to a more engaged role

within the EU. The benefits of this changed strategy should help in the decision making processes of national and regional administrations. VASICA should help coordinate actions, especially those regarding cross-border areas. Benefits are also expected in the form of intensified international cooperation at multilateral and bilateral levels.

Carpathian Project on the Web

All the reports mentioned in VASICA are accessible on the Carpathian Project webpage. It has links to the Carpathian Convention documents as well. Carpathian Geoportal is a part of this webpage, enabling users their own analyses through the interactive access of data from the Carpathian Atlas and other maps produced within the project.

www.carpathianproject.eu





► Mountain Chain in Retezat National Park, Romania

3 THE CARPATHIAN REGION IN EUROPE

The Carpathian Mountains are the Eastern Wing of the Great Central Mountain System of Europe, curving on the territory of eight Central and Eastern European countries (Austria, Czech Republic, Slovakia, Hungary, Poland, Ukraine, Romania and Serbia). The Carpathians begin on the Danube River near Bratislava; they surround Transcarpathia and Transylvania in a large semicircle sweeping towards the southwest and end on the southern bank of the Danube near the Iron Gate in Serbia. The length of the Carpathians reaches over 1500 km, and the width of the mountain chain varies between 12 km and 500 km. The greatest width of the Carpathians corresponds with their highest altitudes. The system attains its greatest breadth in the Transylvanian plateau and in the meridian of the Tatra group (the highest range with Gerlachovský štít, at 2655 m in Slovak territory near the Polish border). It covers an area of 190000 km², and, after the Alps, it is the most extensive mountain system in Europe.

Although commonly referred to as a mountain range, the Carpathians do not form an uninterrupted chain of mountains; rather, they consist of several orographical and geological distinctive groups presenting as a great variant to the Alps. The Carpathians with few peaks extending over 2500m lack the bold summits, extensive snow fields, large glaciers, high waterfalls, and numerous large lakes that are common in the Alps. No area of the Carpathian range is covered with snow year-round, and there are no glaciers. The Carpathians at their highest altitude are only as high as the Middle Region of the Alps, with which they share a common appearance, climate and flora.

The Alps and the Carpathians share many economically disadvantageous geographic and natural features:

- Both spaces as mountainous areas are less favoured for agricultural production;
- Both are geologically younger mountain ranges and therefore poorer in mineral wealth (in this respect, the endowment of the Carpathians is even somewhat better);

- Both are difficult to cross and hard to access;
- Both were peripheral areas in their respective countries; large sections of the mountain ranges constituted borders between countries and were far from large urban centres.

Consequently, up until the middle of the 19th century, they shared the phenomena of poverty, agricultural population and large scale emigration.

After the middle of the 19th century, however, development trends bifurcated radically:

- The Alpine space could live up to its few advantages: central situation in Europe, beautiful scenery, healthy conditions, tourism and winter sport opportunities and highly skilled craftsmanship;
- Most of the Carpathian regions did not have these opportunities or could not exploit them fully. The regions of better endowment from mineral wealth have now become a disadvantage due to the emergence of industrial crises and brown-field problems;

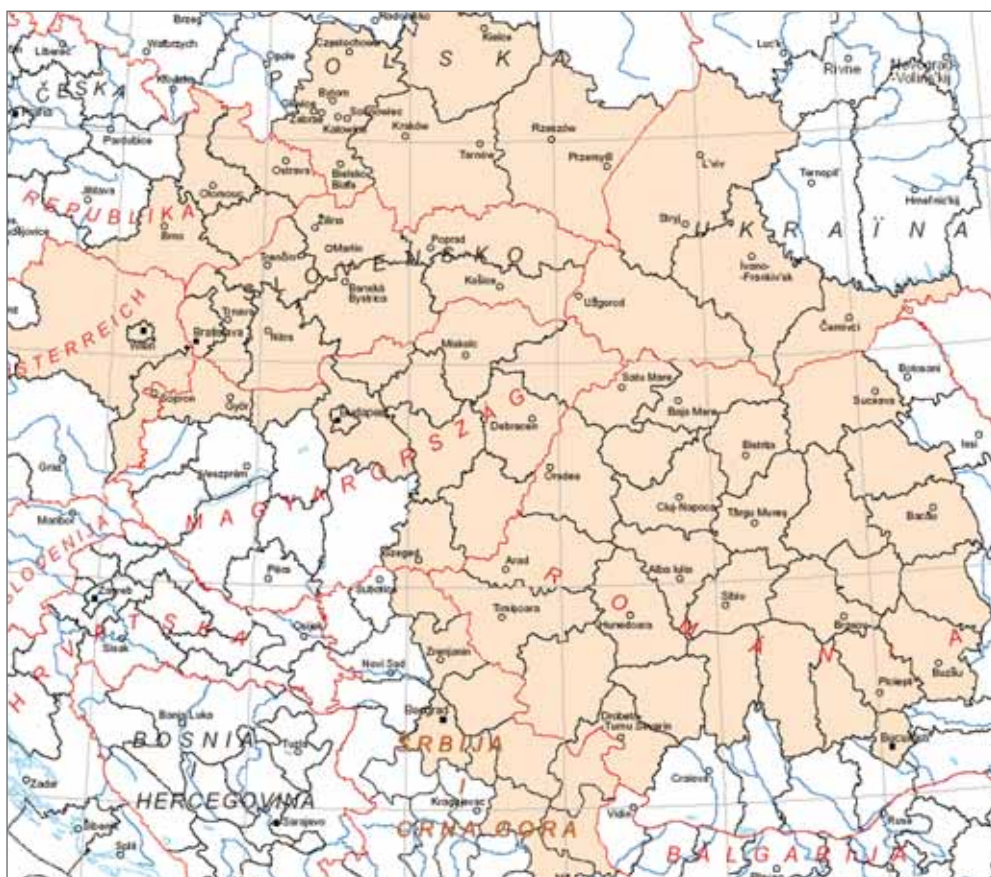
- Today the Alps are one of the most advanced and richest regions within rich countries;
- Today the Carpathian regions belong to the poorest regions within poor countries.

Diverging development trends are characteristic for the whole of Western and Eastern

Europe, but in respect to the Alps and the Carpathians, this divergence is stressed more than elsewhere.

Today, the main objective in the Carpathian area is to reverse this diverging trend and to diminish the development gap between the two mountainous regions in the middle of Europe.

Figure 2: Map of the Carpathian Development Region



Source: Author's construction

The delineated “Carpathian Region”

For the purposes of the analysis and strategy building in the Carpathians, a wider area has to be delineated as the Carpathian programme area. This delineated area comprises a much larger area (460,000 km²), including the fore-lands, than the area of the Carpathian Mountains (190,000 km²). Furthermore, it is delineated according to the administrative regions of the Carpathian area (NUTS2 regions in Austria, Poland and Ukraine; NUTS3 regions in the Czech Republic, Hungary, Romania, and Serbia) in order to have a larger data base for analysis and to enable the participation of regional governments and their

administration. According to this delineation, the whole territory of Slovakia is regarded as part of the Carpathian region. According to this delineation, the whole territory of Slovakia is regarded as part of the Carpathian region.

This larger area has a population of nearly 53 million, which is comparable to the population size of Britain, France and Italy in Europe. It is about 7.6% of the European population, and somewhat less than 5% of the European territory.

The breakdown of the Carpathian Region according to countries is shown in the Table 1.

Table 1: Main indicators of the Carpathian area (2004)

Country	Carpathian area km ²	Carpathian population thousands	As a percentage of the		As a percentage of the	
			Country's area	Country's population	Carpathian area	Carpathian population
Austria	23558	3373	28.1	41.6	5.3	6.3
Czech Republic	21723	3632	27.5	35.6	4.9	6.8
Hungary	54322	7286	58.3	72.9	12.2	13.6
Poland	45514	10138	14.6	26.3	10.2	18.9
Romania	165013	13920	69.5	62.1	36.9	26.0
Serbia	31567	3568	35.7	35.2	7.1	6.7
Slovakia	49034	5379	100	100	11.0	10.1
Ukraine	55895	6217	9.3	12.8	12.5	11.6
Total	446626	53513	28.4	34.9	100	100

Source: national statistical yearbooks



► Landscape view in the Carpathians

4 A BRIEF ANALYSIS OF THE CARPATHIAN AREA

The Carpathian region in Europe stretches over the area of eight countries (Austria, Czech Republic, Hungary, Poland, Romania, Serbia, Slovakia, and Ukraine), comparable in population and land area to the Alps. However, much less attention was paid to the Carpathians in development, economics, and the security of biological/cultural diversity compared to the Alps. As of the 1st of January 2007, six Carpathian countries are members of the European Union. Ukraine and Serbia, although not part of the EU, are of key importance to the security and development of Europe. One of the most important aims of the Carpathian project is to call the attention of European decision-makers to this unique region, its strengths and weaknesses, development opportunities, and the threats of non-action to this area.

4.1 The SWOT Analysis

Below is a sample SWOT analysis of the Carpathian area. One of the responsibilities of this project is to elaborate on the specific details of particular items in the SWOT analysis.

The strengths of the Carpathian Area

There are several places in the Carpathians having well equipped and relatively easily accessible recreation and winter sport facilities. The most important of them are Zakopane (PL), Tatranská Lomnica, Starý Smokovec, Štrbské Pleso (SK), Sinaia, Azuga and Predeal (RO).

The Carpathians are rich in medicinal mineral water sources and spas. Major spas are Krynica in Poland, Piešťany, and Teplice in Slovakia, Borsec, Sovata, Băile Tușnad, Covasna, and Băile Herculane in Romania.

The Carpathian Mountains stretch over an area of eight European countries (the most in the world) and are situated in an political, economical, environmental and from the point of European security important place in the middle of Europe. Their situation calls for more attention and for more effort to cope with their problems.

The Carpathian area is one of the regions in Europe where old rural architecture and different rural arts and crafts have been best preserved. They are one of the attractions of tourism, and if adequately organized and marketed, can be sold to a wider public.

The Carpathian area is rich in forests. It has special importance in Central Europe where a rather small share of surface area is forested (e.g. 60 percent of all the forested area of Ukraine is in the Carpathians). This could form the basis for a competitive wood-processing and furniture industry. Competitiveness could be enhanced by cooperation of enterprises in the different Carpathian countries and by coordination of their strategies.

The Carpathian area is rich in rivers, which are suitable for the generation of hydroelectric power. Regarding that most river basins are stretching over state borders, these developments require transnational coordination.

The Weaknesses of the Carpathian Area

Presently, problems and weaknesses contained in the Carpathian area are unfortunately more numerous than its strengths.

From a geographical point of view the Carpathian Area is like the Alps, a geographically youthful mountain range. Youthful ranges are less suitable for larger settlements and are poorer in mineral wealth; however, some oil and other resources have been found in the foothills of the Carpathians. While ancient mountain areas are often attracting population and economy, youthful ranges have in many cases a “repulsing” effect. The Carpathian area belongs to the less developed areas, even in Central European context. Mountain areas are less suitable for agriculture; arable areas cannot reach altitudes higher than 600-700 metres.

Despite of being lower than the Alps, and mainly for historical, and economic reasons, the Carpathian range is less passable than the Alps. The mountain range is 1,450 km long and there are only 12 railway lines crossing the mountain range (five of which are on the Czech-Slovak border). There is no motorway crossing the Carpathians. Because of the poor accessibility, potential tourism levels are at low levels and are not being utilized effectively.

Agricultural endowments of the area are poor. Despite of these unfavourable conditions, agricultural population density was relatively high, surpassing the carrying capacity of the area. The result was poverty and high emigration from the area in the last 150 years. The Carpathian area was one of the regions with the highest emigration in Europe in this period. But agricultural overpopulation caused also other unfavourable developments in the area. The area, suitable for efficient and large scale plant production is small; steep slopes are more exposed to erosion and many areas are already eroded.

The Carpathian area is so peripheral that markets and large urban centres are inaccessible, too far, and difficult to travel to.

Large portions of the Carpathian mountain range are border regions where international trade and policy can be time consuming from both a technical and administrative point of view. These types of borders are serious hindrances of economic cooperation and integration. For centuries, large parts of the Carpathians were part of the border area and neglected periphery. The Carpathians still serve as a national border between Slovakia and Poland. Even though other former borders of the Carpathians are now located inside the countries, other problems appeared: In Ukraine, Transcarpathia which is isolated by the Carpathian mountain range from the rest of the country, has become an even more peripheral region than before. For Romania, the Carpathians divide the country into two and have remained one of the obstacles of full national integration.

In the last century, state borders have been in a constant state of flux; the ethnic composition of countries was changed substantially. The former Soviet Union border areas were deliberately undeveloped and unindustrialized. Political factors were unfavourable and among the causes of economic underdevelopment. The promotion of Carpathian development was not enhanced as the Carpathians were mostly inhabited by ethnic minorities and not by the respective titular nation. In

the Pre-World War I era, the Hungarian Carpathians were inhabited by the Slovaks, Rusyns and Romanians. Post-World War I, the Carpathian parts of Poland and Czechoslovakia were inhabited by Ukrainians and Rusyns; in some parts of Romania by Hungarians.

The consequences of the communist economic system can still be felt today. Smaller and medium size cities at the foot of the mountain range have lost their important market function as places of exchange and processing of products from the mountains and from the plain. Small and medium size enterprises are missing. Many smaller cities are “one-factory” towns, economically depending entirely on one single industrial plant.

Nearly forty years of communist centrally planned economy caused substantial damage to the Carpathian area. The system of central planning did not consider the specificities of mountainous areas; countries have adopted national uniform methods of development by setting planned targets for progress. This led to serious deforestation in Ukraine and Romania. Collective farms were organized in areas where conditions were unfavourable for large scale production. In some regions of Romania, collectivization was never implemented but these areas did not receive any support by their state. Industrialisation was implemented in the Slovak Carpathians and selective parts of Romanian Carpathians (Brasov), but was largely dedicated to arms industries. The mountainous areas could offer opportunities for tourism, but tourism was not a preferred sector in the socialist economy. International tourism was rather restricted in some countries hermetically isolated from the outside world.





► Certovica to Chopoc, Nízke Tatry National Park, Slovakia

Opportunities of the Carpathian area

The Carpathian area is one of the very few regions in Central and Eastern Europe where the number of population is still growing. It is a large reservoir of educated, skilled (cheap) and relatively young European labour force.

The Carpathians have great potential for tourism. Winter sports facilities are confined to a small number of places mainly in the Western Carpathians (Zakopane, PL; Poprad, SK); but also other regions offer suitable potential. The Carpathians are also home to large national parks with pristine environments of natural beauty that see relatively few visitors.

An important opportunity lies in the revival of medium sized cities along the “market line” at the edges of the Carpathian mountain range. These towns were the centres for the exchange of goods produced in the mountains and plains. The decline of this function in past decades is due to the communist economic system and the holocaust (a large portion of the merchant class in these cities were of Jewish origin). Many of these cities are now in a critical situation because some of the industries located there during the centrally planned economy are declining. Trade, processing and marketing of the products of the mountain areas (like mountain foods) could constitute an important part of the economic base of these towns.

Threats in the Carpathian area

Rural population pressure together with the shortage of arable land hint to the threat of deforestation, overgrazing, and inadequate use of mountain slopes for agricultural purposes. These practices are increasing the hazard of flood, landslide and land degradation.

Climate change, without preventive measures, could also cause the growing threat of floods and the radical decrease of winter sport activities.

A certain level of migration from the Carpathian area is unavoidable and may even have some beneficial impacts on the economic and social problems such as lower rural population pressure and income transfers. In the absence of economic development and improving accessibility, emigration can take excessive dimensions, spoiling the future possibilities of economic development.

Huge socio-economic and security gaps along the external borders of the EU could give rise to different semi-legal or illegal activities. Illegal employment, smuggling of people and commodities, huge price differences in the provision of services, cross-border service provisions, and environmental dumping and export of waste materials can cause increasing tensions in the border area which restricts integration.

In some border areas, a fairly significant part of the population is employed from small scale illegal or semi-legal activities such as the smuggling of fuel and other commodities. Prosperous settlements and illegal activity take larger dimensions; the money earned is not invested in productive activities but in the construction of apartment houses that serves as a form of money laundering. All these developments give rise to adverse income distribution not based on work but on illegal activities.

In the Carpathian area – especially at the edges of the North Eastern and Eastern Carpathians – lives a large part of the European Roma population. A majority of the population have living conditions that have deteriorated in recent decades. Social tensions caused by these developments are substantial, and if measures are not taken to remedy the situation, serious conflict could emerge in this area.

Besides the Roma population there are other ethnic minorities in the area. Their status has improved in the last decade, but it cannot be regarded as stable. At any time, nationalist parties can come into power in any country of the region; should this happen, the region could face serious tensions.

The Carpathian region is now the Eastern external border area of the European Union. The future of the enlargement process of the European Union is still uncertain. But whatever policy will be pursued concerning enlargement, the securing of political balance requires cooperation with neighbouring countries to stabilize their economy and improve the living conditions of their respective populations.



► Gerlach Peak, High Tatras, Slovakia

5 STRATEGIC OBJECTIVES IN THE CARPATHIAN REGION

The aim of the Carpathian VASICA document (Visions and Strategies in the Carpathian Area) is to utilize and enhance the strength of the area, reduce its weaknesses, utilize its opportunities, and to avoid and prevent its threats.

Considering the listed strengths, weaknesses, opportunities and threats, four strategic objectives can be defined for the Carpathian area as a whole:

- Strengthen the internal cohesion of the Carpathian region,
- Strengthen the cohesion with other parts of the European territory,
- Enhance economic growth and job creation in the Carpathian area,
- Improved management of the region's environment and natural-cultural heritage.

5.1 Strengthening The Internal Cohesion Of The Carpathian Area

It is a general observation that the internal cohesion of the Carpathian region is weak. This weak cohesion has natural-geographic, technical-infrastructure, historical, political and ethnical-linguistic reasons:

- The Carpathian mountain range divides the region into two halves: areas inside of the Carpathian basin, and the areas outside of it. The two are divided by a 150 km wide hardly passable mountain range, which has been uninhabited or hardly inhabited for centuries. The mountain range was a natural defence system for the nations and regions on both sides, but simultaneously it separated them from each other and substantially restricted the interactions.
- The Alps are even less passable, nevertheless, the North-South routes were vital for the economic and cultural development of Western Europe, and therefore serious efforts were made to construct roads and railway lines across the Alps. The North-South connection in Central Europe, by contrast, was not a priority issue. Consequently, the number of trans-Carpathian roads and railways is insufficient and the capacity of the existing ones is limited.
- Historically, the Carpathian region was the border area of big empires like the Ottomans, Russian (Soviet), the German, and the Austrian-Habsburg empires. The joining of forces and solidarity was very rarely the political strategy of the smaller nations in this "border area". They looked more frequently for the support of one or more of the great powers to attain their political and military objectives. Conflict was more characteristic of inter-nation and inter-ethnic relations than collaboration.
- Sustaining hostility among the small nations was the tactic of great powers for many years, but these tactics were misused by some communist leaders to divert attention away from the worsening situation in their countries.

- Eight languages are spoken in the Carpathian region. Mutual understanding is somewhat less a problem in the case of the five Slavic languages (Czech, Polish, Serb, Slovak, Ukrainian), much more difficult with the other three languages (German, Hungarian, Romanian). Latin was the lingua franca until the 18th century, but this role was partly taken over by the German language in the 19th century. Russian was also a common language, but unfortunately was not as widely adopted in the Carpathian area for almost a half century. As a consequence, there are whole generations in the Carpathian countries that hardly can communicate with each other.

At the same time, there are some favourable preconditions for more cohesion:

- Carpathian countries and regions share – though in different languages - a common “Central European” culture. With the exception of some Eastern and Southern Romanian regions, all of the Carpathians were part of the Habsburg Empire for 150 years, some regions for much longer. This empire represented a peculiar milieu and a way of life which is still evident in every Carpathian country. Life under the Soviet hegemony was also a common experience. A strange consequence of the restrictions to traveling west was that people got more acquainted with neighbouring countries and the common fate and simultaneous efforts to change the political-economic system created solidarity between nations.
- Though the Carpathian Mountains are a geographic asset bounding countries and regions together, the geographic endowments within the range are highly differentiated. This could offer huge opportunities for product exchange in the framework of international trade. Nevertheless, from the

Collapse of the Habsburg Empire until EU accession, Carpathian countries discriminated each other in their foreign trade relations. It was true not only concerning the tariff-wars between the two World Wars, but also for the COMECON trade and partly even for the CEFTA co-operation. Only the EU accession abolished all the obstacles of economic division of labour between Carpathian countries and regions, and since 2004, economic relations and trade developed very rapidly.

- Finally, common intervention might be useful as members of the EU and in EU forums. Carpathian regions are among the least developed regions of the EU and the common presentation of their problems would give more emphasis to their claims.

The actions for achieving more internal cohesion in the Carpathian region would be the following:

- Development and improvement of transport and communication networks across and within the Carpathians;
- Supporting partnership and cooperation agreements between Carpathian countries, regions and cities;
- Supporting the creation of Euro-regions and converting them to regions of genuine common projects and efforts;
- Enlarging the Schengen zone with Romania as soon as possible;
- Facilitating border crossing also for citizens from non-EU Carpathian regions;
- Establishing cross-border passenger transport networks between the neighbouring parts of the Carpathian countries to

- strengthen micro-regional linkages, to promote tourism and facilitate commuting;
- Formulating more joint cross-border projects for improving the systems infrastructure;
- Enhancing exchanges of pupils and students and supporting language courses on the languages of the neighbours;
- Supporting mutual visits of theatres, ensembles and artists in the Carpathian regions.

Carpathian Project Experience

Policy recommendations for strengthening the internal cohesion of the Carpathian Region stemming from the Carpathian Project report on transport networks are as follows:

Maintain and improve the local passenger transport system in order to support a modal split and thus limiting a shift towards the use of private cars;

Upgrade facilities and quality systems of local transport systems (e.g. modal integration, comfort of vehicles, pedestrian and bike infrastructure, traffic management);

Fostering the use and further modernization of train infrastructure and a further modal integration to limit pressure on road construction due to increasing freight and other transport needs;

Support development of infrastructure and mobility systems in order to meet the needs of tourism transport. This should be carried out with making use of already existing infrastructure, such as narrow gauge railways, and striving for optimum solutions to keep land consumption, noise, and exhaust to a minimum by applying sustainable innovative means of transport;

Support the need for clear planning and policy formulation/implementation for sustainable transport to and in areas of high natural value with respect to absorption capacity to each area.

Policy recommendations for strengthening the internal cohesion of the Carpathian Region stemming from the Carpathian Project report on timber industry:

Enhance and facilitate cooperation between the Carpathian countries, the potential of modern concepts of nature conservation to be accepted and applied faster than in western European countries shall be used;

Elaboration and implementation of common strategies in order to optimize protection, security, and enforcement against illegal logging should be discussed. For the promotion of agro-environmental practices and traditional products, and implementation of forest-environmental schemes including tourism issues;

Policy should adopt action-plans regarding afforestation and transfer to gradual planned-selected cuts;

Improvement of the system of environmental assessment of forestry activities;

Establishment of a forest resource database with harmonized data for the Carpathian Region.

5.2 Strengthening The Cohesion With Other Parts Of The European Territory

Beyond the strengthening of internal cohesion, the Carpathian region is part of the wider European territory. The European integration process means that for the first time in the European history, this area is an equal member of the European community. This means that the most developed sections of Europe supports the adaptation and development of the Carpathian countries, but Carpathian countries should also contribute to all European stability development. The main challenges and tasks of the Carpathian regions in this respect are the following:

- One of the most important tasks is to be comparable to the more developed countries of the European Union. For the Carpathian regions, the principle model is the Alpine region. In recent years the growth rate of some Carpathian regions, such as Slovakia, is substantially higher than the EU average; therefore they contribute positively to the Lisbon objectives and the economic dynamics of the EU.
- This process does not connote the need that the Carpathian region and Western European models should be identical. Central Europe and the Carpathians have unique and peculiar characteristics which validate their preservation such as Carpathian food and drink, folklore, crafts, city and village structure, specialties of transportation, and agricultural practices. By preserving its peculiarities, the Carpathian region can contribute to the diversity of the European space.
- The border and bridge function: the Carpathian region is now the most important part of the EU external border. The EU has an external land border of 6,631 km, more

than a quarter (1,884 km) of which lies in the Carpathian region. These are the borders of EU member states to Ukraine and Serbia. These borders, however, are more important than their quantitative share. Ukraine is the largest state in the whole area, and the Ukrainian Carpathians are of key importance for Ukraine and for the whole mountain range as well. It represents 70% of the all Ukrainian wood production and a substantial part of Carpathian wood production as well. Several important rivers of the Carpathian area take their sources in the Ukrainian Carpathians (San, Bug, Tisa, Prut, Latorica, Uzh). But beyond the economic and hydrological importance, the Ukrainian and Serbian Carpathian regions are of pivotal importance for the whole neighbourhood policy of the EU. These Carpathian regions are borders, but they are also bridges to the neighbouring countries. These Carpathian regions are border but are also bridges to neighbouring countries. The stability and development of Ukraine and Serbia are important factors for the stability of the EU and fruitful transnational cooperation will guarantee this stability.

In the framework of the EU structural, cohesion, and agricultural policies Carpathian countries and regions enjoy significant support for their economies. Simultaneously, this support is an important source of income transfer within the EU towards the Carpathian countries. Beneficiary countries and regions have the political, economic, and moral obligation to utilize these transfers as fully and efficiently as possible and to work on conditions of economic balance and development that do not any more depend on external income flows, as soon as possible.

The main actions to implement these objectives are the following:

- The strengthening of transport and communication links between the Carpathian and the Pan-European transport and communication corridors;
- Connecting the Carpathian region with the European waterways;
- The inclusion of the mountain tourist tracks into the international structure of tourist tracks and area, and its active international promotion;
- Integrated actions aimed at attracting new economic investment projects, especially in the field of new technologies;
- The development of information society on the basis of integrated systems of state-of-the-art telecommunication infrastructure.

Carpathian Project Experience

Policy recommendations for strengthening the external cohesion of the Carpathian region stemming from the Carpathian Project report on transport networks are as follows:



- Measures shall be taken to increase the share of railways in modal split systems in order to divert international traffic and freight transport to sustainable transport systems.
- Stronger use of railway systems for major traffic in and through the Carpathians as well as better control systems can contribute to improve the situation in terms of road safety.
- Railway stations fulfilling the function as distribution centres for the railway network should be extended in order to allow smooth passenger conveyance.
- Implementation of measures to mitigate impacts of major road and highway construction or expansions - such as disfiguring the natural scenery, fragmentation of habitats and interrupting migration routes of wildlife (e.g. by green bridges).
- For a better access to areas of tourism and natural interest, sustainable transport facilities and mobility management shall be set up. These measures shall also include the improvement of connectivity with transnational and higher level rail systems.
- Provisions shall be made and systems implemented to increase the connectivity of transnational systems (especially rail) with regional and local transport systems for freight transport.

5.3 Promoting Economic Growth And Job Creation In The Carpathian Area

Promoting economic growth and job creation in the Carpathian area is the main objective. It has been ranked as third in the list because its instruments and measures are of more general character, not unique to the Carpathian area.

Nevertheless, there are specific Carpathian features of the “growth and jobs” policy that should be noted such as the low activity rate. In the Carpathian region, ~50% of the population between 15 and 64 years of age are in the workforce, while the EU average is 64% and in some regions up to 70%. It means that even if productivity would be equal to EU average (which is unfortunately not the case), the GDP per head would be 22% lower. The first and most important task is, therefore, to create jobs for a larger part of the population. Large multinational firms contribute substantially to GDP and exports, but their impact on

employment is rather restricted; additional jobs must be created by small and medium enterprises. Their support is therefore vital for the whole Carpathian economy.

The GDP per head indicator is the lowest in the Romanian Nord Est region (23.6% of the EU average), but productivity is even lower: GDP per employed person is 11.6% of the EU average because half of the working force is employed in agriculture with very low efficiency; 50% agricultural employment can be considered as latent unemployment.

Inactivity and latent agricultural unemployment together means that in the next years 6-7 million jobs should be created in the Carpathian area only to achieve the present average EU activity rate. The regions with the lowest activity rates can be found in Table 2.

Table 2: Activity rate of 15-64 population (2004)

NUTS code	Name of the region	Activity rate
PL22	Śląskie	49.5
HU31	Észak-Magyarország (north Hungary)	49.5
HU32	Észak Alföld (North Plain)	50.2
SK04	Východné Slovensko	51.5
PL33	Świętokrzyskie	51.6
PL32	Podkarpackie	52.3
HU33	Dél Alföld (South Plain)	53.8
RO12	Centru	54.1
RO22	Sud-Est	54.6
PL21	Małopolskie	55.0

Source: Eurostat

Carpathian Project Experience

The handbook, designed for local authorities and development actors, has been as a separate publication of the Carpathian Project. The objective of the handbook is the definition of a short-medium term development plan to be used as useful tool by public and private stakeholders to promote sustainable tourism in the Carpathians. The methodology adopted is drawn upon a fully participative process that has involved project partners working in different pilot areas: Fagaras Mountains in Romania, Podkarpackie region in Poland, the Ukrainian part of the Carpathians — in order to gather information and results from the field experiences; The results of activities and baseline studies performed by other project partners were integrated.

The result of this interactive process is implementation of a development plan tailored, in a bottom up approach, on the needs of the pilot territories that represent the common platform to set up a possible road to sustainable tourism that can be easily transferred to other Carpathian regions. The regional planning documents stress sustainable tourism as the engine for enduring socio-economic development based on controlled exploitation and enhancement of natural, historic, and cultural heritage which is in the conceptual frame of this handbook. The envisaged development plan has a transnational perspective. It considers the Carpathian regions of Poland, Ukraine, and Romania since the since this transnational area as the main environmental and economic focus. The short-medium term plan has been developed on the contents and outcomes of the activities implemented in pilot areas that have been conceived as axes of the plan.

Starting from the results of the assessment in the regional areas the plan outlines the development strategy of the “Carpathian tourist system” breaking it down into four strategic axes:

- Tourism development model and branding policy;
- Infrastructure;
- SME’s creation and consolidation;
- Training.

This has led to a “bottom up” development model that organizes assessment, results and evaluation of the activities in the pilot regions into a system that could ensure the design of an effective development plan consistent with territorial needs. The plan has been designed taking into account the following strategic issues:

- the identification of a trans-regional governance body as a strategic management tool to guarantee successful implementation. This transnational body, that could be set under the “umbrella” of the Carpathian Convention, is conceived as a forum where all regional policies can find a common approach for the development of the sustainable tourism in the Carpathians;
- The definition of a development strategy for the entire area perceived as a single tourism system. The plan proposes the Carpathian development model as an “umbrella plan” to coordinate all strategies and activities dealing with sustainable tourism.

The tourism development strategy envisaged will highlight the main fields of intervention in the area of:

- Infrastructure, to fill existing gaps in the area consistently with transnational and local strategy;
- Consolidation and creation of SME’s in order to support entrepreneurial development in the area;
- Marketing of the tourist system to the different targets both internal (local communities and operators) and external (potential visitors and professional intermediaries);
- Training human resources to be involved in the development issues, enhancing capacity and improving skills to support efficiently the development and change processes needed to improve touristic system.

5.4 Improved Management Of The Environment And Natural-Cultural Heritage

The Carpathian region is particularly rich in natural assets. However, the use resources, especially in the last 50 years, have really disturbed the ecosystem and action is needed to restore it. A concern for the natural environment improves the quality of spaces, creating better conditions for life and for businesses. This can be one of the factors generating positive social change and reversing depopulation. The diverse heritage of the Carpathians has accrued many contributions from foreign cultures, religious and ethnic, that no longer exist in the area. Such mixture of cultures can generate substantial momentum of development, provided it is properly researched, managed and considered in development policies.

The natural environment of the Carpathian Region is heritage to the entire European Community and should be of high priority for protection. Protecting environmental and cultural assets can form the basis for the development of certain types of economic activities like tourism. This is why protection and actions aimed at restoring the value of environmental and cultural assets can also be assessed in economic terms, and in the long run can be converted into quantifiable advantages.

Potential common actions could be the following:

- Common and coordinated care for cross-border natural parks and reserves;
 - Implementation of European nature conservation programmes (like green belts);
 - Protection of cross-border rivers against pollution and improvement of water quality in the catchment basins of rivers, crossing the borders;
 - Coordination of actions regarding the use and protection of hydro-geological structures which cross the borders, including the restoration of hydro-geological balance in areas with disrupted water systems. Protection of areas both with underground and with cavern water;
 - Cooperation in preparing environmental and strategic impact assessments for cross border areas;
 - Integrated monitoring of air quality;
 - Sustainable management of forests in the border areas and increasing the woodland cover;
 - Preparation of studies, assessing the capacity to reclaim and redevelop industrial and degraded land, and preparation of joint reclamation and redevelopment projects;
 - Strengthening and conservation of regional architectural traditions;
 - Raising of social awareness and education for cultural and natural environmental protection;
 - Revitalisation of cultural landscapes in rural areas;
 - Promotion of the tourism to industrial heritage places;
 - Organisational and technical efforts aimed at protecting cultural heritage.
- The development of population is the result of birth and death rates and migratory movement of the population.

Carpathian Project Experience

Policy recommendations for conservation and restoration of natural and cultural resources stemming from the Carpathian Environmental Outlook (KEO):

- Development of regional sustainable tourism strategies with recognizing the specific conditions of mountain regions;
- Development of joint incentives and actions for managing protected areas and landscapes;
- Joint actions for improving environmental quality (e.g. air, water, soil);
- Development and implementation of joint strategies and policies for the sustainable use of natural resources and heritage;
- Development and implementation of sustainable development strategies with more emphasis on assuring sustainable transport and energy-efficient transport systems;
- Implementing sub-national and local plans, programmes and projects (Policy Guiding Principles” in the renewed EU Sustainable Development Strategy);
- The use of the Carpathian Convention as a vehicle to provide a trans-national framework for cooperation and multi-sectoral policy integration.
- To use the Carpathian Convention to open a forum for participation, development and implementation of trans-national strategies, programmes and projects;
- Actions taking into account global, regional and trans-boundary contexts;
- Formulation and implementation of culturally sustainable and coherent policies;
- Measures and incentives for avoiding or mitigating rural de-population;
- Measures on education, communication and public participation and environmental democracy;
- Implementation of more environmentally friendly technologies and environmentally friendly practices;
- Implementation of policies to support sectoral developments;

Policy recommendations for conservation and restoration of natural and cultural resources stemming from the report on water management and risk prevention:

- Water management shall further recognize its transnational dimension; cooperation on the cross-border and transnational level shall be further enhanced.
- Adequate infrastructure and systems in order to provide orderly sewage treatment and retention of hazardous waters in case of industrial accidents shall be constructed and implemented.
- The integrated Water Resources Management-principle and a system of internalization of environmental costs and benefits shall be implemented to reach compromises between conflicting interests — on rivers and their areas, namely urban development, land use planning, restoration of historical flood-plains, inland waterway transports, construction of artificial reservoirs, compensation activities and maintaining an environmentally acceptable flow.
- Objectives that reflect environmental, social and economic needs and priorities shall be set, by taking into account different policy areas.
- Other policies are strongly encouraged to take into account water management issues;
- Catastrophe damage mitigation measures shall — beside structural measures — promote also non-structural means and use the potential of participatory approaches in flood prevention and preparation.
- Efforts shall be taken to reach the Water Framework Directive-objective to reach a good status for all waters by 2015.
- In the process of implementing the Water Framework Directive and other EU-policies the best-possible integration of common approaches and standards for management and institutions in Ukraine and Serbia should be targeted.



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► Traditional religious procession, Poland

6 DEMOGRAPHY

The average population density of the Carpathian region is 120/km². Behind this average, however, the differences are very large. On the mountains proper, the economic carrying capacity is rather low with a population density of 10-25/km², but in the forelands it is 150/km². It is especially high along the external “market line,” a chain of cities with a population density of more than 200/km². Although there are differences in population among the forelands and the more mountainous areas they cannot be regarded separately. But the two areas, with different densities of population cannot be regarded separately. The economic base for a significant share of the population in the densely populated area is in the mountains (and in their products). On the other hand, the population in the mountains would be even smaller without the demand of the population in the forelands for their services and products.

The development of population is the result of birth and death rates and migratory movement of the population.

During the 20th century, birth rates in the Carpathian area were rather high, higher than in other areas of Central Europe. There were a variety of reasons for this: rural life, deeper religious faith, but also a less education. However, in the last decades, birth rates decreased radically, more radically than the respective national averages. They are still higher, than in the surrounding plain areas, but the difference is much smaller than before.

The highest birth rates can be found in the proper mountainous areas in the Northeast Carpathians (in Romania, Poland, Slovakia and Ukraine). The lowest birth-rates are in Austria, Hungary and – interestingly – also in some parts of Poland and Slovakia.

The highest death rates are in the Southern Carpathians, Romania, and especially in Hungary. The regions with the lowest death rates are in the Northern Carpathians, Slovakia, and especially in Poland. Low death rates are mostly due to the younger age

Figure 3: Density of population 2004

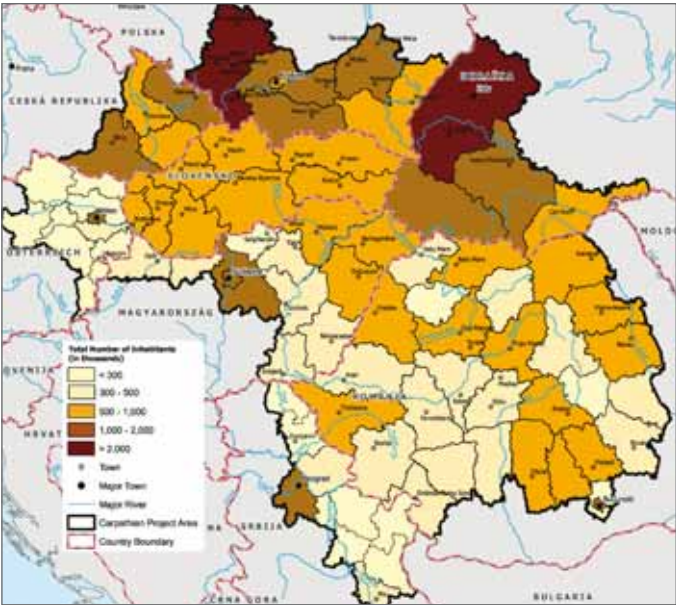


Source: EURAC

structure of the population, resulting from former higher birth rates.

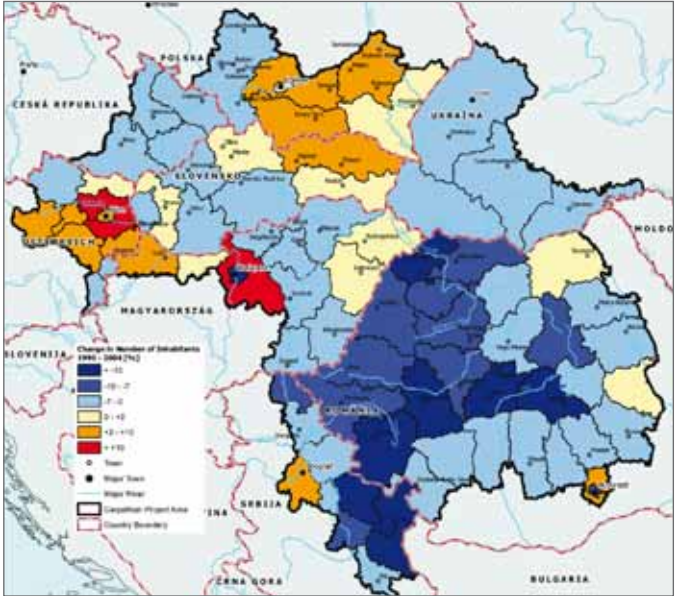
It should be noted that even the highest natural increase figures are rather low in international comparison. The dominant trend in the Carpathian area is a natural decrease. Out of the 88 NUTS3 regions in the Carpathian Area, only 23 were noted registered to have natu-

Figure 4: Number of inhabitants 2004



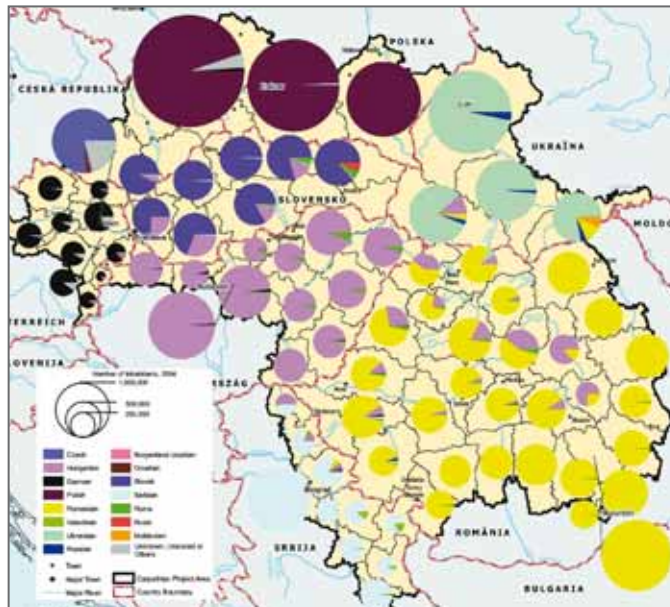
Source: EURAC

Figure 5: Change in number of inhabitants 1990-2004



Source: EURAC

Figure 6: Old age index / proportion of under 15 to over 65 years old, 2004



Source: EURAC

ral increase; in the other 65 regions, natural population showed negative growth.

This natural population flow is modified by migration.

The regions with the highest emigration figures are not the less developed but the industrialized agricultural counties. It is partly the consequence of the collapse of industrial plants established in the socialist period. On the other hand, the skilled, more mobile workers of these counties are those, who can find work in other regions, especially abroad.

In a longer historical perspective: the proper Carpathian area was – since the 19th century – one of the main sources of European emigration. The restricted economic carrying capacity of the mountainous areas and the high population growth resulted in very high emigration figures. The numbers of emigration

statistics of Eastern Slovakia, Galicia, Szeklerland at the beginning of the 20th century were comparable with the respective figures of Britain and Ireland. A part of this emigration was of temporary character. Slovak workers, for example, worked for some years in the USA and then returned to their home country with their savings.

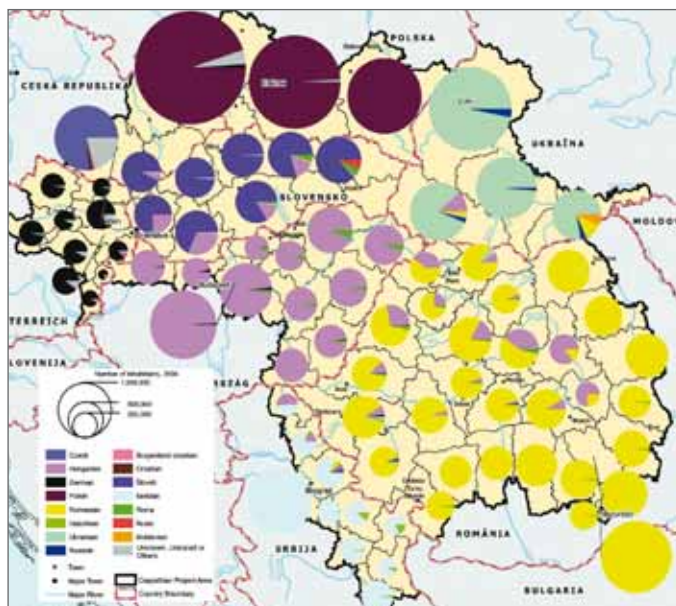
Due to high emigration flows the population did not increase, even though the birth rates were quite high in some of the Carpathian countries. There are even regions with less population than a century ago. Voluntary migration, war, forced resettlement, and the holocaust also contributed to the slower growth and population decrease like in Galicia and Banat. In the last decade, hundred thousands, even millions of people – mainly from Romania and Poland - had left their home country, looking for employment and higher earnings in Western Europe.

6.1 Ethnic And Religious Affiliations

There are eight countries in the Carpathian region, so the population is divided between different nations and ethnic groups. But even within the individual countries, the population is of multi-ethnic character. There are Hungarians and Ukrainians in Slovakia; Ukrainians and Germans in Poland; Romanians, Slovaks, Hungarians, Poles, Russians and Germans, in Ukraine; Hungarians, Poles, Ukrainians and Serbs in Romania; Romanians, Germans, Slovaks and Serbs in Hungary; Romanians, Hungarians and Slovaks in Serbia; Croats in Austria and Poles in Czech Republic. Roma population is spread over the whole Carpathian region, accounting more than 2 million people.

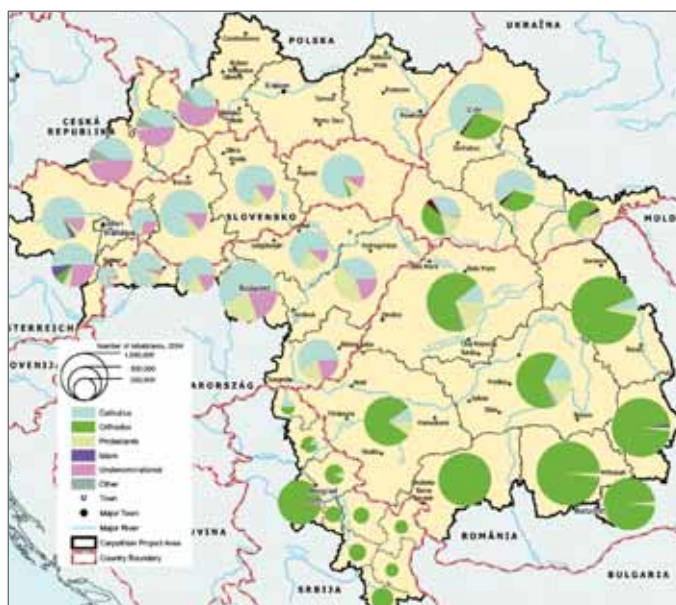
But even the Ukrainian population in the Carpathians is divided into different ethnic groups. There are Rusyns, Lemkos, Bojkos and Hutsuls, all living in the Carpathian Mountains. Mountain ranges divided and isolated them from each other, therefore they could develop their own dialects and ethnic identities. In the Carpathian part of South Poland live the Góral's whose language is based on Polish but infused with words from the Slovak and Vlach languages. The Szeklers in the Eastern Carpathians speak Hungarian, but their origin is different from the other Hungarians. Another

Figure 7: Language structure (%)



Source: EURAC

Figure 8: Religious structure (%)



Source: EURAC

Hungarian group called the Csángos live in the Eastern edge of the Carpathians in Moldavia, and because of their isolation, a significant portion of the Csángos speak Romanian instead of Hungarian. The Moți in the Apuseni Mountains speak and identify as Romanian, but may have their ethnic origins elsewhere. Many in the Czech Republic identify as Moravians or Silesians. It is evident that there is a very diverse ethnic mosaic in the Carpathian Mountains.

The demographics of religion are highly diverse among the Carpathians as well. The majority of the Polish, Slovak, Czech, Austrian, and Hungarian population is Roman Catholic. Among the Hungarians who live in the Carpathian region, the majority are Calvinist Protestant. A minority of Slovaks and Germans in Southern Transylvania are Lutheran, and a substantial minority of Szeklers belong to the Transylvanian Unitarian Church. The larger part of Romanians and Serbs are Eastern Orthodox Christians.

The Eastern Catholic Church (or the Greek Catholic Church) has a special significance in the Carpathian region, because its adherents in Europe live almost exclusively in the North-Eastern or Eastern Carpathian area.

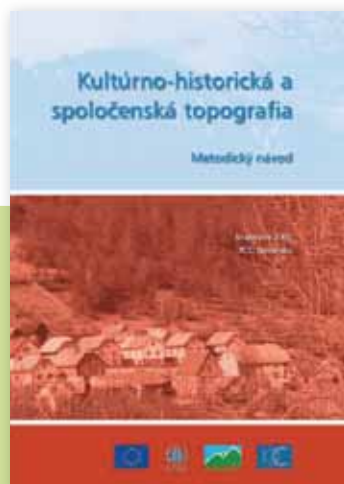
Ethnically, they are mostly Ukrainians and Romanians but there are also Slovaks and Hungarians. After Russia annexed this area, the Greek Catholic Church was eliminated, and its adherents were regarded to be of Orthodox religion, who were formerly forced to leave the Orthodox Church. After 1990 the Greek Catholic Churches have been revived in these countries and now they are competing with the Orthodox Churches for the faithful people.

Before World War II, the Carpathian area was one of the most important settlement areas of Hebrews in Europe. Their population in the Carpathians reached more than five million. The Holocaust, emigration, and natural decrease have radically reduced their presence in the area, and the Hebrew population is no more than 100,000.

In recent decades, new religious movements and small churches have been attracting and increasing the population throughout the region. The deterioration of living conditions, the collapse of earlier systems and ideals, and sometimes their charitable activities contributed to the growing number of adherents of new religious movements.

Carpathian Project Experience

The handbook on the cultural-historic and social topography was one of the Carpathian Project's products. It can be used to analyse the social background for the future development in a specific mountainous locations. The handbook is available as a separate publication.





© Juhu Rankonen

► Romanian farmer

7 AGRICULTURE IN THE CARPATHIAN REGION

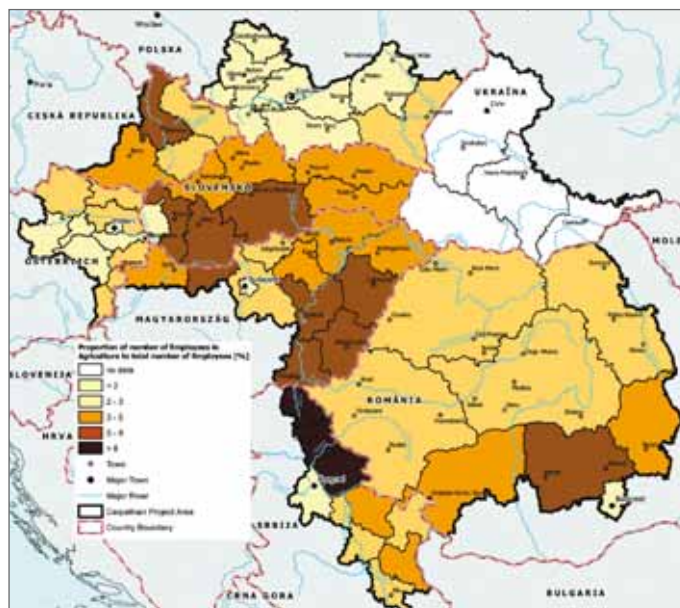
7.1 The Situation And The Challenges

Agriculture and Forestry is still among the most important economic sectors in the Carpathian region, but its share in GDP and employment are decreasing. It can further be observed, that not only the share, but also the absolute level of production is decreasing. With the exception of Romania and Austria, the volume of agricultural production is still lower than 18 years ago in all Carpathian countries and regions.

The mountainous character of the area determines the types of land use and agricultural production:

- The share of arable land in the proper mountainous areas is lower than 20 percent. Higher situated areas and steeper slopes are unsuitable for plant cultivation. In some areas of Romania and Poland, farmers formed terraces for strip cultivation in the late 19th and 20th centuries, but since then many of these areas have been abandoned.
- Another more important type of agricultural land use is grazing on permanent grassland; a key element of mountain cultures often serving as a link mountain areas where animals graze in summer and low-land areas where they graze in winter. The share of grassland in land use is about 20-30 percent in the Romanian and Ukrainian Carpathians, it is less in the higher altitudes of the Slovak Carpathians.

Figure 9: Employment in Agriculture (%)



Source: EURAC

In the transition areas and in the fore-lands of the mountains, the share of arable land is higher.

- Permanent crops occupy a substantially smaller share of land in the Carpathians. On the lower slopes of the mountains in Slovakia, Hungary, Romania and Ukraine, there are vineyards.

- The largest share of land is occupied by forests. 66 percent of the mountainous area in the Eastern and Southern Carpathians is covered by forest. In the Northern Carpathians, this share is even larger: 75 %. Forests are the most important and valuable resources of the Carpathians. It is especially

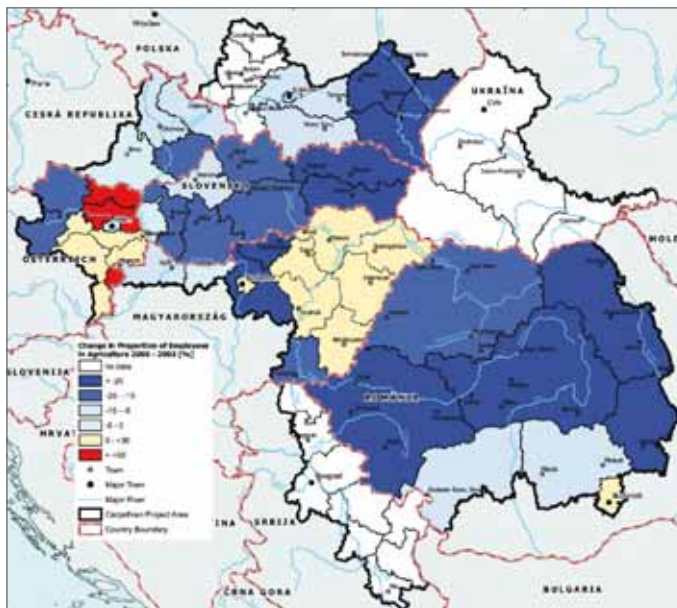
true in Ukraine, where nearly 70 percent of the forests of the whole country are to be found in the Carpathians, which occupy only 4 percent of the area of Ukraine. It is no wonder that forests are seriously threatened by over-exploitation and deforestation in this country. In Ukraine, forests were especially endangered in the 1950s, but it has worsened.

In the last decade, substantial changes occurred in the land use pattern of the Carpathians:

- The land covered by forests decreased substantially. Between 1992/93 and 2000/2001 (in less than one decade) the forested area decreased by 5 percent. Between 1992 and 2001 the forested area has decreased by five percent. This five percent increase is highly differentiated according to countries and regions however. The largest decrease can be observed again in Transcarpathia¹ (Ukraine) (more than 15 percent) and in Romania (8 percent). This is mainly due to the changing socio-economic conditions. A large part of the forests and arable land has been divided among small farmers in recent years; but the only method of production available to them was logging. In addition, the institutions of the protection of forests had been weakened and demoralized.
- Forested areas in the Carpathian regions of Slovakia, Poland and Hungary slightly increased. This increase was partly due to natural processes (increasing the atmospheric

¹ Interestingly, in the other Carpathian regions of Ukraine (Lviv and Ivano-Frankivsk region), deforestation is much more limited;

Figure 10: Employment in agriculture - changes 2000-2003



Source: EURAC

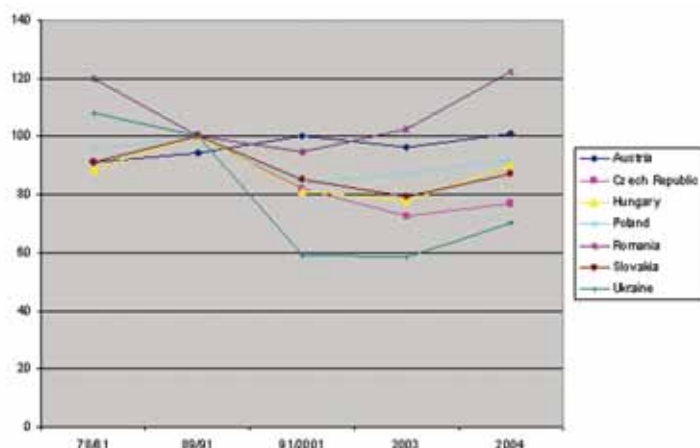
concentration of CO² resulting in abundance of vegetation), partly to institutional conditions. In Poland, most forests remained in state ownership, and generally, land ownership did not change radically. There is a long-term tendency in the Polish Carpathians to transform pastures into forests. In Hungary, a large portion of forests became private property, and clear cutting began to occur more frequently. However, incentives for afforestation have slowed forest loss.

- A general trend in the whole region is the decrease of arable land in the Carpathians. The decrease is quite drastic in some areas, but even in average more than 10 percent. The loss is closely related to the economic situation of agriculture in Carpathian countries. In the competitive situation a large part of cultivated area proved to be not competitive and efficient enough to cultivate. A part of it was transformed to forest or grassland but another part has been abandoned and

is not cultivated at all. It is a general phenomenon in these countries, but especially spectacular in the Carpathian regions.

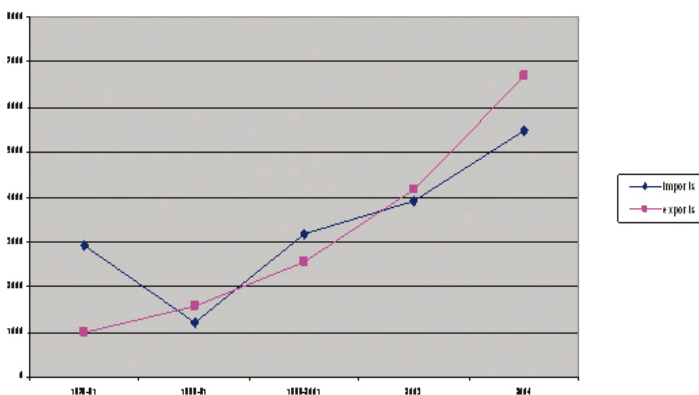
This leads us to the overall situation of agriculture in Carpathian countries.

Figure 11: Agricultural production in the Carpathian countries 1978-2004 (1989-91=100)



Source: FAO Yearbook

Figure 12: Agricultural imports and exports of Poland, million USD



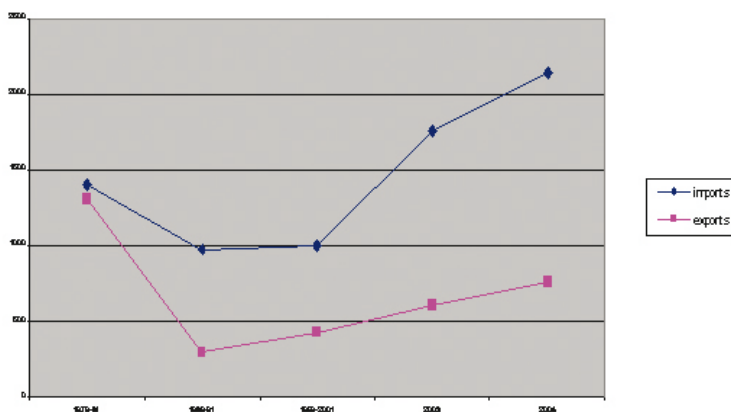
Source: FAO Yearbook

Agricultural production is still lower in all Carpathian countries, with the exception of Austria and Romania, than in 1981-91 in the years of change in the political and economic system. One of the reasons is the change in the ownership and farm system. The new farms are very small (less than one hectare) so they are not able to produce efficiently. They lack the necessary capital and knowledge to modernize their farm.

Another reason is the market problem. In most cases the marketing system which would help to sell the agricultural products of small farmers to the domestic and external (EU and other) markets is missing. At the same time, the more efficient, better marketed food and other agricultural products of the EU15 countries have already captured a significant part of domestic markets in new member states.

In the case of Poland, there were years in the recent decades when it was the net importer of agricultural goods, but today has a slight surplus in exports.

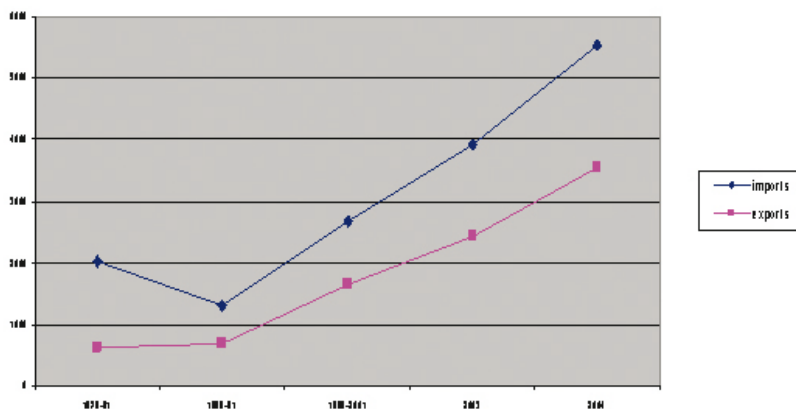
Figure 13: Agricultural imports and exports of Romania, million USD



Source: FAO Yearbook

Romania which had a balanced trade in agricultural products at the end of the 1970s, became a large net importer of agricultural products in the last 2-3 decades.

Figure 14: Agricultural imports and exports of Czechoslovakia (until 1991) and of the Czech Republic and Slovakia (after 1993), million USD



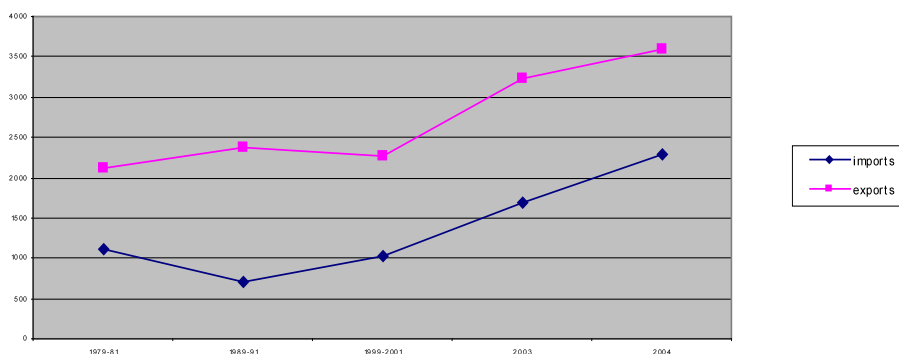
Source: FAO Yearbook

The former Czechoslovakia was always a net importer of agricultural and food products, but in the last decades the gap between imports and exports increased.

Finally Austria, which has always been a net importer of food and other agricultural goods succeeded in 2004, achieved a bal-

anced trade in agricultural products and ceased to be a net importer. The geographical conditions of Austria have made it an unfavourable country to achieve this balance compared to other Carpathian states. Therefore, to achieve a better balance is not a matter of geographic conditions but of structural change in the economy.

Figure 15: Agricultural imports and exports of Hungary, million USD

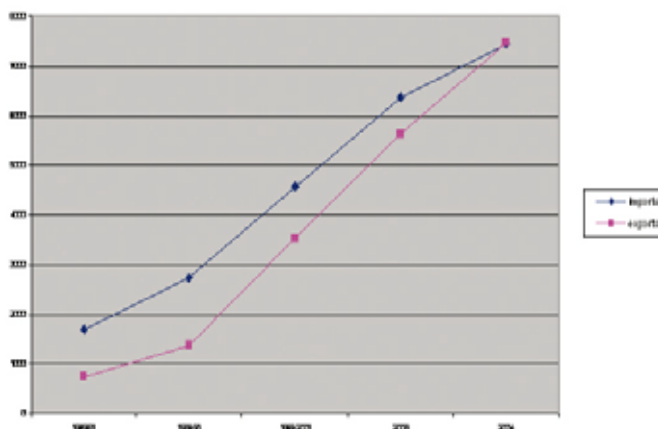


Source: FAO Yearbook

The volume of agricultural exports of Austria amounted to 7.5 billion Euro in 2004, which is substantially more than the export of other countries with larger agricultural areas and more favourable natural conditions. In the

same year the volume of Polish agricultural exports was 6.7 billion Euro, Hungary 3.6 billion Euro, and 0.75 billion in Romania, one tenth of the Austrian figure even though Romania is three times larger than that of Austria.

Figure 16: Agricultural imports and exports from Austria, million USD



Source: FAO Yearbook

Therefore, the reorganisation of the markets of mountain agriculture should be among the prime objectives of any development policy of mountainous regions. Within

this objective the main tasks are the protection and promotion of mountain food products, and the reorganization of their domestic external markets.

7.2 Policy Recommendations For The Agriculture of The Carpathian Area

7.2.1 The cooperation of Carpathian countries and regions in the field of agriculture

The Carpathian countries have very different endowments for agricultural production. While the plains are more suitable for plant production, mountain areas offer opportunities for animal husbandry and wood production. Areas with different endowments are relatively close to each other, enabling the exchange of goods with relatively small transport costs. These opportunities were efficiently utilised within the framework of the large empires (Habsburg, Russian, German) until the beginning of the 20th century. After World War I however, new countries pursued protectionist agricultural policy, and the old agricultural trade linkages weakened substantially or disappeared entirely. This protection focused agricultural policy survived until the accession of the Carpathians to the EU in 2004. This happened despite the fact that in 1992 the Visegrad countries established the Central European Free Trade Agreement (CEFTA), which provided measures for the liberalization of trade in agricultural products among the countries. Unfortunately, these provisions were not observed. If a particular agricultural product in a partner country faced serious market problems, protectionist measures were frequently applied though they were not reconcilable with the treaty.

The application of such instruments was not any more possible after the accession of most Carpathian countries to the EU. Trade in agricultural products between the countries increased very dynamically. Nevertheless, opportunities for further increase were still very available.

There are opportunities for the division of labour and for the exchange of products not

only within countries but also between regions. Before the centrally planned socialist system, the centres of agricultural trade were the small and medium sized towns at the foot of the mountains. Highlanders came down to the town-markets and sold or exchanged their products with those from the plain or industry regions. The agricultural market was one of the main functions of these towns and cities. Under socialism, the procurement of agricultural products became the function of large state enterprises which skipped these small town markets and practiced central distribution.

These farmers' markets were not the most efficient and modern ways of food trade, but certainly more efficient than state food procurement. Suitable organisation and enterprises and revitalisation of the exchange of mountain and plain products could re-establish the market function of these towns and cities.

7.2.2 The protection and promotion of Carpathian mountain food products

The Carpathian mountain areas are less suitable for mass agricultural plant production than plains areas. To cope with this disadvantage, mountain areas should specialize in products for which they have better conditions such as dairy products. Ewe and goat milk are traditional products of the Carpathians, but more importantly regional specialty cheeses have been famous for centuries in the greater Carpathian area (like Cas Afumat, Brinya in Coaja de Brad, Brinza in Basica, Brinza de Burduf, Cheag, Urda, Dulle, Sarata in Romania, the drink Zinzica, the cheese types of Ostiepy, Parenica, Korbaciky in Slovakia).

The same is true for the gathering of different berries (like cranberry, blueberry, whortleberry) and mushrooms, which are to be found only in

the forests of mountain areas. For many in the lower socio-economic bracket in the mountains, gathering is an important source of income and living. In order to promote the production and markets of authentic mountain products, the European Parliament proposed the preparation and adoption of a Charter to protect mountain food products in Europe. The European Charter for Mountain Quality Food Products was signed on 11 December 2005 in Strasbourg.

The Charter defines first, what can be regarded as Mountain Quality Product. Five qualities should be fulfilled:

- Raw materials must be derived from a mountain region;
- Processing must be carried out in a mountain region;
- Production must take into account concerns relating to sustainable development;
- Production must attempt to maintain the biodiversity and heritage of mountain regions;
- Producers must be able to guarantee at

all times the transparency of information to consumers.

The Charter has two main objectives. An economic development objective and a policy objective policy which are as follows:

- The economic development objective aims to provide better identification of quality mountain products in the market and to avoid counterfeits and misinterpretation that would be detrimental to producers and consumers.
- The policy objective is to recognise and promote the role of farmers and enterprises that produce benefits for society in the mountain areas of Europe and defend their interests. It would serve the objective to maintain the population in the mountains.

The definition of mountain quality food products helps to ensure accurate labelling and better protection of a niche in the European food market. According to Table 3, Carpathian countries still have to make serious efforts to register and protect their special mountain food products.

Table 3: Submitted applications for EU protection of foods (only those in the Carpathian regions of the respective countries)

Country	Already registered and protected	Application under investigation	Submitted by national authorities, but still not investigated
Czech Republic	Stramberk "ears" (sweet wafer)	Niva cheese, Olomouc tvargle, Moravian-Silesian sauerkraut	Pohorelice carp, Old-Brno beer, Brno beer, Znojmo beer
Hungary	-	-	Apricots of Gönc
Poland	Podhale ewe's cheese	Oscypek smoked cheese	Korczin bean, Carp of Zator,
Slovakia	Skalický trdelník (pastry horn)	Parenica, bryndza, ostiepek smoked cheese	

From the notebook...

Another – and older – measure of the European Union is to ensure protection to national speciality foods. It is not restricted to mountain foods, therefore mountain food products also should utilize this opportunity.

To get EU protection for a given national speciality, the application must be submitted to the European Commission. The Commission has one year for scrutinizing the application, and can ask questions from the national authorities concerning the preparation of the food to be protected. After one year they publish the description of the food and its preparation in the Official Journal. Other countries can remonstrate against it within six months, but if there is no serious protest the food will be registered as protected. If there is remonstrance, the two respective countries will have negotiations.

Old member countries of the EU have more than 100 registered and projected types of mountain food each. New members are just starting to apply for registration. So far, the Czech Republic achieved substantial progress, because they succeeded to include into the Accession Treaty the protection of several types of food, among them most types of Czech beer. Slovakia, Poland and Hungary made the first applications just recently and Romania did not yet apply so far for registering its food specialities. Unfortunately, there are very few mountain products among those which were submitted for protection.

7.2.3 Flexibility of EU CAP and national regulations in the Carpathian area

In 2004 Poland, Slovakia, the Czech Republic, and in 2007 Romania became members of the European Union and eligible for EU CAP support. Despite several similarities, the agricultural and farm structure of the Carpathian countries is much differentiated. Therefore EU intervention and regulations must be flexible to consider these important differences.

Some important indicators of agriculture in the Carpathian countries are shown in Table 3.

The share of agricultural employment is 4-7% in Austria, Czech Republic, Slovakia and Hungary, while it is 38% in Romania and 18% in Poland. The average farm size is about 140 ha in the Czech Republic and Slovakia, while it is 10-20 ha in Austria, Poland and Hungary and

only 2 ha in Romania. It should be noted that in mountainous areas the share of agricultural employment is higher and farm size is smaller than the respective national average.

The structure of EU support is also different. In Austria, Czech Republic, and Hungary about 60% of it is used for direct payments and intervention (Pillar 1), this percentage is about 50% in Poland and Slovakia and 40% in Romania. The share of Pillar 2 (restructuring and rural development) has a reversed ranking.

In general, the type of EU agricultural support is different between the old and the new member states. New member states did not have those statistics and documentation which would be necessary to apply the system and measures of support of the old member states. Therefore in all new member states (with the exception of Slovenia) the simplified system of "Single Area Payment Scheme" (SAPS) is applied. This system quantifies the

amount of EU support exclusively on the size of agricultural area cultivated by the farmer.

Considering the relatively low level of EU support in the first years of membership; the other specific feature of the agricultural support system of the new member states is that national governments are entitled to pay a complementary support to their farmers which is gradually reduced during a 10 year transition period. At the end of the 10 years, farmers of the new member states will enjoy the same EU support than farmers of EU15. The name of this national support is "Compensatory National Direct Payments" (CNDP).

Though SAPS might have several advantages, it is disadvantageous for the mountain regions because animal husbandry and its need for support are entirely disregarded. Animal husbandry is a shrinking sector of Cen-

tral European agricultural. If disregarded in support schemes, it will be certainly decline further. National support schemes (CNDP) therefore consider livestock of the farms and support is paid accordingly.

Recent experiences have shown that this type of support favours large farms and herds of animals in the plains regions and much less in the mountain areas. Therefore, a new solution has to be found for the problem. Several experts and institutions suggest that support for animal husbandry suggest that support for animal husbandry in new member states should be coupled with LFA (Less Favoured Areas) support, paid in areas with unfavourable natural conditions for agricultural. This scheme would help to concentrate special animal husbandry support to areas with some natural or economic drawbacks. It would be part of the CNDP and of EU support system as well.

Table 4: Main agricultural indicators (2004)

Country	Share of agriculture in employment	Average farm size ha	Number of farms	EU agricultural support 2007-2013 million €	Of which 1. pillar (intervention and direct payments) %	Of which 2. pillar (restructuring and rural development) %
Austria	5%	20	137.000	9117	57	43
Czech Republic	4%	134	26.400	7316	62	38
Hungary	7%	26	155.400	10298	63	37
Poland	18%	12	1082.700	28269	53	47
Romania	38%	2	1211.800	13524	41	59
Slovakia	5%	143	12.900	3892	49	51

Source: Eurostat

Carpathian Project Experience

Some pilot actions undertaken within the Carpathian Project explain as best practices examples how to include the local communities and NGS into sustainable development by combining environmental conservation with economic use of natural and cultural resources.

Carpathian countries have the opportunity to steer their development towards the integration of different interests, including conservation. The handbook elaborated within Carpathian Project: “Addressing Threats to Nature in the Carpathians – Legal and Administrative Instruments” describes a number of tools to sustain and enhance sustainable development. These instruments reach from assessments on project planning level to the environmental assessment of projects, plans, and programmes such as the Environmental Impact Assessment and the Strategic Environmental Assessment. Transnational institutions and legal frameworks are described, on EU-Level (Parliament, Commission, legal frames as Natura 2000) as well as in the Aarhus-, Bern-, Espoo and Ramsar-Convention and the World Heritage Convention. Furthermore, there are a number of practical recommendations on how to and who can file complaints in cases of noncompliance to the mentioned legal structures and frameworks. Additionally for the Czech Republic, Hungary, Poland and Slovakia, country reports on selected administrative and legal tools were elaborated.

The handbook “Seizing Opportunities for financing nature conservation and local development in the Carpathians” was elaborated to provide an understanding and overview of selected funding sources relevant for activities, planning procedures, communications and specific projects on nature and landscape conservation as well as related local developments. The funding instruments explained are mainly those from the European Union, with the Agricultural fund, Regional Development Fund, European Social Fund, Cohesion Fund as well as the LIFE+ Financial Instrument for Environment and the 7th Research Framework Programme. EU-Funds for Non-Member States are described with the Instrument for Pre-Accession Assistance (IPA) and the European Neighbourhood and Partnership Instrument (ENPI). Furthermore, the European Economic Area (EEA), Financial Mechanisms Norway, Iceland, and Liechtenstein provided funds for 10 countries, who joined the EU in 2004, which additional funds from Norway for Bulgaria and Romania. These funds, among others, also address biodiversity and the environment.

To inform stakeholders on legal instruments and funding possibilities, informational material has produced two transnational workshops as well as four country workshops in CZ, SK, and PL.



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Simultaneously, the LFA support design should be revised as well. In old member states, 35 percent of all LFA support goes to mountain areas, while new member states only receive 28 percent even though there is a comparable high percentage of arable land in both new and old states.

Another policy proposal refers to the distribution of dairy production quotas. Dairy production is the branch of agriculture where production and procurement is most strictly controlled in the EU. Nevertheless, production and procurement quotas are sometimes quite mechanically allocated to regions and farms, disregarding the geographic conditions. Mountain areas, where dairy production is one of the most important branches of agriculture, should be preferred by the allocation of quotas. The same is true for livestock limitations. The number and size of livestock is related to the size of cultivated area. In mountain areas, however, this relationship is specific and cannot be compared to the farms in the plain areas.

7.2.4 Diversification of mountain economy

Behind all these policy proposals improving the conditions of mountain farms, the basic problem is the agricultural overpopulation and over employment in mountainous areas.

This is the basic obstacle of increasing productivity, efficiency and competitiveness of Carpathian agriculture. In some regions of the Polish and Romanian Carpathians, 40-50 percent of the working force is employed in agriculture and the farm area per one employed is extremely small. In some areas, agricultural employment increased in the last decade and a half because agriculture absorbed those people who lost their job in mining and industry. The only solution is to establish non-agricultural jobs and diversify the economy in these areas to defer emigration. These possibilities will be dealt with in the chapters on industry and tourism.



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- ▶ Mining activities contaminate rivers in the Carpathian region

8 INDUSTRY IN THE CARPATHIAN AREA

8.1 Situation And Challenges

While in some areas of the Carpathians agricultural remained the largest sector of employment, most regions had industry which played the role of the most important employer until just recently. This role of industry was reinforced by the underdeveloped services in most former socialist states, and they could not fulfil the same employment opportunities as in European countries. Employment in services increased dynamically in the last decade and a half, and is the highest employer in most of the Carpathian regions.

8.1.1 Mining

Though younger mountain ranges (like the Alps, Pyrenees and Carpathians) are less rich in mineral wealth, the Carpathians were – since the Middle Ages – one of the most important places of mining in Europe. There were four major gold and silver mining areas in the Carpathians: the North-East Carpathians (Baia Mare, Baia Sprie, Kapnik - all in Romania), the Transylvanian Island Mountains Apuseni (Abrud, Romania Alba county), the North-West Carpathians (Banska Stianica, Banska Kremnica, Banska Bistrica all in Slovakia), and the North Carpathians (Gelnica, Banska Belá, Roznava, Spišská Nová Ves, Jasov in Slovakia and Rudabánya, Telkibánya in Hungary). The 13th saw a production volume of 1,000 kilograms of gold and 10,000 kilograms of silver which was 80 percent and 20 percent of total European production respectively. Nowadays, Australian and Canadian firms try to revitalize gold mining in Romania and Slovakia, but the applied cyanide technology implies serious environmental dangers and hazards. In several places in the Transylvanian Carpathians salt was – and partly is – extracted.

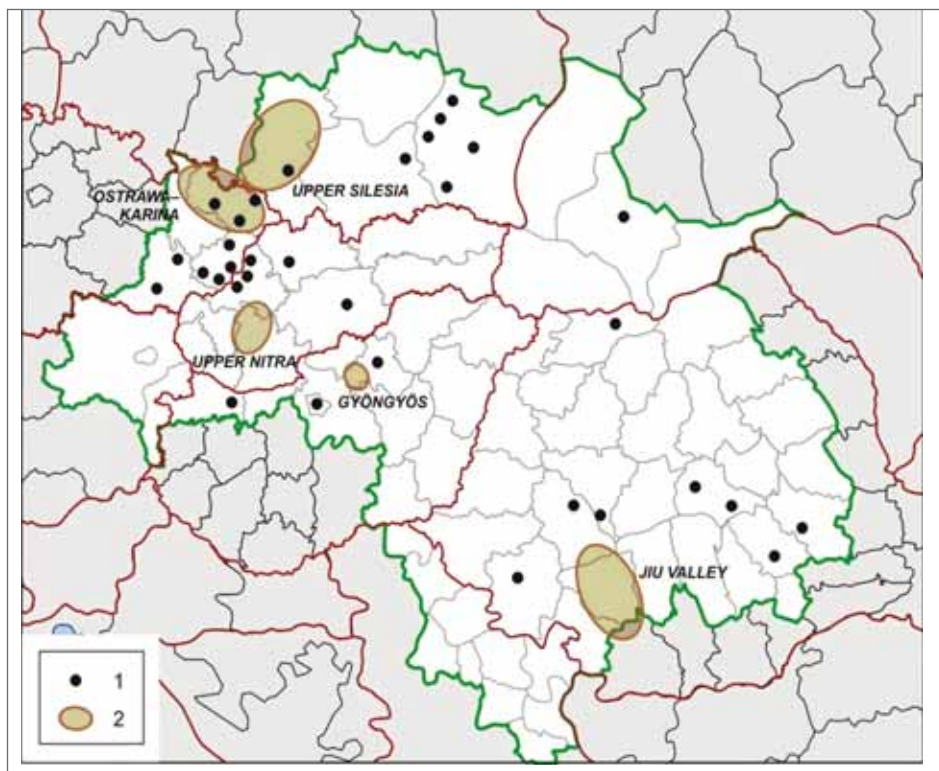
The largest hard coal reserves of Europe can be found in Silesia, Poland. Poland is the

7th largest coal producer of the world and the first in Europe. The mines are not located in the Carpathian Mountains but in the greater Carpathian region. In the last 15 years, the volume of Polish production has slightly decreased, but its efficiency and competitiveness increased. This has been the result of restructuring, privatization, and the closure of insufficient mines. But restructuring is still not finished and there are still inefficient mines. Nevertheless, coal remained the basis of Polish energy economy and one of the main export items of the Polish economy.

The southern region of the Silesian hard coal basin is in the Czech Republic, named Ostrava-Karviná; coal mining here is more than 200 years old. In the Ostrava area, all mines closed in the 1990s and only the mines in the Karviná are still operational. Production decreased, but efficiency and mechanization increased also in this area. Being the only hard coal mine in the Czech Republic, the government plans the continuation of the production for a longer period.

In Slovakia, most of the coal mines have been closed due to inefficiency or depletion of resources. Hard coal is not to find in Slovakia, the most significant brown coal mines are in Upper Nitra (Hornonitrianske Bane Prievidza).

Figure 17: The major mining fields and arms industrial sites in the Carpathians



Source: author's construction

In the Hungarian Carpathian region all coal mines are already closed, only some open pit lignite mines are still operating.

In Romania, the only hard coal mine was the Jiu Valley, in the Southern Carpathians. In recent decades several restructuring programmes of coal mines were implemented in this region, but these programmes brought tension and problems. However, the Jiu Valley restructuring programme is unique because after 20 years of efforts and bailouts a solution has not come to fruition. Bad management and political intervention resulted in a dramatic situation.

Coal mining had several serious impacts on the environment and the socioeconomic

situation. Excavated rock was equal to half of the amount of coal produced; a large portion of this waste rock was used for building material for surface group reclamation. Large amounts of cavern water have been pumped out which is a non-renewable resource. The surface around long time underground mining was present have been deformed substantially and has contributed landslides. Open pit mining has led to entire settlements to be relocated; such is the case in the Czech Republic, Hungary, and Romania in recent decades.

In the 1970s, about 1 million people worked in the mining sector in the Carpathian region. Today, the number of employees of the sector is about 340 thousand. Its distribution among

countries is the following: 177 thousand in Poland, 90 thousand in Romania, 55 thousand in the Czech Republic, 15 thousand in Hungary and 9 thousand in Slovakia (2006 data). 700 thousand high-wage jobs were lost in this area. Many formerly prosperous cities and settlements are now regarded as crisis areas with high unemployment and low incomes. Infrastructure and services which were operated and maintained by the mining companies are now in a deteriorated and poor condition.

8.1.2 Manufacturing

For a long time the Carpathian area was less developed industrially than the rest of Europe. When industrialization was brought to the Carpathians area it was a distorted, imbalanced, and unfavourable in structure.

A large section of the mining industry was extractive and primary processing. A Metallurgic and Timber industry had been developed, but frequently only the first phases of production were located in the Carpathian area which was of less value in the production process. These industries offered jobs only for the male population. Industries were based on exhaustible resources, and these resources were used rather wastefully and with extremely harmful environmental impacts. Air pollution was stuck in the narrow valleys, causing serious health hazards.

In the middle of the 20th century, a new phenomenon appeared in the Carpathian area. A substantial part of the arms industry was located in this area.

In Poland, these new elements appeared already in the 1930s. Since 1928, there were recurring attempts in Poland to create a "triangle of security", an industrial region in the middle of the country, secured from any invasion by

Germany or Soviet Russia. By April the plan was set in motion and expanded to territories beyond the "triangle."

The Central Industrial Region (Centralny Okręg Przemysłowy, COP) was one of the biggest economic projects of the Second Polish Republic. The 4-year-long project was initiated by the deputy Prime Minister and Minister of Finance, Eugeniusz Kwiatkowski. Its goal was to create a heavy industrial centre in the middle of the country as far as possible from the German and Soviet borders to strengthen the Polish economy and to reduce unemployment. The four and a half year plan of development of the COP was scheduled from 1 September 1936 to 30 July 1940 but was interrupted by the outbreak of World War II. Nonetheless, the COP project had succeeded in vastly expanding Polish industry, and after the end of the war COP was rebuilt and expanded. Nonetheless, the COP project has succeeded in vastly expanding Polish industry, and after the end of the war COP was rebuilt and expanded. The following industrial projects were part of the plan. Steel mill and electric power plant in Stalowa Wola, rubber factory in Dębica, aircraft factory in Mielec aircraft engine and artillery factory in Rzeszów, hydroelectric power plants in Rożnów and Myszkowice, expansion of the Zakłady Azotowe in Mościce.

At present, the locations of arms industry in the Polish Carpathian region are Jasło, Stalowa Wola, Mielec, Swidnik, Rzeszów, Tarnów, Nowa Deba and Bierun.

After World War II, Slovakia became the main focus of Czechoslovakian industrial development because of a stronger lobbying potential of the Slovak leadership, the mechanic imitation and a servile following of Soviet practice, and the location of defence industries in Eastern Slovakia. A role had

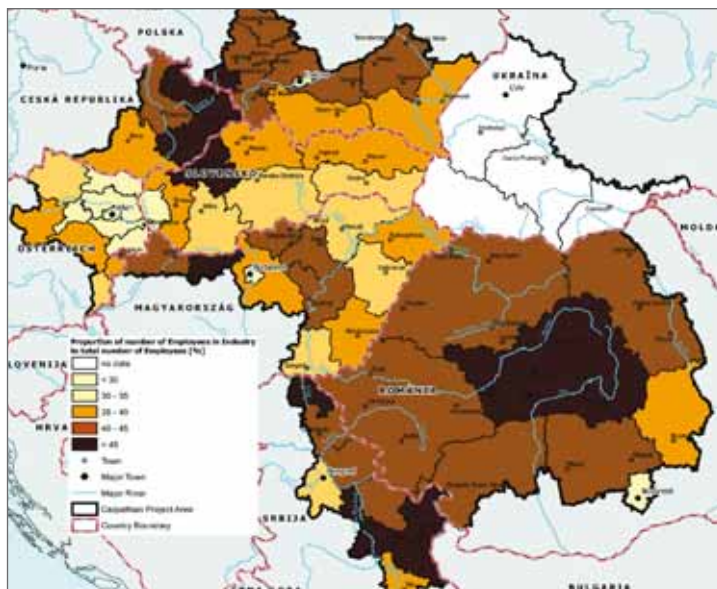
been played to implement the ideal convergence of regional development between the Czech Republic and Slovakia. The intention of implementing the convergence of regional development between the Czech and Slovak lands was also of certain relevance.

New plants were located in the Northern half of Slovakia, especially in the valleys on the rivers Váh and Hron. Most of the new plants belonged to the arms industry. The huge concentration of arms industries in Northern and North-Western Slovakia such as those in Martin, Dubnica, and Detva were significant in European context. By the 1980s, the degree of Slovak industrialisation matched the level of industrialisation in Czech Republic; in respect to defence industries it even surpassed substantially.

Another area of large arms industry within the Carpathians was in the Czech Republic (Uherský Brod, Kunovice, Koprivnice, Vítkovice, Nový Jicin, Vyskov, Vsetín, Brno, Bojkovice).

Ukraine was the main area of arms manufacturing in the former Soviet Union. Nearly half of all the Soviet arms industry was located in the Eastern part of the country. Western Ukraine - close to the Western borders of the Soviet Union - was substantially less engaged in the armament industry. Nevertheless, arms industry was significant also in this part of the country. Ivano-Frankivsk was a closed city until the independence of Ukraine. Foreigners were not allowed to enter this city. Several other cities in the mountainous areas of the

Figure 18: Employment in industry (%)



Source: EURAC

Ivano-Frankivsk region were also involved in arms manufacturing.

Romanian arms industries were also prevalent in cities such as Brsov, Ploesti, Orastie, Fagaras, Sadu-Gorj, Dragomiresti, Cugir, Plopeni, Moreni, Zernesti, Resica.

Hungarian armaments were located in the Budapest area. In the 1950s during the cold war following the Soviet example new arms manufacturing plants were located in the North-Eastern part of the country (Téglás, Sirok, Sajóbáony, Diósgyőr). In the 1970s and 1980s most of them were converted to peacetime production.

Unemployment grew suddenly and substantially in these Carpathian regions. The situation was dramatic because these regions used to be the wealthiest and favourite ones in the area. The crisis of unemployment lasted until the end of the nineties and in some of the less fortunate areas until just recently.

The Czech Republic, Slovakia, and Poland recovered from this crisis in 2003 through restructuring, privatization, and FDI in the motor car industry. Some problems remain to be resolved however in the countries of Ukraine, Romania, and Hungary.

Carpathian Project Experience

The Carpathian Project report on “Challenges and Priority for Adapting the Management of Carpathians forests to new Environmental and Socio-economic Conditions” describes practices for forest management, policies, and the economic use of forests.

The overview shows that all Carpathian countries have now adopted policies for sustainable forest management comprising of objectives for strengthening the economic function of the forest, but also to improve and protect the environment and contribute to a better quality of life including cultural and social dimensions of forests.

Principles of Article 7 of the Carpathian Convention were widely integrated in the countries with some exceptions. Carpathian countries also build upon other international agreements and commitments such as the Kyoto protocol. An analysis of the national institutional structure shows that agricultural ministries are in charge of forests, sharing some responsibilities with ministries of environment and supported by specialised national authorities which results in an overlapping of duties. The wide process of forest privatization, including ongoing restitution processes, causes problems of inexperience in forest management; this together with pressure from increasing poverty, result in the clear cutting of private forests to make rapid economic gains. As a response, private owner associations have been set up for coordinated management.

Contribution of the forest sector to the national economy is difficult to estimate, but forestry is a fundamental necessity of the local economy in the Carpathians. Data shows that Romania and Slovakia had the biggest volumes of deforestation and increases in wood production until 2005 with an overall decrease in 2006.

The production of non-wood forest products such as hunting has a great impact on socioeconomic development. Strict legislations for hunting offer opportunities of long-term conservation in the Carpathians. Fragmented data suggests that the problem of illegal logging is not significant, with other sources indicating a greater significant impact on the mountain ecosystem in Romania. Forest certification processes are processed with FSC-scheme being most developed overall, 31% of the forested area in the Carpathian region are certified.

NGOs actively cooperate with the state forest administration in some regions on issues like sustainable forest development. The Carpathian Ecoregion Initiative, established in 1999, created an international partnership to achieve conservation of nature in the Carpathian Mountains while supporting local economy and culture.

The Carpathian Oil Industry

The Carpathian Oil Industry has an impressive history. This region was the birthplace of the modern oil industry in the 19th century thanks to formidable oil reservoirs that can be found in the flysch formations that run in a band along the outer rim of the Carpathians and through the Sub-Carpathians.

Crude oil has been used for 4000 years. According to Herodotus and Diodorus Siculus the Babylonians had already used crude oil for the construction of walls and the towers of Babylon. The Romans used crude oil for military purposes. Marco Polo described natural eruptions of crude oil near the Baku and Caspian Sea where it was collected from the surface. The first deep handmade well was established in Sloboda Rungurska, located in Poland at the time, in 1771. Carpathian peasants were using crude oil to lubricate the wheels of carriages, and selling in the European market. However, the uses of crude oil were limited to its unrefined state.

The modern history of petroleum began in 19th century with refining kerosene from crude oil. It was Ignacy Łukasiewicz, a Polish pharmacist, who discovered the method together with his colleague Jan Zeh for the first time (1852/1853) and patented it in Vienna (December 1853). He also constructed the first kerosene lamp which was first used on the 31st of July 1853 during a surgery in a hospital in Lwów. A year later (in 1854) with Tytus Trzeciecki, they started the first crude oil mine in Bóbrka in present day Poland. Initially, the wells were drilled down to 15 then 60 meters¹. In 1868 Bóbrka had 60 hand-dug wells, two of which still exist. Mr. Łukasiewicz opened the world's first crude oil distillery in Ulazowice near Jasło.

The demand for fuel/kerosene used for lighting of houses and whole towns was enormous; this is why the oil mining industry developed so rapidly and the region became one of the centres of the world's oil industry in the 19th century.

About 40 years later in 1895 large oil-reservoirs were dug in Eastern Galicia near Drohobych and Boryslav in what is now Ukraine². At this time, rapidly developing drilling techniques allowed exploring oil from significant depths like those found in the "Orów I" well nearby Boryslav was 2274 meters deep. Financed by foreign companies (Austrian, French, English, Polish, German, Belgian, Italian and American), oil production increased eightyfold between 1870 and 1910. In consequence the center of the Galician oil industry shifted from Bóbrka to Boryslav. In 1909 Galicia encountered 5% of World's oil production and was the third largest oil producer of the World. The annual crude oil extraction solely in Galicia/Boryslav region exceeded 2 million tons (2.075 million). At that time the oil industry employed some 1/3 of Podkarpackie region inhabitants.

The Galician oil industry had the same problems like other regions experiencing a similar oil boom: an uncontrolled over-production due to fast and uncoordinated exploration of the oil-fields. Additionally the subsequent processing and commercialization was not organized by monopolies of oil cartels (as it was for example in the USA and Baku). When production in 1908/09 reached its peak, prices declined without any external possibilities for market regularisations. After the

¹ Of course, over the years the drilling methods became much more efficient and technically sophisticated (free-fall drilling, percussion-type drilling device, cable drilling, use of engines, Canadian drilling method). This was also the result of the engagement of foreign entrepreneurs, investors, and oil-pioneers in the mid eighty – eighties

² The first trial drilling took place in 1901, seven years after Bóbrka;

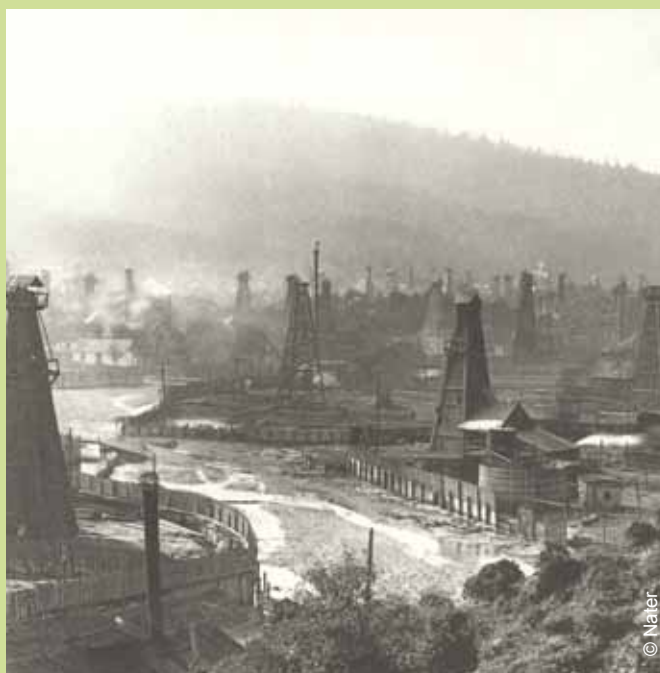
outbreak of the First World War oil production sunk rapidly and in 1925 Galicia provided only 0.54% of the World oil production (10th worldwide) and disappeared until the outbreak of the Second World War.

Another important center of the Carpathian oil production is the Ploiesti-region, located 60km north of Bucharest in South Central Romania. The first large oil refinery opened there in 1857 and was owned by Mr. Teodor Mehedințeanu. Romania was the first country in the world with a crude oil output officially registered in international statistics, namely 275 tones (1857).

The US did the same thing in 1859. It was followed by Italy in 1860, Canada in 1862, and Russia in 1863. The city's growth

since that time was directly related to the expanding Romanian petroleum industry, having refineries, storage tanks, oil-field equipment works, and a distillery. During World War II it was the target of repeated massive bombing raids. With the largest petroleum reserves in Eastern Europe, Romania was a major oil producer and exporter throughout much of the twentieth century. Romania was the seventh in the world in total oil produced with 7.2 million metric tons in 1937. In 1950 oil satisfied nearly half of the total energy needs. After 1976 production gradually declined. Romania heavily invested in developing an oversized oil-refining industry; 1988 domestic crude output had fallen 9.4 million tons, while refining capacity stood at 30 to 33 million tons annually. To keep the refineries running, ever larger volumes of crude had to be imported. The social and professional changes in the regional society are closely linked to the oil industry. Due to foreign investments between 1900 and 1940, Romania saw the emergence and fast development of big factory centres; Ploiesti region is still one of the most industrially active areas in Romania.

The boom of the oil industry had an accordant influence on the nature and landscape of the Carpathians. The rapidly growing demand for timber (used for mining towers, barrels and pipelines) resulted in intensive exploitation of more accessible forest complexes located close to oil mining fields. This was accompanied by the construction of roads and narrow-gauge railways which allowed extraction of timber from the mountains. Previously there was no significant external demand for Carpathian timber; wood was used solely by the local inhabitants as construction material and firewood.



► Old Galician Oil field

8.2 Policy Recommendations For The Industry Of The Carpathian Area

8.2.1 The “brown-fields” problem

Brownfield are those industrial, other non-agricultural and non-residential areas where former activities were abandoned and presently are areas not used for any economic, residential, or leisure purposes.

The Carpathian mountainous regions are facing an extremely difficult brown-fields problem for three reasons. The brown-fields problem emerged for them in an extremely short period, in extremely large quantity and it affects an extremely large proportion of the potential industrial area:

- The brown-fields dilemma is a direct and concomitant consequence of the economic transition from a centrally planned to market economy. A very large part of industrial firms established under the directive central planning regime proved to be inefficient and non-competitive in the open market economy. Carpathian countries, within a short span of 5 years, in 1991 to 1996 saw an abandonment of economic activity. While in Western countries, the problem emerged gradually during several decades, Carpathian countries had to face the problem in five years;
 - In the Western countries, the brown-fields problem emerged as a consequence of the decreasing demand for some products or as a consequence of obsolete technologies. These problems did not occur at the same time in all industrial branches. The consequences of the inefficient and uncompetitive centrally planned economy emerged at the same time in all sectors and branches of the economy. There emerged such a huge number and area of brown-fields, which is unparalleled in market economies;
 - The processes described above are common to all countries and to the whole area of the respective countries. In mountainous areas, however, the situation is more acute. In narrow valleys, suitable locations for industry are highly restricted and a large portion of suitable areas are already occupied with brown-fields. Therefore, if these brown-fields are not cleaned up then there is no possibility for new industrial investment.
 - In most cases the clean up and reuse of brown-fields is more expensive and less attractive for investors than green field sites. This is the main difficulty of revitalisation because local governments cannot force investors to use brown-fields. Rigid insisting upon brown-field utilisation might discourage the investors from selecting the city or region for their investment; brown-fields are also repulsive and discouraging for tourism developments. Unfortunately, several brown-fields are situated in the immediate vicinity of the most valuable natural and cultural heritage sites in the Carpathians (for example abandoned cement factory before the entrance of the Cheile Bicazului - Gorge Bicaz - in Romania).
 - Brownfields are special a problem if they are contaminated with dangerous and harmful chemical substances. Unfortunately, several brownfields belong to this category in the Carpathians. Their reuse requires much more effort and much more money. Sometimes even the cleaning procedures are not yet properly elaborated and tested. Therefore research in this field should enjoy priority in I&TD programmes.
- Carpathian countries and regions have to use the following instruments to solve the “brownfields” problem:

From the notebook...

How to clean up this huge amount of brown-fields in the Carpathian area? Unfortunately, one chance has been missed in most countries and it was the privatization phase. In the 5 new Länder in Germany, the “Treuhandanstalt” connected privatisation with the obligation of cleaning up and reuse of brown-fields. In most Carpathian countries priority was given to the privatization methods of management and employee-by-out, voucher privatisation, or to the budgetary revenue from privatisation and not to the clean up of the areas. The situation was marginally better in the Czech Republic where a certain proportion of privatisation income was used for environmental rehabilitation of industrial sites. It is extremely difficult, if not impossible, to enforce the fulfilling of this obligation a posteriori. Most of the real estate has changed proprietors several times during the last 15 years.

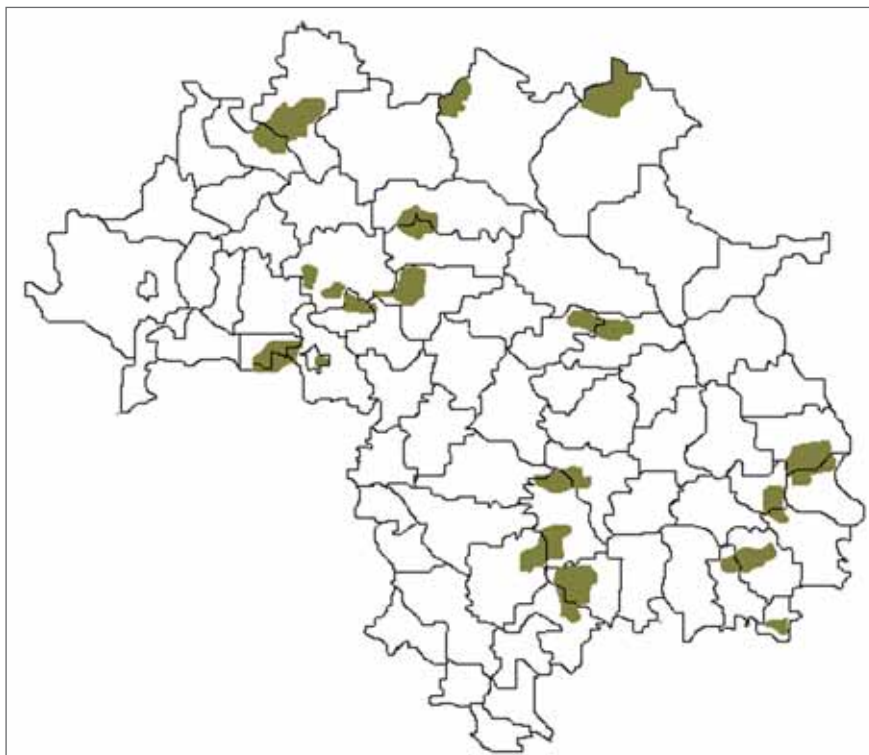
- The privatisation of the remaining stock of state-owned industrial assets should be strictly connected to the clean up and reuse of brown-field areas.
 - The proprietors of brown-field areas should be obliged to clean up these areas within a given period of time. In case of noncompliance they should lose their real estate or should pay serious penalty;
 - In the course of urban planning, the reuse of brown-fields should be enforced more seriously. New industrial areas should not be designated until large brown-fields are re-utilised.
 - Both the EU and national governments should assign high priority to the reuse of brown-fields in their structural support policies. Brown-fields should enjoy the same status as convergent or remote areas; in the case of the Carpathian countries, most brown-fields are in convergence areas. Multinational and big enterprises should also have the opportunity to become subjects of EU and national support in brown-field utilisation.
 - As already mentioned, business investors are frequently repulsed by the costs and complications of brownfields reutilisation.
- Therefore, brown-field clean up should also benefit from support in this case if used for residential development purposes. In many cases, residential use is the only possible way of re-utilisation. However, this method can be applied only if the areas are not contaminated.
- In abandoned mining and manufacturing places there are two options of utilisation. Either fully remove the remnants of the older industrial assets to start building in a new cleaned up area, or use the area as an industrial or mining heritage location for an open air museum or other educational, leisure, or cultural purposes such as those places in Germany, Britain and the Czech Republic; or like several mines in Austria, Poland, and Romania). Obviously, the transformation to industrial or mining museum requires also some investments.
 - In recent years, there were innovative remedial techniques employed at distressed brown-field properties. A remedial strategy uses naturally occurring microbes in soils and groundwater to expedite a cleanup, and in situ oxidation which uses oxygen or oxidant chemicals to enhance a cleanup. Often these strategies are used in conjunction with each other or with other remedial strate-

gies. Often, these strategies are used in conjunction with each other or with other remedial strategies. Some brown-fields with heavy metal contamination have even been cleaned up through an innovative approach that utilizes deep-rooted plants to soak up metals in soils into the plant structure as the plant grows. After they reach maturity, the plants — which now contain the heavy metal contaminants in their tis-

sues — are removed and disposed of as hazardous waste.

- If the problem cannot be resolved with these solutions then the assessment and appraisal analysis of cleaning up the brown-fields should be supported. A thorough analysis is namely indispensable before starting any clean up exercise.

Figure 19: Main brown-field areas in the Carpathian Region (2004)



Source: Maciej Borsa, Urbanproject (Romania)

8.2.2 Conversion

The task of conversion had already been fulfilled in the Carpathian region. Nevertheless, there are still capacities which have

to be converted to civilian use. In 2000, the community initiative CONVER of the EU ceased to exist, but there are other funds and ways for supporting these actions.

8.2.3 Industrial diversification and the problem of the “one-factory-towns”

One-factory-towns are a specific problem of new member states but even more of the Carpathian area:

“Socialist industrialisation” has acknowledged only big enterprises. Small and medium Enterprises (SMEs) did not exist under socialism because they were difficult to control in the state owned economy. Therefore industrialisation meant to establish one large enterprise in smaller towns which would provide jobs and income to the population of the town.

But in several cases this single enterprise did not only provide jobs and income to the town, but it also undertook the responsibility of service provision to the city's population. Nursery and kindergarten were operated by the single enterprise. These plants provided housing and heating to their employees. Cultural and sports facilities were also the property of the enterprise. They have supported local authorities to construct new roads, water and sewage facilities in the town etc. These services were initially intended for the employees of the enterprise. Later, if the enterprise was in good financial position they would extend the services to the whole city. This left the population of the city at the mercy of one single large establishment.

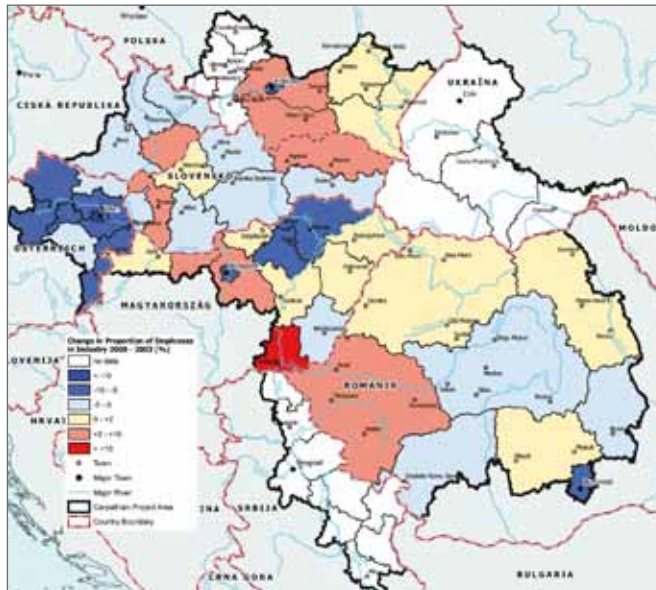
The situation became especially critical if the monopoly went bankrupt. It was not only an economical but very serious social problem because there were no other jobs in town or in the surroundings. Basic services to the city could not be sustained because they were operated by the monopoly. Governments were forced to bail out the firm; otherwise the fundamental living conditions were endangered. This bailout did not ensure any improvement in the efficiency and competitiveness of the enterprise.

One-factory-towns existed in large numbers in the Carpathian regions of Poland, Slovakia, Ukraine, and Romania, and of less quantity in the Czech Republic and Hungary.

The proposed measures and institutions dealing with this problem are the following:

- The local governments should be strengthened and supported in order to enable them for the takeover of those communal and social services which were provided by the single big enterprise in the town. After takeover, they can be privatized to smaller, independent firms. This refers most importantly to housing, heating, nurseries, kindergartens, local transportation, and health services.
- Similar situations should be avoided in the future because it is not only socialist enterprises, but modern multinational firms are sometimes willing to monopolise the employment opportunities of a town and exclude competitors from the area. For that aim they are sometimes willing to provide services which do not belong to their proper business activity. Local governments and the inhabitants welcome this patronage, releasing them from some obligations. Serious critical situations could arise if multinational firms move to other countries or regions where labour is cheaper than the present locations. Firms can support local governments financially but not with their own provision of communal services.
- Economic diversification and employment is better served by several SMEs operating in different sectors or branches of economy than by one single big enterprise. Therefore priority should be given to the support of SMEs. Unfortunately in most Carpathian countries, the largest governmental support such as taxation allowances and capital grants are given

Figure 20: Employment in industry - changes 2000-2003 (%)



Source: EURAC

to the large multinational countries to attract them to the country. However, it is understandable because large multinational companies bring the knowledge, exports, as well as higher tax incomes. In contrast, their employment impact is moderate and expectations concerning future higher tax revenues have proven several times to be fallible.

- Significant foreign direct investment in Carpathian towns and cities can be connected to diversification if assembly parts and accessories for the main plant are produced in the same region by domestic SMEs. These SMEs should be subcontractors and suppliers of the big enterprise, however they should be independent ventures who produce for other customers as well. National and regional governments should insist within reasonable time that the share of supplies and deliveries of domestic contractors should increase. It could be a condition of supports and allowances to large firms,

but subcontractors should make efforts to not be fully exposed to a single customer.

8.2.4 Promotion and support of SMEs

This policy proposal is closely related to the former one. It should be emphasised here that the promotion of SMEs in the new member states is quite different task from the same activity in the old member states, and therefore requires different approaches and instruments.

SMEs essentially did not exist in the socialist states. All economic activities were organized in large socialist firms. These large units were easier to control centrally and to impose centrally defined production, sales, employment and investment target figures on them. Small and medium units did not fit into this economic system.

It follows that SMEs had to be created after the system change, in the last 16-17 years.

Carpathian Project Experience

The development support of small and medium enterprises (SMEs) with a strong focus on tourism development forms an important part of the Carpathian Project. With transfer of experience from Italy, adapted to local needs, a strategy and tools for SME support in mountainous areas were elaborated for stimulating tourism demand. In pilot activities carried out in the Podkarpackie region, tourist facilities were strengthened and expanded through actions aimed at consolidating existing entrepreneurs, supporting new ones, and local communities.

Developing the strategy and tools for analysis of the Podkarpackie tourism sector within the domestic market with European and international tourist flow was carried out by checking the tourism offerings, hospitality, and transport infrastructure. With the support of local actors a strategy for regional tourist circuits was laid out with respect to sustainability that includes the targeted selection of the regions' main attractions, assets, reference targets, and measures that can be undertaken. The proposed tourist circuit model identifies priorities and guidelines assisting local actors in drawing up strategic and coordinated plans to promote tourism in the region by directing attention toward the consistency of integration with the local context. Two 5-day itineraries with prices calculated were elaborated covering the Podkarpackie region but also stretching into Ukraine. The report is a tool for guiding future strategies for promoting tourism in the region; by providing a summary and specific look at the situation in the Podkarpackie tourism sector and its potential for development.

One pilot action was carried out with the introduction of tools to support new enterprise creation in the Carpathian Space. These tools enable prospective entrepreneurs and local tutors to implement steps of enterprise creation in a simple and standardised way. These steps comprise of elaborating a business plan focusing on the business idea, elaborating objectives and strategies, planning and operational matters, checking the economic and financial sustainability of operating choice, communication and fund raising. Local tutors were additionally trained to ensure effective assistance to new entrepreneurs.

Most SMEs had to start from new entrepreneurs; very few could be created from a smaller part of a privatised big state-owned enterprise such as retail shops or small privatization. They did not have the time to accumulate the required capital, therefore most of them are suffering from shortage of capital.

Some older EU member states, like Italy, insist upon applying the same or stricter regulations on SMEs in the new member states than the old ones. They refer to the lower wage level of new member states which makes SMEs more competitive and therefore

they are against capital grants to SMEs in the new member states.

The chief characteristic is that without the minimum required capital SMEs in the new member states, especially those in the less developed regions such as the Carpathians, will never compete with SMEs from old member states. Therefore, they have to be dealt with differently.

Carpathian Project Experience

Another pilot action was implemented for the support of already existing enterprises to consolidate their businesses. It was difficult to find enterprises willing to participate. Some refused for such reasons as unsuccessful training and limited time resources for training. Most enterprises are small and micro enterprises and – proportional to the size of business - were reluctant to provide financial data. A handbook for consolidation of participating enterprises was elaborating comprising of a methodology, project experience, and transferability levels. Rather than pre-structured tools it proposes a programme of assistance adapted to a particular context, customised to the entrepreneur's needs. Furthermore, trainers were educated on the means of enterprise assistance.

The last pilot action for support and development of SMEs targets the creation of network involving public and private stakeholders, local communities, other SMEs, as well as enhancing the regional impacts of existing programme frameworks to work together in sustainable tourism development in the Podkarpackie region. It became apparent in the workshops held that some stakeholders still see sustainable development as an obstacle rather than a chance for economic growth. Also the need for an entity coordinating tourism development policies and among stakeholders in the region was underlined. The network thus was implemented as a round table for planning and implementing programmes on tourism with the aim on focusing policies and maximising the impact on the region. Due to several problems related with regional rules and regulations, as well as lacking technical assistance to the network, the implementation of the network could not be further maintained. Its importance as a strategic governance tool to foster tourism development is recognised by the Marshall Office however.

8.2.5 The Carpathian motor car industry cluster

Putting the problems of transition aside, the past twenty years witnessed very positive developments in the industry of Carpathian countries. One was the fundamental restructuring of industry. The two main branches of industry became the automobile industry and electronics. By 2008, Slovakia had nearly 40 percent had total industrial output in the Carpathians and even a larger percentage of industrial exports were produced by the automobile industry there. The share of industry is slightly lower in other countries but still very high.

The region's advantage lies in its high level education, highly qualified polyvalent labour force with significantly lower labour cost, exceptionally high technical capabilities, and a high-

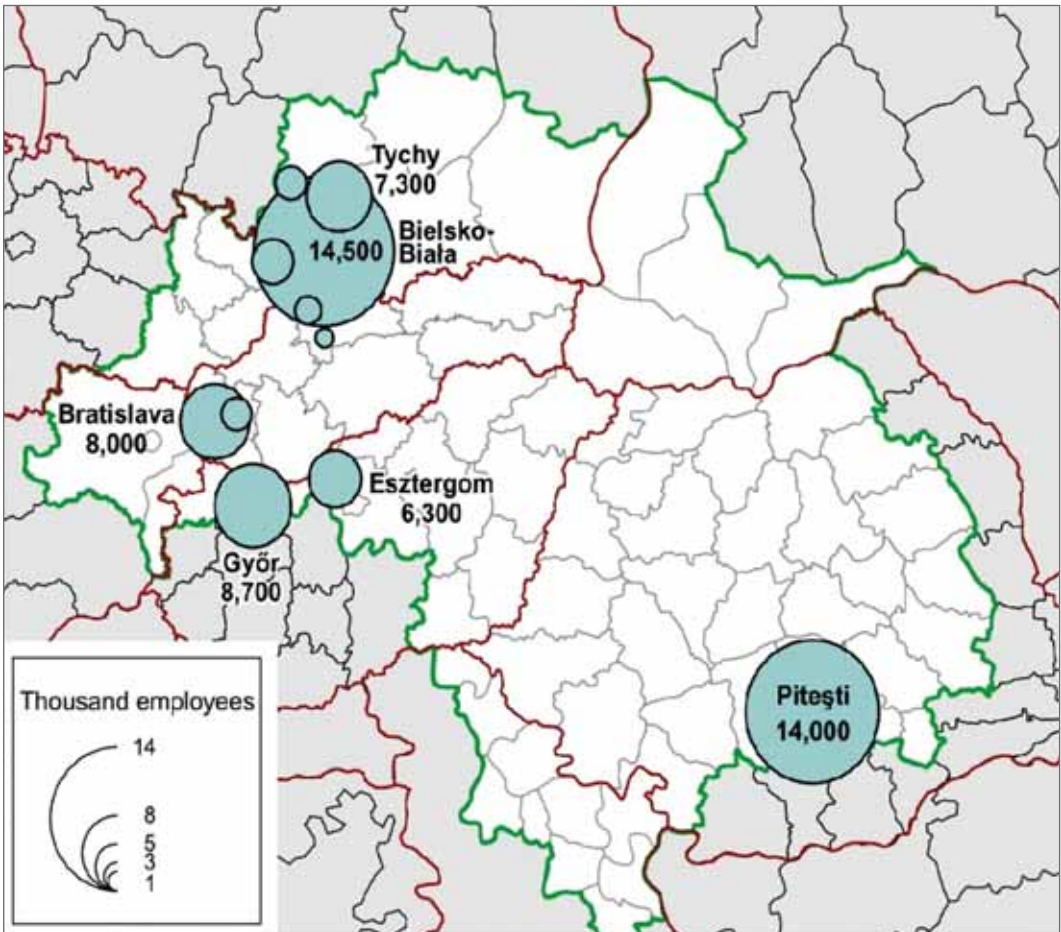
quality supply base. Subsequently, the growth of joint ventures and acquisitions and the success of green-field operations are some of the driving forces that encouraged motor car concerns' decision to initiate new research development and production engineering facilities.

Technological know-how, access to local mature Western markets, continued product quality and development, lower labour costs, subsidies and incentives from national and local governments, and loans from the European bank of Reconstruction and Development as well as the European Investment Bank all point towards growth and rebirth of the region's automotive industry. Therefore this presents a key example of regional restructuring where renewed economic structures are prioritized, such as adaptation to changing demands and entrepreneurship.

The interesting development is that all these new investments were implemented in a relatively small area, embracing parts of four countries: Czech Republic, Hungary, Poland, and Slovakia. The area begins from the riverside of the Danube in Hungary and Slovakia, continuing in the valley of the river Vah and through the Silesian gate to the most southern parts of Poland. Along this line the main motor car or parts manufacturing plants are the following:

Esztergom HU (Suzuki assembly plant, Győr HU (Audi motor and assembly plant), Bratislava SK (Volkswagen gear and assembly), Trnava SK (Peugeot and Toyota), Zilina SK (Hyundai KIA), Martin SK (Volkswagen parts, axels, steering), Ostrava CZ (Siemens, parts), Nošovice (Frídek-Místek Hyundai) CZ, Bialsko-Biała PL (Fiat), Tychy PL (Fiat), Gliwice PL (Opel assembly and parts).

Figure 21: The major centres of the automotive industry in the Carpathians



Source: author's construction

Together this area produced nearly two million automobiles by 2008 and employed about 20 thousand people.

But the real significance of the cluster is not in these large foreign owned plants, but in the several hundred SME suppliers who are working for and delivering to large plants.

The possibilities for local suppliers are not yet exhausted. Due to technical devel-

opments, the parts and accessories of cars have become more universal; suppliers can serve several manufactures are not bound to a single partner.

That makes the grouping of manufacturers to become a real cluster with multiple co-operation and bindings. This elements of the cluster should be enhanced and supported in the future



© Marcea Borsa

Carpathian Project Experience

Local brand development in the mountainous region of Poland was one of the Carpathian Project's pilot actions. It is the example explaining how to achieve the VASICA's strategic goals in practice.

To date the Podkarpackie Voivodship has remained virtually exclusive from intercontinental flows; the small share of foreign tourists coming from Slovakia and Ukraine. This exclusion occurred in spite of remarkable natural assets, art, and cultural characteristics that reflect a long and dramatic history that can attract significant segments of the international tourism market. Therefore a pilot project was implemented in the Podkarpackie region that supports less the creation of a local brand, which is already present, but more the definition of a sustainable and comprehensive tourism product as well as promotional and awareness measures.

In the first step, characteristics of the Podkarpackie region and their suitability to form the core of a tourist product to be offered to international markets were analysed. Local tourist operators and the region's responsible officials, in addition to studies and observation workshops, were carried out to discuss inputs and results.

In the next step, the creation of a sustainable tourism product is discussed and its need to be identified. Such a product should benefit from upgrading the offer in terms of infrastructure and systemized management of tourism assets which can channel funding from different levels in Poland and Europe. These efforts have to be accomplished by measures to increase awareness among public and private stakeholders on the strategic importance of regional assets for tourism development and hence for regional economic development. Alongside this, effort is necessary to upgrade skills and abilities in terms of professional qualification in this sector, hence improving the service offerings and quality as well as strengthening the ties between tourism offers and other economic sectors in the region. The execution of a promotional campaign targeted to the outside market, with professional operators and the general public as target groups, is considered as crucial.

A plan with concrete examples are provided in the pilot project report with the elaboration of a marketing mix for the implementation of activities that addresses domestic and international market guidelines. The examples of promotion and communication indicated in this report refer to the Italian tourism market because it can be taken as a model for many European markets.



► Krakow city, Poland

9 URBAN NETWORK IN THE CARPATHIAN AREA

9.1 The Situation And Problems

Urban network and urbanisation in the Carpathian area were determined by history and geography.

One of the main factors of urbanisation was the peripheral situation of the Carpathians. The Carpathians constituted the borders of the old Hungarian Kingdom; hence the Carpathians were per definition the peripheries of the neighbouring countries, of Poland and of the Romanian principalities.

Now, the Carpathians constitute the border between Poland and Slovakia, between the Czech Republic and Slovakia, partly between Romania and Ukraine. The Ukrainian Carpathians no longer constitute the border line with Hungary and Slovakia but are fully contained and at the most outer edges of the Ukrainian state. In Romania the Carpathians are now in the centre of the country, but the mountain range still constitutes borders for the countries (judets) and for the NUTS2 regions. Furthermore, they represent a dividing line in Romania both historically, sociologically, politically, and even in administrative systems².

This peripheral situation represented in the Carpathian area was reflected in the urban system. All the big urban centres, from where the Carpathian area was governed and controlled (Vienna, Budapest, Warsaw, Prague, Bucharest) were outside of the proper Carpathian area. The largest cities in the wider Carpathian region, Cracow and Lviv had a population of

154 thousand and 176 thousand respectively in 1900. At the same time Vienna had two million, Budapest one million inhabitants. The other cities in the Carpathian region were even smaller: Bratislava had 62 thousand, Timisoara 72 thousand, Uzhgorod 14 thousand inhabitants.

9.1.1 Small towns

In the same period, there was a dense and lively small town network in the Carpathian area. These small towns were rather poor and there was much room for improved infrastructure, but had self government, cultural and town embellishment societies, and other active civilian organizations. Their economy was based in trade, small-scale industry, and agriculture. However, a large majority of the population lived in villages and rural areas.

One important feature of the urbanization of the Carpathian area was in the late 19th and 20th century. The ethnic composition of urban and rural population was rather different. In the Polish Carpathian region a substantial part of urban population especially in smaller towns (or shtetls) was Jewish Hebrew, while the rural population was Polish and Ukrainian. In the Ukrainian Carpathian region, a large part of the urban population was Jewish or Polish; rural populations were Ukrainian. In Slovakia, urban population was German, Jewish and Hungarian, rural population Slovak in majority. In the Transylvanian area, urban population was mostly Hungarian, German and Jewish and of rural was Romanian and Hungarian.

² For example, until 1999, when the Act on Cadastre and Real Estate Publicity became effective, Romania had a dual land registration system: the land book system in Transylvania, and the land transcription system in the other parts of the country.

During and after World War II dramatic changes occurred in the composition of the urban population. The Holocaust resulted in the disappearance of the vast majority of the Jewish population from Carpathian towns. German population also disappeared from Polish, Czech, Slovak, and Romanian towns through expulsion and emigration. The Polish population emigrated from the Ukrainian towns, a part of the Hungarian population emigrated from the Transylvanian cities and towns. Several towns have lost more than half of their population. Large cities have recovered in population rather quickly. But some small towns have still not recovered.

Small towns have also been disadvantaged through other measures in the socialist period:

- These small towns were formerly scenes of exchange represented by both types of agricultural products, mountains and plains. At the same time, farmers spent the money received for products in the shops of these towns. It was the main function of these cities along the "Market Chain (line)". After collectivization of agriculture they lost their market function, especially in cities in the foreland of the Carpathians. The products of collectivized agriculture were sold straight through the central procurement system of the state, while avoiding the markets of small towns.
- Industrial investments and labor resources started in large cities. Only when these resources were fully exhausted central ministries forced to allocate investments also to smaller towns. These investments most frequently created "one factory towns" or they belonged to the armament industry, and small towns served as the "hiding place" of these industries.
- The administrative role and function of cities and towns was extremely important in the

socialist period. In a highly hierarchical society, all directives and resources come from the top down. Therefore it is critical to question where a person or local government is situated within the hierarchy. Those on the upper levels dispose of the development resources and allocate them to lower level organizations rather arbitrarily, frequently following self interest. Cities which had some regional administrative function would distribute the resources received so that their share was disproportionately higher. Towns without this administrative position were defenceless against such acts.

- After 1945, Carpathian countries had to take over the Soviet territorial administrative system. It had 4 levels: national level, regional level, district level, local level. District level was immediately over the level of villages, the seats of the districts were in the smaller towns. District level was represented in Poland by the "powiats", in Czechoslovakia by the "okres", in Ukraine and Romania by the "rayons", in Hungary by the "járás". It can be discussed whether this Soviet type administrative system was suitable for the smaller Carpathian countries, nevertheless the "district seat" role ensured for smaller towns and central function and the associated jobs and resources.
- In the 1970s, however, several Carpathian countries transformed their territorial-administrative system. Smaller regions have been established and the district level has been abolished (in Poland the powiats, in Romania the rayons, in Hungary the járás). Small towns lost their administrative function, jobs, and associated institutions. They lost the function of resource allocation and could not favour their seat town in this allocation process. Exceptions can only be found in Czech Republic and Slovakia where small towns did not decline so

dramatically than in the other Carpathian countries.

- The 1999 administrative reform in Poland re-established the powiats. But in the 25-30 years meantime, since the abolishing the powiats, local governments (Gminas) have been consolidated, strengthened and upgraded in function. Powiats could not regain all the functions and power that they had enjoyed before.

9.1.2 Large and medium cities

Larger towns with administrative centre functions, in contrast to small towns, grew

and developed very rapidly. The main driving force of this growth was industrialization; housing and infrastructure were concomitants of industrialization and administrative functions.

According to Table 5, the most dynamic growth was in Romanian cities. If we disregard the specific development of Suceava³, the population in 2000 of big provincial cities was up to five times larger than 50 years ago.

³ The capital city of Bukovina was Chernivtsi. After World War II Bukovina was divided between Ukraine and Romania. Chernivtsi became a part of the Ukrainian half. Suceava became the capital of the Romanian Bukovina and this administrative change accelerated the growth of the city tremendously.

Table 5: Carpathian cities with the most dynamic population growth 1950-2000

City	Population 1950	Population 2000	Growth %
	in thousands		
Suceava (RO)	10.1	117.6	1064%
Baia Mare (RO)	28	150	436%
Bacau (RO)	39	197.2	433%
Pitesti (RO)	38.3	186	386%
Kosice (SK)	60.7	242	299%
Brasov (RO)	84	310	269%
Piatra Neamt (RO)	34.9	124	255%
Uzhgorod (UA)	35	118	237%
Ivano-Frankivsk (UA)	65	218	235%
Timisoara (RO)	112	330	194%
Cluj-Napoca (RO)	117.9	329	179%

Source: national statistical yearbooks

Similar rates of urbanization did not take place in other parts of Europe. It was also related to the collectivization of agriculture, which urged many farmers and peasants for leaving rural areas and fleeing into cities.

This high rate of urbanization compounded by socialist ideology, economic policy, and urban planning resulted in the total transformation of urban structure in the following ways:

- City centres were neglected; urban housing was nationalized and neither the state nor the inhabitant cared for the maintenance. Commercial banking was abolished, tourism was greatly restricted and trade was the “for the time necessary evil”. So the traditional functions of downtown areas disappeared and it led to a dramatic deterioration of most city centres.
- For new immigrants, huge multi-storey housing estates were built on the periphery of cities. These buildings provided basic comfort and meant a social rise for the masses coming from rural areas. In some cities there was strange segregation; new immigrants lived in new flats while the native city population lived in dilapidated dwellings in the city centres.
- State housing construction was restricted to large cities. The applied technology, the prefabricated panel construction system, could only be economically applied to mass production. Most small towns were saved from this technology and preserved their traditional image, with few exceptions. In Slovakia, for example, panel technology was applied for housing construction in smaller cities. Some of these towns now look as if they were surrounded by a high city wall made of 10 storey panel houses.

After the political and economic change in 1990-91, the functions and internal structure of Carpathian cities changed fundamentally:

- Downtown streets and squares were greater appreciated. New banks built their headquarters or moved to old valuable but deteriorated buildings after reconstructing them. Business firms occupied the flats in the renewed buildings. Residential use was crowded out by business utilization because it was more profitable for owners to rent the space to business firms. Shopping streets were also renewed and now offer an international selection of goods.
- At the same time, large housing estates started to deteriorate and lose their former social prestige. They started to deteriorate because they were built in the 1960s and 1970s and are now nearing the time when they need to be renovated. Neither the technologies nor the financial resources are available for the renovation however. Furthermore, the original problems of inadequate building construction show in poor isolation and in rigid, unchangeable structures. The original inhabitants of the houses became old or moved away and the new renters are of lower social status. This situation has led to a decline of the social prestige of estates and acceleration in the exchange of inhabitants. In the Czech Republic and Slovakia, this downgrading of large housing estates only happened to a much lesser extent.
- In contrast to the previous period, the population of most Carpathian cities started to decline in the last decade. Population numbers declined in all cities with the greatest losses in the largest cities. The number of inhabitants of Budapest decreased from two million to 1.7 million in 15 years. The population loss of Bucharest was similar.

The population decline was the result of many reasons. First, population had very little or negative growth. Equally important was migration. Suburbanization accelerated in these countries in last decades. Upper and middle class families moved to the suburban areas for more agreeable, quieter, and a healthier environment. Many unskilled city dwellers who lost their jobs in cities hoped to earn a living in privatized agriculture by returning to their rural homes. Others, and those on pension, who could not afford the increasing rent costs and the charges for urban services also moved to rural areas. Finally, in the last decade, there has been notable emigration from some Carpathian countries; city inhabitants were the most affected. More than 1 million Polish and more than two million Romanian citizens are working in Western European countries and it is also one reason for the decline of urban population. Overly large decline in population may cause serious problems.

The per capita costs of urban communal services may increase, but incomes of the city from local taxes and fees might decrease. These two tendencies might result in the worsening budgetary balance of cities.

National capitals might be the main beneficiaries of system change under socialism, but were hermetically isolated from Western metropolises and cut off from the international trends of innovation, fashion, culture, and thinking. They were the most disadvantaged of the centrally directed socialist system and gradually became a grey, provincial city. After the system change, they renewed their world and European connections and were the main locale of international business, banking, and commercial firms; FDI was directed mostly to these cities and their surroundings.

This was good news for the whole of the Central European space. However, it was beneficial and detrimental for the Carpathian Region and other peripheral regions. The extreme centralization of the most international and profitable developments meant that peripheral regions were excluded from these developments. They did not enjoy the advantages of the systemic change, only the drawbacks. For example, in the 1990s, economic growth was restricted in Romania and Hungary to only the capital regions; all other regions had negative growth rates. All banks in Hungary had their headquarters in the capital city of Budapest. For a long time the FDI stopped at the capital cities and did not move further into the peripheral regions. Now that the absorption capacity of capital cities is nearly exhausted, capital looks for other locations of investment; but this 17 year delay had serious negative consequences on the Carpathian countries.

Carpathian Project Experience

There are two types of settlements within the Carpathian space, metropolitan areas of international importance and remote farmsteads. In the Carpathian Project report “Typology of the Settlement Structure in the Carpathian Area,” a typology of settlement types was identified by legal status, demographics, and importance (range of influence, role, and function). For typology elaboration 1000 urban and rural settlements were analyzed and three case studies were carried out. The first, “Human Settlements in the Municipality of Poronin Villages” in Poland, “Peculiarities of Settlements in Ukrainian Carpathians,” and “Human Settlements in the Prahova Valley” in Romania.

Urban settlements are one main group of settlements in the Carpathians. Most cities and towns were founded in large valleys along transport routes or for defence reasons. Carpathian settlements are generally small and medium sized due to many reasons, geographical conditions and environmental protection for instance. Bigger cities are usually located at the foothills of mountains. Four main types of urban settlements in the Carpathians could be identified:

- “Subcarpathian Metropolises”, having more than 500.000 inhabitants, international importance and being a capital or a large administrative centre. Budapest, Bucharest and Bratislava as capital cities belong to this type as well as Lviv and Krakow.
- “Carpathian Regional Urban Centres” have a population between 100 and 500 thousand; usually centres of NUTS II or NUTS III administrative units. They perform the role of regional



centres in administrative, industrial, tourist, communication and/or educational terms. Examples are Sibiu in Romania, Miskolc in Hungary, Kosice in Slovakia, and Rzeszow in Poland.

- “Carpathian Medium-Sized Cities and Towns” are inhabited by 20 to 100 thousand people and are rather diverse in their functions, usually with a focus in industry, tourism, or health. These cities have an urban form, transport accessibility, and adequate environmental conditions. Cities such as Alba Iulia and Borsa in Romania, Boryslav in Ukraine, Slin in Czech Republic, and Liptovsky Mikulas in Slovakia belong to this type.
- “Carpathian Small Towns” are locally important and are inhabited by 20,000 people or less. Most developed from local trade while others are spas, tourism, or industrial centres. Small local centres as Dukla in Poland; industrial towns like Baicoi in Romania; tourist centres as Rachow in Ukraine; and health resorts like Rajec Teplice in Slovakia are considered small towns.

The second group main group is *rural settlements*. Carpathian rural settlements are quite similar to settlements in other mountain areas, especially for the fact that only a smaller or larger part of the administrative territory of the settlement is really suitable for housing development because of natural conditions. In the transnational typology, four main types of rural settlements were classified:

- “Rural Centres” are typically settlements without legal urban status but still performing the role of administrative centres also for other settlements, as for example Kamienica in Poland.
- “Villages” as another type are delimited settlements with administrative competencies limited to them. This is the most common type of Carpathian rural settlement, one example is Zdzial in Slovakia. Villages as well as rural centres often lack sewage systems and thus water pollution is a common problem.
- “Empty Villages” are existent due to wars, migration and relocations. Most of them have been resettled, but a few still remain uninhabited as for example Boyko village in Poland. Human activities in this type of settlements are usually limited to extensive use of farmland or to hosting seasonal tourist facilities.

The third group is “Carpathian Remote Farmsteads.” Usually these are forest areas with no means of public transport and a lack of services, difficult for the most elderly inhabitants. Due to their often scenic location, tourist facilities in these areas increase.

Concluding, it should be pointed out that small towns and rural settlements make up the majority of the Carpathian settlement structure. This type is most connected with tourism, sport, recreation, health resorts, local services, and are also rich in cultural traditions. Thus small towns having better accessibility, local services, rural settlements, natural conditions, and cultural conditions are best suited for further tourism development.

These case studies indicate problems of rural settlements as a negative population growth, an ageing population, and a lack of incentives for the young to stay in the area. The danger of “aggressive tourism development” related to environmental problems and the need for alternative sources for income, such as sustainable energy or agricultural products, is identified. Accessibility of settlements is seen as a major issue for future development.

9.2 Policy Recommendations Concerning The Urban Network

9.2.1 Establishing a new urban-rural relationship

The establishment of a new urban-rural relationship is one of the main policy aims of the European Spatial Development Perspective (ESDP) approved in 1999. The decision was made in Postdam by the ministers of EU member countries responsible for spatial planning and development. This aim had special significance for the Carpathians, but could not be included into the ESDP since the Carpathian countries were not EU members until after the approval of ESDP in 1999.

Nearly 50 years of “socialist planned economy” created a specific hostile relationship between urban and rural areas. The first reason for this relationship was the absolute priority of industrialization which was implemented partly through large scale transfer of resources from rural areas with agriculture to urban areas with industry. The second reason was the extreme centralization and distribution of financial and other resources of development. Urban areas could receive more economically at the expense of rural areas, and rural could receive more only at the expense of urban areas. This distributional controversy existed at national, regional, and district levels. Rural areas were the most neglected from this controversy, but both parties were convinced that something had been taken from them which they had rightful claim for.

Rural settlements had lost the right to govern themselves and their financial resources. Several villages were organised into one larger administrative unit. School, administration, and the management of agricultural co-operatives were located in the centralized administration, and taxes paid by other villages were used in the central settlement. In many

cases, financial support to urban settlements was distributed on a per capita basis. In order to increase their population and through their financial support quota, many cities incorporated several rural settlements in their administrative area. The gained incremental financial support was utilized and spent in the central cities. In Romania, more than 3000 rural settlements lost their name, identity, and independence. Some mergers into centralized were justified, while others were not.

After the change of the political and economic system in 1990 centralizing measures were undone. Rural settlements regained their local government and independence in the Czech Republic, Hungary, and Slovakia. Each rural settlement had its local government even though they were rather small; more than half of them have less than 500 inhabitants, especially those in the mountains. Financial quotas equalized for urban and rural settlements.

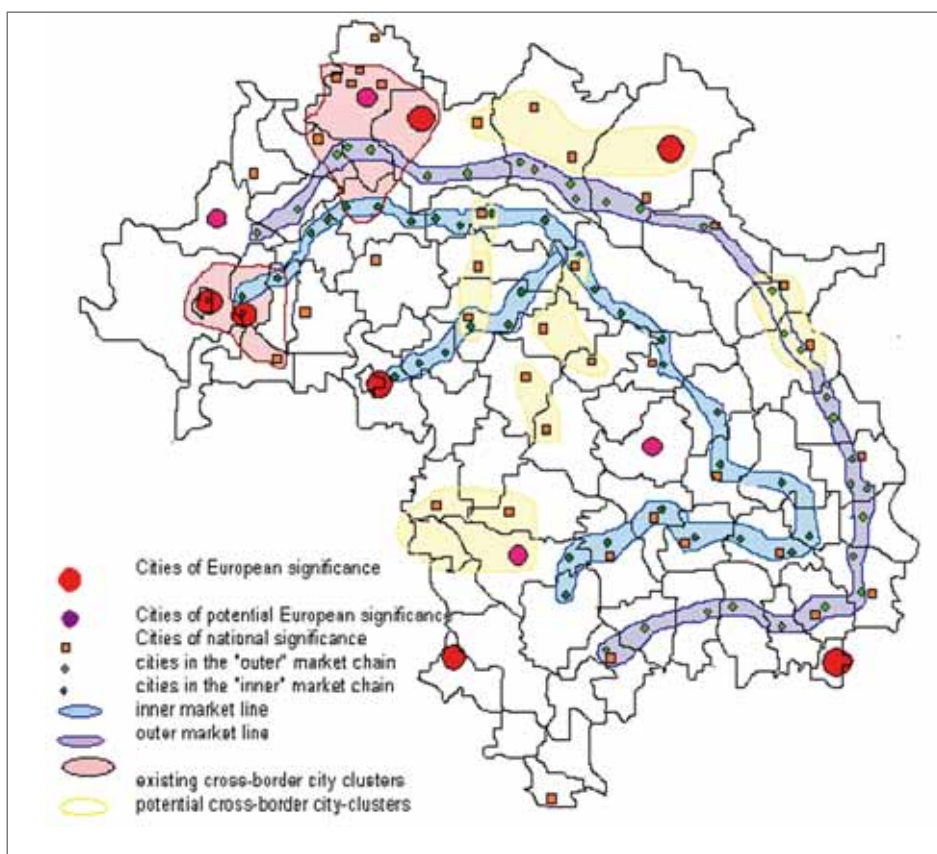
Simultaneously, a new problem arose. Remembering the bad experience of the past, rural settlements and governments were unwilling to cooperate with each other or the urban centre, which they formerly belonged and exploited. At the same time, urban centres increasingly regarded themselves as also being exploited. Their service facilities (schools boarding-schools, hostels, transport, waste disposal, cultural, health, and social) were not only used by city dwellers but also by neighbouring villages. Some facilities, including boarding-schools and hostels, were used exclusively by rural inhabitants.

Furthermore, most small local governments were unable to provide their population with all the necessary services, and they were unwilling to cooperate with other settlements, especially with towns. According to new democratic

principles, central governments are not entitled to force local governments to cooperate to establish common services. New instruments are to be found to establish urban-rural cooperation which fit to the new conditions. These might be:

- To introduce incentives to cooperate (e.g. to offer higher support conditional upon common action);
- To establish the legal regulations for inter-communal facilities as legal entities or juristic persons;
- Differentiated support quotas for the facilities used by the non-resident population;
- Promotion of contracts between the cities and the neighbouring settlements on mutual payments for services offered by the other local governments;
- Promotion of common planning and policy for education, health, local transport, labour market and environment.

Figure 21: The major centres of the automotive industry in the Carpathians



Source: author's construction

Carpathian Project Experience

Carpathian Project's action "Local Agenda 21" was the explanation and example of raising public awareness on sustainability.

Regions and rural settlements in the Carpathian face different challenges as migration to the cities or abroad, abandonment of agricultural lands, traditional farming practices and cultural traditions as well as environmental and transport problems. Local Agenda 21 (LA 21)-processes can support settlements to take challenges and the future into their own hands and steer towards sustainable development. To raise awareness on sustainable development and to support actors and stakeholders to set up and implement such a process in their communities a Local-Agenda-21-Manual was elaborated. It contains advice for initiating change, finding the right direction for change and suggests how to start local sustainable development. The ideas outlined in the manual mean to be suggestions that can be adapted to specific local situations and accomplished by own creative ideas.

In the manual's four chapters the principles of sustainable development and their application on local level are introduced and the differences between the "old school" type of development and the LA-21 inspired approach are discussed as well as the benefits communities can gain when using the sustainability approach.

The third chapter describes 12 steps of the LA21-process. It starts with advice and method proposals on getting the commitment of local governments. Next it identifies community values and the present situation of the community; comprehending the underlying obstacles causes for problems the underlying causes for problems to formulating a common vision, strategy and an action plan. Further steps comprise of avoiding negative social, economic, or environmental impacts and activities, as well as creating a financial frame for the implementation of the LA-21 process. The steps also consider the need to integrate feedback loops in the process by means of monitoring and evaluation, to identify problems and adapt the implementation plan or envisaged results accordingly. It can also illustrate achievements and motivate people for further cooperation.

To complement the practical value of this manual possible pitfalls are outlined that can arise in this multi-stakeholder process; for example that one group of the population dominates the process and other stakeholder groups are not integrated enough.

Two examples show the processes of LA21 are attainable; the Arló municipality in Hungary and Kráľoválehota in Slovakia.

9.2.2 The role of the chain of “market cities”

The role of cities in goods trading has been essential for development. For centuries towns and cities were developed around market places where goods were bought and sold. Clearly different environmental conditions between Carpathian Mountains and surrounding plains had been reflected in different raw materials available and different products made in two neighbouring areas. The need for the exchange different goods created a favourable market niche and numerous market cities developed along foothills of Carpathians.

Moreover, long distance trading routes developed for transporting more exclusive goods. Many routes followed the foothills of the Carpathians or crossed the mountain chain using river valleys or low passes; such as the wine trail from Hungary through Slovakia to Poland. Points where such routes crossed offered particularly favourable places for city development. As long as inland transport and communications relayed on the power of rivers and horses relatively dense chains of cities developed along these routes and physical links between cities were usually accompanied with economic links between them. Social and cultural links in turn usually developed as the aftermath of economic links.

The development of industry, railways, and cars in the 19th and 20th century significantly changed the settlement network. It stimulated the development of mining areas and transport nodes whereas many other cities lost their importance. Moreover many areas, mainly in the foothills of the Carpathians, were subjects of state-driven development policies; Hungarian government actions in North-Eastern Carpathians in the 19th century, the Polish Central Industrial Region in northern foreland of the Carpathians in the 1930s, the industri-

alization of Slovakia between 1950 and 1980, and the rehabilitation plan of the Jiu Valley in Romania in the 1990s.

After World War II, all Carpathian cities and towns went through a period of a centrally planned economy. This means the role of market mechanisms in urban development was neglected for authoritarian developmental decisions. However, the same political regime, socialism, achieved different results in different parts of Carpathians. In Poland individual farming and private ownership of land was preserved and the private sector of economy was reduced to farms. Craftsmen workshops and small enterprises survived but farms had been collectivized. Moreover, some regions underwent strong developmental pressure as a result of industrialization which often brought about significant environmental damage. Simultaneously, other regions not designated for industrial development have preserved their relatively untouched natural environment and a traditional urban/rural settlement patterns due to the lack of a private developmental initiative.

Currently, as a result of the shown processes, the settlement network in the Carpathians and their foreland developed two chains of urban centres can be distinguished along the foothills of the Carpathian range.

The following towns and cities roughly mark the “external” line: Uherské Hrádisté, Zlín, Vsetín, Nový Jicín, Tešín-Cieszyn, Bielsko Biała, Nowy Targ, Nowy Sącz, Krosno, Sanok, Przemyśl, Drohobycz, Strij, Ivano-Frankivsk, Cernivtsi, Rădăuți, Suceava, Tirgu-Neamt, Piatra-Neamt, Onesti, Bacau, Focșani, Rimnicu Șarat, Ploesti, Tirgoviste, Rimnicu Valcea, Tirgu Jiu and Orsova.

The following cities and towns mark the “internal” line: Bratislava, Trnava, Nitra, Levice,

Lucenec, Rimavská Sobota, Miskolc, Eger, Gyöngyös, Kosice, Uzhgorod, Mukaceve, Hust, Bistrita, Targu Mures, Sighisoara, Sibiu, Oradea, Cluj-Napoca, Alba Iulia, Resita.

Many of these cities now share common problems because of the troublesome heritage of the socialist period; environmentally harmful declining industries are unable to compete successfully within the market economy.

One should note however that this apparent similarity due to geographical location and common recent political past covers the real variety of environmental, economic and social situations. Moreover easily noticeable on the map linear structures do not necessarily reflect existing economic, cultural, infrastructural links and relations between cities as well as these lines are not the only directions leading towards development. Therefore any actions taken in order to support the development of these settlements should not be limited strictly to those lines.

Currently both chains of cities as well as other cities situated outside the internal and external market lines enjoy democracy and market economy. So the key to the development of local economy remains mainly in the hands of local people, their invention creativity, and enterprise. Any measures taken on regional, national or international levels can be only supportive measures and cannot replace these indispensable elements of success. The existence in Carpathians of quite well developing areas next to areas of weak economic position without any peculiar natural advantages or deliberate governmental actions confirms this fact. Settlements located in the foothills of the Carpathians between Cieszyn and Myslenice in Poland are the most prosperous economically in a regional scale. In addition, the Carpathians have few product brands that are able to compete successfully in the market

because of their high quality and usefulness, not because of their traditional character. It refers not only to Hungarian wine and "Radegast" or "Żywiec" beer but also to such products as "Malachowski" sleeping bags, furniture from Kalwaria Zebrzydowska or hand made glass from Krosno to mention only some Polish examples.

In order to enhance the development chances of their cities, city authorities could join their forces along the above drawn 'market lines' or even across them in any other configuration. There is no single remedy for all the problems of the Carpathian chains of market cities, and only the following general suggestions concerning their potential revitalization policies can be formulated:

- Developing public utilities with special emphasis on the development of a sewage system proportionally to the development of water supply systems in order to improve the quality of life and reduce the adverse environmental impacts of settlements.
- The improvement of accessibility by means of integrated approach to the development of all kinds of public and private transport (roads, railways, plains) and all kinds of movement (by foot, bikes, ski or horse). Priority should be given to cross-Carpathian north-south directions. Special emphasis should be put on places and actions where relatively small investments may bring significant improvement in short- and long-distance mobility (e.g. the reconstruction of the railway between Nowy Targ and Trstena or the co-ordination of bus timetables on opposite sides of border crossings; enabling crossing the Ukrainian border on foot in higher parts of Carpathians.).
- Formal networking of cities using various legal forms in order to promote joint cities, regions and their products.

- Development of intensive suburban agriculture in the surroundings of cities.
 - More attention to Carpathian success stories in the domain of economic development initiative stressing not so much on repeatable but rather inspiring for originality.
- The original market chain function cannot be reconstructed. The forms of trade and transport have changed. Production technologies and consumption habits have also changed.
- Nevertheless, some elements of this function can be reestablished by the following:
 - New and modernized market places for primary producers with quality controls, near to the centres of the cities (which can serve also as tourist spots, like the Budapest Central Market Hall);
 - Improving transport conditions between cities and mountain settlements. Regular public transport on market days to cities and back

Carpathian Project Experience

The Carpathian Project developed a special action for the implementation of information technologies, IT, as a pilot action in Podkarpackie, Poland. The project's report "Communication and information society building – policy guidelines" analyzes the development level of information society in the Carpathian Space and studies coefficients characterizing the state of information society development. It consists of two thematic parts. The first deals with definitions and the process of formation of an information society and the utilization of ITC in the Carpathian regions. In the second part a Digital Access Index as a mean of the studied variables (representing characteristics of infrastructure, quality, usage, knowledge of society and affordability) was calculated and discussed. Also correlations with population potential within the NUTS-3 regions of the Carpathian Space were presented.

The study shows that broadband connections are now generally available. However, in sparsely populated regions there are important exceptions. With stronger competition and lower prices, take-up has increased rapidly with high growth rates. Most internet connections remained narrowband and only few broadband connections in the eastern and southern parts of the Carpathians offered more than 3mb/s. Disparities between the regions exist. Regions in the new member states of the European Union lacked technologically, but evidence now shows that broadband internet is intensively used. The regions of the states which are out of EU (Ukraine and Serbia) are also growing but at a slower pace.

Availability of online public services has continued to grow and many services are now available with full interactivity. The use of online public services has increased accordingly and a large majority of users report benefits in terms of time saving and more flexible access to administrations.

Regions are challenged to extend the information society to people with less or no formal education, the unemployed, and elderly. These divides are less acute in countries which are more advanced in the adoption of ICT and in some new member states of the EU. However there is no sign that the gaps reduce over time. Policy support is needed to achieve a fully inclusive information society.

- Improving transport between the market-chain cities
- Commercial houses and special shops for protected mountain food products;
- Food processing plants for mountain products;
- Special restaurants with local foods;
- Networking between Carpathian market chain cities. Exchange of information, common actions, fairs and safeguarding of common interests.

9.2.3 The future of the EU and the Carpathian Cities

On the 21st of December 2007 Poland, the Czech Republic, Slovakia and Hungary joined the Schengen agreement on abolishing border control on the internal borders of the EU. After a few years, Romania will join the Schengen zone. Between 2010 and 2014 all Carpathian EU member states will introduce the Euro as their own currency. All derogations concerning the application of EU regulations will expire 2011-2014. There will be substantial progress in the field of the harmonisation of taxation and regulations in the EU member states.

These developments, the full accession of the Carpathian countries into the single economic space of the EU will bring about fundamental changes in the situation and functions of Carpathian cities. What happened in the old member states in 50 years will take place in the new member states in 7-10 years. The question is, to what extent these countries are prepared for these changes:

- State borders, as hindrances of the movement of people and of economic relations will totally disappear and cities will have

to face a borderless economic and social space in their surroundings. Cities on the borders will be either the winners or the losers of this situation. Winners, if they can extend their attraction area beyond the borders, losers if they have to yield their former attraction area to a competitor city on the other side of the border. The rearrangement of the attraction areas will take place not exclusively on the basis of distances. Accessibility, the quality and price of services will also play a role in this process. Some kind of competition existed already among cities on the two sides of the border, but borders and the difficulties accompanying the crossing of borders gave a protection against rearrangement. This protection will disappear in the near future.

- Winners and losers cannot be defined unambiguously in this process. Maybe, one city is winner in one respect and "loser" in others. For example, it can be seen already in the Banat area, that Timisoara, Romania became the trans-border winner in business attraction, While Szeged, Hungary became the trans-border winner in health and educational services
- Accessibility plays a very important role in the competition of cities. Cities without motorway access have substantially less chance for FDI investment than cities have motorway access. But in recent times, airports play a similarly important role. Cities which can be accessed by regular international flights have a huge advantage compared to cities which have not (the competition between Timisoara and Szeged was, in fact, decided by the international accessibility of Timisoara airport). Furthermore, the majority of people in Carpathian countries do not choose their national airports, but the airports closer to their place of residence:

people from the Western regions of Romania and from the Eastern regions of Slovakia choose the Budapest airport, people from the Western regions of Hungary choose the Vienna or Bratislava airport, many Slovaks choose Prague and many Czechs Bratislava airport. Cheap airlines quickly adjust their flight plans to the changing demands in the area.

- Another important feature of trans-border city competition is that its outcome is less dependent of national regulations, and more dependent on local policies. The EU harmonization of taxation and support policies allows fewer deviations in national taxation and support policies. Cities are in the position to offer land, special services, acceptable environment, and less bureaucracy to potential investors. In finding the

location of future investments the role of national governments will decrease while the role of city governments will increase.

- There are cities in the Carpathian region which were divided by the changing state borders. Examples are Cesky Tesin (CZ)-Cieszin (PL), Komarno (SK) – Komárom (HU), Esztergom (HU)- Sturovo (SK), Sátoraljaújhely (HU) – Slovenské Nové Mesto (SK). With the entrance into the Schengen zone, it became possible to reunite, virtually these cities. They can extend their attraction area and provide more, better and diversified services to their population.

It is not yet clear how this rearrangement among Carpathian cities will take place in the future, but it will affect the urban network and hierarchy substantially.

From the notebook...

This virtual reunification process – obviously, has its difficulties. For example, the local government leaders of Slovenské Nové Mesto (the Slovakian part of the former city Sátoraljaújhely) decided not to open the street, connecting the two parts of the city for car traffic. The explanation was that car traffic would increase air pollution and noise in the streets which were – in the old border regime – closed for car traffic. It might be true, but on the basis of this argumentation car traffic could be banned from all streets of the World. As a consequence of this decision, car drivers have to make a roundtrip, outside the city to the old border station, to get to the other half of the city. What has been achieved in Schengen, can be reversed by local bureaucrats.

9.3 Transnational Cooperation In Urban Development

The Carpathian region has a developed settlement structure, but local geographical conditions make relationships between individual components difficult, especially between nations. The vitality of the settlement network is also weak because of its components, especially villages and small towns. During the 50 years of communist rule, its municipal infrastructure and housing stock significantly depreciated. A long term division arising from an inflexible administrative border with an insufficient number of crossing points weakened the socio-economic links between localities across borders. The restoration of former cross-border linkages (communication, social, and economic) is of paramount importance to the reversal of the area's periphery and to the stimulation of its endogenic capacities.

The basis for the region's internal cohesion is a developed settlement structure made up of centres performing relevant functions and a system of linkages between them. Such a network enables provision of proper services to the area's inhabitants and can be conducive to the diffusion of comprehensive and progressive development processes into the entire area.

Internal cohesion is a goal which can be pursued on the basis of close transnational cooperation and should result from the engagement of the local authorities in these processes.

The regions' complementary, primary strategies can help them find appropriate solutions. Cooperation should be based principally on the results of an analysis of local development prerequisites such as the location within a relevant network and the predispositions and policies of other centres. Also of some importance are the aspirations of the local inhabitants and authorities.

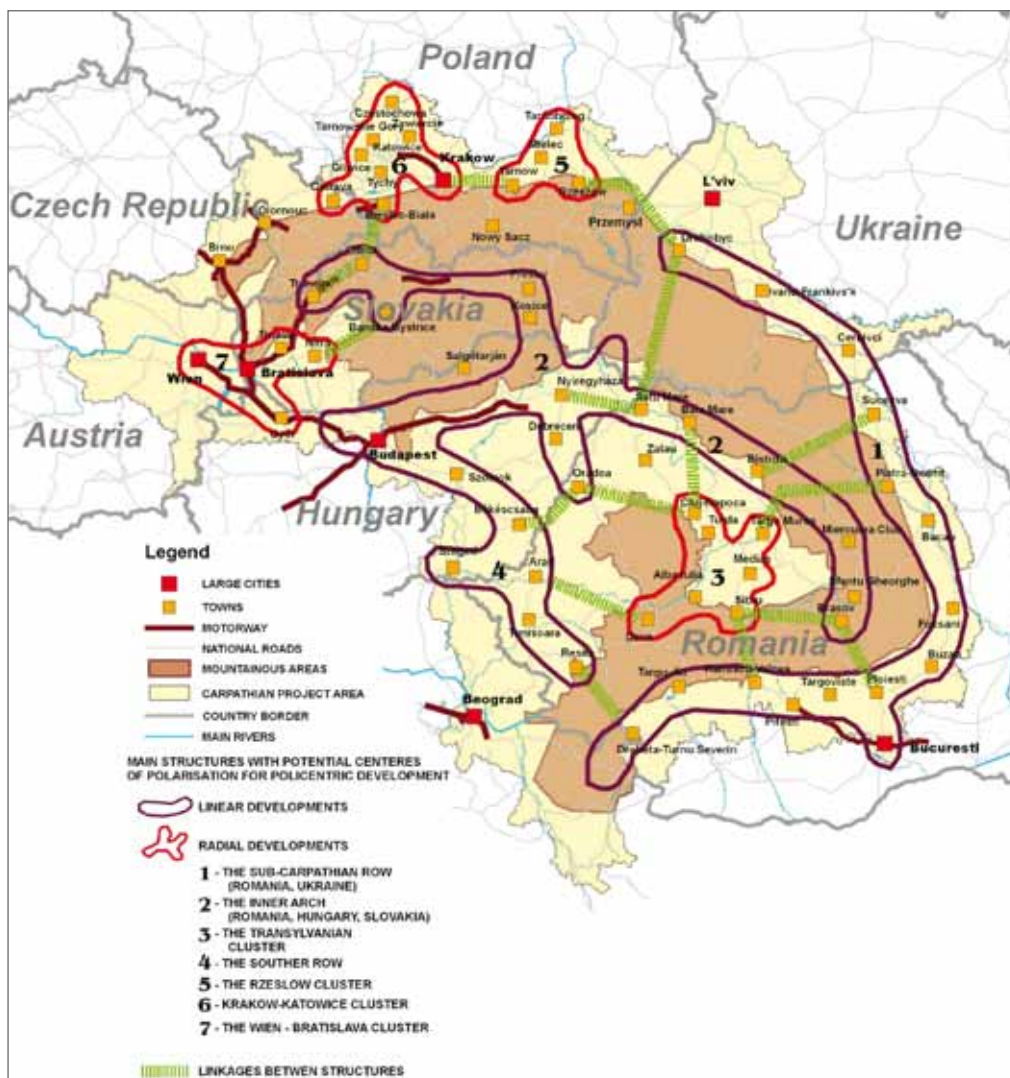
The VASICA strategy focuses on territorial cohesion. Therefore the major challenges of urban development for the transnational region include:

- Increasing the number of communication linkages and improving their quality;
- Developing the links between individual elements (nodes) of the settlement structure, including both technical infrastructure and co-operation between businesses;
- Promoting the development of small- and medium-sized settlement centres and a multi-axis (polycentric) development of the border region;
- Redeveloping and improving the material assets of towns and cities;
- Developing social capital, boosting employment, especially when based on the service sector;
- Counteracting social exclusion, developing human resources and reversing depopulation;
- Developing local and regional communications and telecommunications infrastructure;
- Developing renewable energy sources;
- Raising the level and flexibility of the education system, expanding the offer of secondary schools and universities, especially in areas with a low level of qualifications;
- Encouraging municipalities in the mountain areas with a high, but unused, tourist potential;
- Supporting small- and medium-sized businesses in the tourist industry.

With reference to the settlement structure the potential cooperation areas are:

- Formulating common strategies for development zones (related to the settlement structure);
- Establishing, strengthening or promoting the transnational cooperation between towns and cities across the borders;
- Exchanging information and experience between small- and medium-sized towns

Figure 23: Transnational settlement structure for polycentric development - synthesis of the national spatial development documents



Source: Maciej Bors, Urbanproject, Carpathian Project Strategic Workshop for Spatial Planning

relating to the urban development and renewal;

- Integrated management of nodal and strategic areas affecting the development of the entire transnational region.

With reference to communications, infrastructure and flood prevention and control the potential cooperation areas are:

- Construction and modernisation of expressways in the border area, including projects to link the north and the south;
- Formulation of strategies for improving lower-level communication links, in the context of a possible signature of the Schengen Treaty and the expected future EU enlargements;
- Identification of new border crossing opportunities and joint projects for the alternative use of border crossings after the signature of the Schengen Treaty;
- Formulation of coherent plans for the location, modernisation and connection of regional airports and the use of smaller airports for international transport;
- Modernisation and expansion of regional railway links;
- Introduction of cross-border public passenger transport networks between the neighbouring parts of the Carpathian countries to strengthen micro-regional linkages, to promote tourism and to facilitate commuting;
- Joint preparation and implementation of tele-information and telecommunications capital investment projects;
- Formulation of joint cross-border projects for improving the water and sewage man-



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agement systems;

- Exchange of information regarding surplus electric and thermal energy, waste disposal capacities, sewage treatment etc.;
- Preparation of joint proposals for the use of renewable energy;
- Joint formulation of flood control schemes for river catchment basins;
- Incorporation of existing multi-use water reservoirs into the region's flood protection systems;
- Expansion of the flood monitoring system.

With reference to economic activity and tourism the potential cooperation areas are:

- Identifying and strengthening cross-border economic sector clusters;

- Identification of and cooperation between economic development zones, including the creation of cross-border investment zones;
- Promotion of small- and medium-sized enterprises;
- Strengthening of production and service functions of micro- and subregional growth poles;
- Support for the creation of integrated production and service businesses with the ability to share work in the border regions;
- Reclamation of the large areas of derelict land following the extraction of natural resources, as well as former military grounds, to be used for new economic initiatives;
- Strengthening of research and development, and the transfer of know-how;
- Cooperation in the area of spa services as well as sanatorium treatment and caring for the elderly;
- Integration of tourist routes – walking and cycle routes;
- Promotion of the Carpathian transnational tourist areas and routes;
- Support for the development of direct work contacts, and the exchange of information between corresponding local and regional administrative authorities across the borders.





► Traditional landscape in Domogled Valea
Cernei National Parc, Romania

10 CULTURAL AND NATURAL HERITAGE IN THE CARPATHIAN REGION

10.1 Situation And Problems

10.1.1 Cultural heritage

The cultural heritage of the Carpathian area represents a unique composition within Europe:

- On the one hand this region is the most Eastern of Europe where the monuments of the Western European Romanesque, Gothic and Renaissance art can be found. The medieval Polish and Hungarian kingdoms were Roman Catholic states and church architecture followed the Western patterns, but secular architecture and art also followed these styles. German and other Western emigrants founded cities in this area importing the artistic styles of their home countries. It was then taken over by the native aristocrats and the wealthy. Brasov, Sibiu, Alba Julia and Sighisoara are the easternmost examples of Romanesque and Gothic architecture. Lviv, Kraków and Tarnów are the easternmost examples of Renaissance architecture.
- On the other hand this is the most western area of Europe where the monuments and art of Eastern Christianity are also present. In some parts of Romania and Ukraine there is a marvellous juxtaposition of the two artistic and architectural worlds.
- Finally, the Carpathian area is the part of Europe where the monuments of European folk art and architecture have been preserved the most intact. Mountain people are more inclined to be engaged in the preparation of local handcraft products and to build artistically decorated houses. They are compelled to complete their income through the selling of handcrafts (wooden and textile)

objects because income from agriculture is not enough for survival. However, they have more time and their environment is more inspiring for artistic activity than on the plains. On the other hand, they had more time, and their environment was more inspiring for artistic activity, than on the plains. Furthermore, the Carpathian settlements were rather isolated from the outside world, to preserve their customs and traditions. Tangible and intangible heritage such as songs, music, dances, and fairy tales are protected aspects of Carpathian culture.

These three strands of cultural heritage are equally present in the Carpathian area, and they together determine the respective policies of the countries and of the area as a whole.

The respective institutions for the management of cultural heritage have been established in all Carpathian countries since the beginning of the 20th century. Most of them have taken over the Austrian legislation, since most Carpathian regions belonged at that time to the Habsburg Monarchy. This legislation gave priority to the methods of art history. The selection of protected heritage was exclusively the work of art historians. Such relations lasted very long, even after the Second World War until the 1970's. In the late 20th century the vernacular architecture in rural regions and "anonymous" architecture in urban structures became part of protected cultural heritage. The protection of architectural heritage in many Carpathian regions is still too strongly connected to its origins (from the time of the Austro-Hungarian monarchy) and is underdeveloped in modern theory, methodology, and European trends.

The methods in management of cultural heritage stems from the socialist period. This political system provided a centralized managing power to act for the preservation of historic heritage in the name of “common interest”. Architects and managers did not have to care about efficiency, utilisation and the participation of private sector.

The democratic changes in 1989 and 1990 brought completely different possibilities for society, and the management of historic cultural heritage. Both urban planning and conservation became multilayered, and former centrally managed societies had to realise that decision-making involves more stakeholders, different interests and new techniques.

As a part of these changes, the earlier “academic” aims to protect only the most artistic part of built heritage have funda-

mentally changed. New economic criteria, new technologies, and the demand to integrate built heritage into the everyday human environment have substantially changed former approaches. Culture heritage has been transformed from an object of symbolic and ideological values to an organic part of towns, landscapes, and regions.

Such changes certainly demand new methods of assessment and utilisation. Historical architectural heritage should have become an organic part of regional and urban planning, allowing new methods of utilisation and re-utilisation. New principles, new methods and new possibilities have to be developed and put forth, involving not only politicians and experts, but also investors, individual users as well as the general public.



Carpathian Project Experience

The Carpathian project report “Carpathian Cultural Heritage – Identity and Regions of Traditional Culture” is the result of research carried out on basic common features for a unique profile of the Carpathian area in Europe and the characteristic cultural factors for endogenous socioeconomic development.

It shows that the Carpathian mountain range is an area with places and objects reflecting the rich historical and cultural past of that region. The Carpathians are the origin for the diffusion of cultures from every direction which is evident in the variety of religions and traditions present. Additionally, the Carpathian Space is rich in landscapes and sites of specific natural value. This was confirmed by decisions of UNESCO World Heritage Centre that inscribed a variety of natural and cultural landscapes, churches and monasteries, fortresses and historic centres of towns into the UNESCO World Heritage List.

Cultural landscapes on the heritage list are of spiritual significance (Kalwaria Zebrzydowska in Poland) and those characterized by long tradition of wine cultivation (Tokaji Wine Region in Hungary). Among the churches of specific cultural value are the wooden churches of Southern Little Poland and Maramures and Byzantine churches of Moldavia. Beside the Dacian Fortresses of the Orastie Mountains of Romania, historic cultural sites comprise, among others, Spišsky Hrad, (Slovak Republic) and the historic centres of Sighisoara (RO), Cracow (PL) and Lviv (UKR). Further heritage sites are characterized by mining as the town and surrounding landscape of Banska Stiavnica (Slovak Republic) and the Wieliczka Salt Mine in Poland. The caves of Aggtelek (HU) and Slovak Karst are recognized as natural heritage sites.

There are also many culturally and environmentally important places in the Carpathian Mountains inscribed in the UNESCO World Heritage Tentative List. It is an inventory of those properties which each State party intends to consider for nomination in the future. This tentative list comprises natural sites as the Dunajec River Gorge in the Pieniny Mountains in Poland, the natural reserves of the Tatras mountains in Slovakia and Poland and the Djerdap National Park in Serbia. Cultural sites listed are for example the historic centre of Sibiu (RO), the town core of Kosice (SK) and also the Industrial Complexes at Ostrava (CZ). Several religious sites and monuments are contained in the list, such as the Gemer and Abov churches in Slovakia and the Romanian monastery Neamt in Moldavia.

Beside the comprehensive overview on natural and cultural heritage sites a “Map on Carpathian Cultural Heritage” was elaborated that shows UNESCO Heritage Monuments and Carpathian Cultural sub-regions with intangible cultural heritage also taken into account. The delimited cultural regions have to be considered as approximate layouts of transitional zones rather than precisely defined borders due to the variety of traditional culture in the Carpathians and complicated political history. In countries such as Ukraine. In countries as Ukraine, Poland and Czech Republic regions were delimited as areas inhabited by distinct ethnographic groups (Ukraine, Poland, Czech Republic) and in other countries more historic units were delimited (Slovakia). Agricultural traditions with special emphasis on viniculture were used as main criteria for delimitation of Hungarian regions, while traditional costumes, music and dance were used for Romania. The cultural subdivision of Serbian part of Carpathians follows geomorphologic structure of the mountains. The map shows, that in spite of these different criteria used, borders of cross-border international cultural regions (e.g. Bucovina/Bukowyna, Spiš/Spisz) turned out to be relatively compatible on both sides of national borders.

Due to different environmental conditions and easier access to different regions, the future of the traditional culture now depends mainly on the attitude of the local community. The report states, that local culture with all its tangible as well as intangible components can survive when the local community appreciates its value as such - regardless of its attractiveness for visitors and its commercial value. Therefore any policy concerning cultural resources of Carpathians should obey the “Primum non nocere” principle (“First, do no harm”).

10.1.2 Natural heritage

Obviously, the main objective of natural heritage management in the Carpathians is the mountain range. Mountain ranges, river flood plains and sea coastal areas are generally the main objects of natural conservation and management, because these are the areas, where natural habitats could survive with the highest probability.

Figure 24: European landscape typology for Carpathian Region



Source: EURAC

Table 6: The main factors of natural protection in the Carpathian countries

Country	Number of protected objects	Area of the country km ²	Protected area km ²	Share of protected area %
Austria	1087	83860	23475	27.94%
Czech Republic	1768	78870	12451	15.79%
Hungary	236	93030	8299	8.92%
Poland	1822	333882	90526	27.11%
Romania	931	238610	12360	5.18%
Slovakia	1176	49010	12347	25.19%
Ukraine	5198	657630	22468	3.42%

Carpathian Project Experience

The Carpathian Environmental Outlook (KEO) was one of the most important products of the Carpathian Project, published as a separate publication. It is a geographically integrated report on the state of, and trends related to, the environment retrospectively over the past 30 years and forward to 2020. For KEO, an integrated environmental assessment approach was carried out. The study is based on analyses of socio-economic and environmental processes and focuses on sustainable development issues, especially the economic efficiency and environmental effectiveness of policy actions. The KEO-report also provides 35 (thematic) maps and many tables with overviews on the area.

KEO presents the state of the area and a number of current issues that are a threat to biological and landscape diversity such as climate change, pollution, infrastructure development, unsustainable use of natural resources and accumulation of waste, loss of traditional livelihoods and mass tourism. Most of these challenges are identified as being of global or transnational nature. Negative impacts of hazards such as floods also have a trans-boundary, regional or even macro-regional character.

KEO points out the importance of economic, political and social choices that are being made today and that will have effects on the environment far in the future. KEO emphasizes that the next 15 years will be as crucial as the past 30 years for shaping the future of the environment and underlines three scenarios to explore what the future could be, depending on different policy and societal approaches.

The “Business as Usual” scenario describes a future development state in which globalization and liberalization forces are strong and propagated throughout the Carpathians. Multi-national enterprises with government support dominate the division of power. Government policies are driven by the promotion of economic growth. The cultural, ethnic and language diversity and the integration of Roma population are not considered as important with traditional values and cultural associations disappearing. Regional disparities increase and the depopulation of rural areas accelerates. Exploitation of natural resources, air and water pollution, and no commitment to mitigate climate change results in major hazards in the regions and leads to weather extremes.

The “EU Policy First” scenario considers the successful implementation of EU environmental regulations in the Carpathian region. The need for stronger policy coordination and structural reforms is

recognized by Carpathian governments. In the budget 2013-2020, EU policies aim at maintaining and strengthening regional and social cohesion. Huge funds are available for sustainable rural and agricultural development helping to decrease the social divide and decreasing regional disparities. A focus is also put on renewable energies, bio-fuels and energy diversification. Traditional air pollutant emission are further reduced with positive impacts on urban air quality. Forest cover stabilises or slightly increases. Trans-regional cooperation at all levels intensifies in environmental protection and nature conservation. The Natura 2000 network and other protected areas grow in size.

The “Carpathian Dream Scenario” assumes that pro-environment and anti-poverty policies are given highest priority. Policy-makers recognize that achieving environmental sustainability relies on a multitude of potential interventions undertaken by a broad variety of individuals, groups, organizations and institutions across different levels and sectors. Three approaches for environmental society are pursued: implementation of technological innovations; changing the structure of government, laws and the education systems; and changing consumer behaviour. Use of renewable energy sources and zero-energy houses increases widely. The economy of the area is characterised by qualitative growth accompanied by regional convergence. Agriculture promotes organic farming and small scale and traditional agricultural methods with old varieties, traditional domesticated animal and plant species. Local products are supported with local branding and advanced marketing systems. Formerly indigenous extinct species are resettled or reintroduced with support from NGOs governments. The total extent of protected areas increases, green/migration corridors are established and effective measures are taken to decrease habitat fragmentation.

Concluding, KEO underlines the unique and dynamic common living space of the Carpathian Mountains; ecologically valuable and important in terms of human heritage. The enormous economic and ecological potential is highlighted together with the threats to it and the changes in the environment, society and policy the region undergoes.

The challenges of the future are to preserve the region’s development potential with sustainability. There is a need for responsible policies that support sector developments. These policies should take into account for regional and trans-boundary contexts in order to enhance the Carpathians environment and human livelihood.

Similar to the cultural heritage, Carpathian countries have established their institutions and regulation of natural conservation and have followed the guidelines of the UN and EU. Five out of seven Carpathian countries are members of the European Union and have therefore incorporated the Europe-wide legal framework on nature protection and biodiversity into their national legislation⁴.

⁴ Including the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitat Directive) and the Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (Bird Directive);

All Carpathian countries started their nature protection programs by designating national parks, while the designation of more permissive protected landscape areas and their regulation followed only later.

According to Table 6 the countries can be divided into two groups. Austria, the Czech Republic, Poland and Slovakia declared more than 15% of their territory to be protected. This percentage corresponds to the level of developed European countries. In Hungary, Romania and in Ukraine, it can be

Table 7: Share of National Parks and Biosphere Reserves in the protected areas

Country	Number of national parks	Of which: in the Carpathian area	Area of national parks km ²	Of which: in the Carpathian area	Share of National Parks in the protected area
Austria	6	3	2356	403	10 %
Czech Republic	4	1	1372	79	11%
Hungary	10	6	4817	2296	58%
Poland	23	7	2983	852	3,3%
Romania	13	12	8848	3047	72%
Slovakia	9	9	3178	3178	26%
Ukraine	30	9	19091	5214	85%
Carpathian region		47		15069	

partly explained by the fact that the large part of these two countries is a plain used for agricultural production.

Most characteristic is the distribution of protected areas according to the level of protection (Table 7). While the share of protected area is smaller in Hungary, Romania and Ukraine, those areas have the highest level of protection. These protected areas are in large national parks.

Sustainable economic activities which are harmonious with protection objectives, such as farming, are allowed in protected areas including national parks. This applies, in particular, to privately-owned land if it is part of the protected area. Different regulations concerning economic activities apply to the state-owned land (which sometimes can constitute the whole farm) inside protected areas. Be-

sides the presence of a legally binding management plan (usually obligatory for protected areas in most countries), the land ownership and management powers of the protected area authority are required for avoiding the adverse effects of unsustainable economic activities which threaten species and ecosystems. In Poland, the national parks have the exclusive right to manage the state-owned forests within their boundaries, which is not the case for all Carpathian countries.

It is difficult to find the right balance of economic growth with conservation and protection. Voices exist that claim that the combined protection of natural environment and human activity is the insufficiently elaborated element of the protection regulations of some Carpathian countries. They denounce the intensive economic, agricultural, and animal husbandry in some of the National Parks. Conservation and

economic objectives are present together; their priorities are rather ambiguously defined. Some national parks report intensive wood cutting activity or large scale animal husbandry. In order to feed these animals, meadows are cut down and there is serious danger threatening rare species. As the financial support from the government to some large national parks is insufficient, park management tries to achieve income through agricultural activity, sometimes at the expense of conservation objectives.

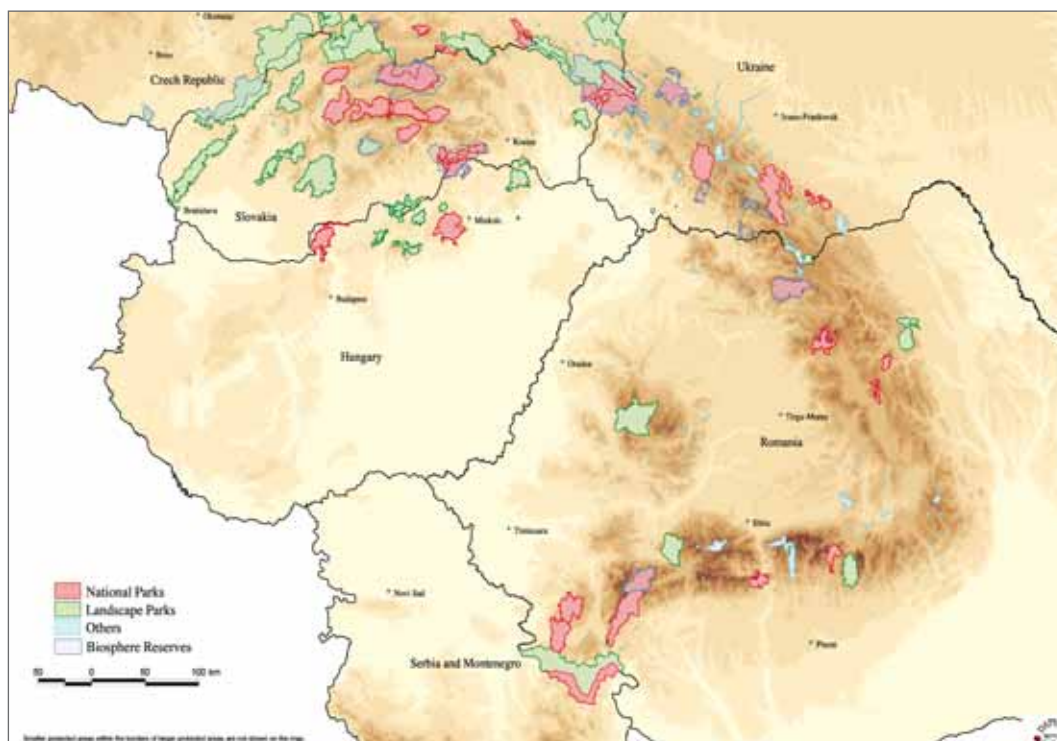
Indeed it must also be seen that such activities are often crucial not only for biodiversity conservation (e.g. meadow maintenance prevents the spontaneous secondary succession of forests to post-agricultural areas,

protects synanthropic plant communities, and these habitats maintain open grazing areas for herbivores constituting the prey for large carnivores and birds) but also for the sustainable development and cultural heritage maintenance (e.g. traditional pastoralism practices) in the related areas.

10.1.3 The establishment of the Carpathian Network of Protected Areas (CNPA)

The WWF - World Wide Fund for Nature entered the Carpathians into the list of "Global 200 Ecoregions" in need of biodiversity and habitat conservation, and supported the Carpathian Ecoregion Initiative

Figure 25: Large scale protected areas in the Carpathians



Source: Daphne Institute of Applied Ecology

(CEI), an informal international consortium of more than 50 partners (governmental, non-governmental, funding, scientific and academic organizations) from six countries of the Carpathian region who signed up to the common “CEI Vision”, aiming to achieve “the conservation of nature in the globally important Carpathian mountains and, at the same time, supporting local economy and culture for the lasting benefit of the people living in the heart of Europe”.

The Carpathian Ecoregion Initiative was the first common project focusing on the whole Carpathian region. Its activities included common studies and inventories of region’s resources, natural values and economy, as well as the establishment of common GIS databases. The CEI published the “Sta-

tus of the Carpathians” report providing the overall view on the Carpathian region and the “Carpathian List of Endangered Species”, as well as seventeen theme reports and several smaller fact-sheets on the Carpathians, in English and in Carpathian languages.

The CEI identified thirty priority areas for biodiversity conservation that encompassed 15.6 percent of the Carpathian Mountains. This was based on the outcomes of the first biodiversity assessment conducted on a “eco-regional” scale, and resulted in developing a vision protected areas in the Carpathians for the future. In 2001 the CEI resulted in convening the Carpathian-Danube Summit in Bucharest, attended by nine Heads of State and high level officials from five other countries, HRH the Duke of Edinburgh, Ministers of Environment

From the notebook...

The first landscape problem of the Carpathian countries concerns the privatization. When agricultural land was collectivized some areas were declared to be a nature conservation sites. Their retirement from cultivation was not a problem for the collective farm since these protected area represented only a very small fraction of their cultivated area. During the re-privatisation, these areas were given back to the original owners. For them this, however, this is was a serious problem because they could not afford to turn these areas into arable land or pastures in order to live. Therefore conflicts arose between natural protection and the basic interests of the new individual farmers. This occurred in most countries where the privatization of agricultural land took place, but each country had a different solution. In some countries farmers received compensation; in others, like Hungary, the government was forced to purchase back the land.

Another controversy arose in the Tatras after a catastrophic wind-storm in November 2004. The storm devastated 12,600 Ha of forest and threw down 2.5 million cubic meters of wood. Recently planted spruce trees overwhelmingly were the most affected.) Most of the area had been quickly cleared from the thrown down trees but in the Western part of Tatra National Park – especially in Tichá and Koprová valleys - conflict arose between environmentalist and forestry organizations. Environmentalists blocked a clearing of uprooted trees to prove that natural forests of spruce, larch, fir, and beech survived much better in a windstorm. Foresters were weary that *ips typographus*, a type of wood-borer worms which invaded the thrown down trees, would cause much great damage by invading also the intact trees if immediate action was not taken. This conflict between environmentalists and foresters has not settled which could endanger the promised EU support to Slovakia to reconstruct the damaged Tatra forest.

Carpathian Project Experience

The devastation of environment, restructuring of settlements, changing societies, and loss of cultural traditions in the socialist era as well as new challenges of globalization are main factors for elaborating a methodology for “Cultural-historical and social topography (CHST)”, which were developed as part of the Carpathian Project.

This systematic approach and process in which basic structures, processes, phenomena, values, and events in terms of historical heritage and environment were identified and assessed. This results in strategies, recommendations, and proposals on the development of a respective territory with regard to potential for cultural-historical linkages and sustainable development. This results in a strategy, recommendations and proposals on the development of the respective territory with regard to potentials for cultural-historical interlinkages and sustainable development. All steps of this process are carried out with integration of civil society, local players and experts as well as by following a multi-sectoral and interdisciplinary approach.

Knowledge should be maintained, and with new ways of thinking can be applied in order to achieve and renew continuity and sustainability in local and regional development. Thus the CHST seeks to protect and conserve historical and cultural values in harmony with the structure of the environment.

Beside elaboration, the methodology in all its phases was applied in the model region of White Carpathians. The CHST-document contains a monograph on this case study but also a manual for applying the methodology in other regions of the Carpathians.

Additionally CHST seminars on Carpathian identity were held in the Slovak Republic. Within a two day conference on the Carpathian convention, cultural, historical, and social issues were discussed and the results of the project were presented at COP2 as well as the annual REC Conference.

from eight countries, high-level representatives of the World Bank, UNECE, UNDP, UNEP, European Commission, EU-Presidency, Stability Pact and OECD, as well as numerous NGOs from both Carpathian and Danube regions. This Summit adopted a “Declaration on Environment and Sustainable Development in the Carpathian-Danube region”, giving green light for the proposed regional multilateral agreement focusing on the Carpathians.

The official negotiation process facilitated by UNEP-ROE took only 6 months from October 2002 to March 2003. At the Fifth Ministerial Conference “Environment for Europe” (Kyiv, May 2003), the Carpathian countries

adopted the Framework Convention on the Protection and Sustainable Development of the Carpathians (the “Carpathian Convention”), signed and ratified by all seven Carpathian countries. UNEP-ROE has been requested to act as the interim secretariat of the Carpathian Convention. On 1 May 2004, the Office of UNEP Vienna - Interim Secretariat of the Carpathian Convention has been opened. Pursuant to Article 4 of the Carpathian Convention - the Carpathian Network of Protected Areas (further as “the CNPA”) was established by the 1st meeting of the Conference of the Parties (COP1) to the Carpathian Convention in December 2006 in Kyiv, Ukraine, as “a thematic network of cooperation of mountain pro-

tected areas in the Carpathian Region". The CNPA aims to contribute to the protection and sustainable development of the Carpathians, in particular to accomplishing goals listed in

Article 4 of the Convention, and supporting the work and activities of the Carpathian Convention Working Group on the conservation of biological and landscape diversity.

10.2 Policy Recommendations On Specific Problems Of The Cultural And Natural Heritage

10.2.1 National bias in the management of cultural heritage

A specific feature of the Carpathian area is that there are several areas inhabited by more than one ethnicity with distinctive cultural heritage and areas which were inhabited in the past by ethnic and religious groups which are no longer there. Several churches, synagogues, monuments and buildings were marked in national ideologies. National cultural heritage was promoted and cared for because it supported their national history, but neglected the elements of cultural heritage which did not fit into its conceptual ideology.

In the Carpathian countries, the region's legal and professional arrangements are needed to preserve the respect for and memory of all nations and ethnicities, languages, and religious group which create a specific national heritage. In the Carpathian region deliberate destruction of cultural heritage - experienced during the Balkan Wars - did not occur, but some bias in favour of national heritage occurred. UNESCO World Cultural Heritage nominations serve as an example. After 1999, this attitude changed significantly and more nominations were made from the formerly neglected types of heritage.

10.2.2 The "heritage" of the socialist period

Carpathian countries now face the problem of how to treat "cultural heritage" of the social-

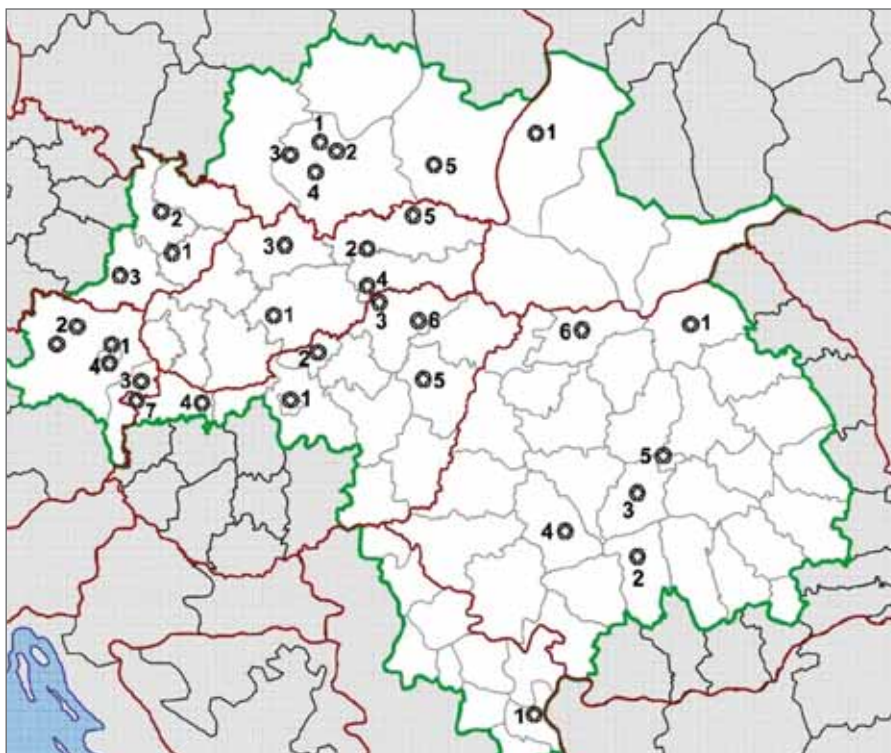
ist era. Many buildings and monuments were created during this period of 5 decades which are now marking the view and skyline of many cities and settlements. Many of the most provoking monuments symbolizing the old system have already been removed. The recent architectural and cultural heritage should be considered from only an aesthetic and practical point of view, not ideological. National heritage has to be preserved regardless because it is an integral part of the historical heritage of the country.

10.2.3 Military cemeteries and monuments of World War I. and II.

Between 1914 and 1917 the Carpathian Region was the scene of some of the largest and most fierce battles of World War I (Gorlice, Limanova, Przemsyl, Kolomea, and Chernivtsi). Nearly 2 million soldiers died on the Galician and Romanian fronts, and their graves are unmarked or not taken care of.

These battlefields and cemeteries also belong to the historical heritage and monuments of Europe. In other battlefields of World War I in Europe this fact has already been recognized. The battle-fields of Flanders, Artois and Champagne are marked by beautiful flower gardens, visitor centres and trench-museums. The situation is similar in Italy, in the battlefields of the Dolomites. Even in Turkey, near to Gallipoli, Dardanelles, the graveyards of British, Australian and, New Zealander and

Figure 26: The World Cultural Heritage Sites of the Carpathians



Source: Author's construction, UNESCO

Legend:

Austria: (1) Palace and Gardens of Schönbrunn (1996); (2) Towns Krems , Melk; (3) Fertö / Neusiedlersee Cultural Landscape (2001); (4) Historic Centre of Vienna (2001)

Czech Republic: (1) Gardens and Castle, Kroměříž (1998); (2) Holy Trinity Column , Olomouc (2000); (3) Tugendhat Villa, Brno (2001)

Hungary: (1) Budapest, including the Banks of the Danube, the Buda Castle Quarter and Andrásy Avenue (1987, 2002); (2) Old Village, Hollókő (1987); (3) Caves of Aggtelek Karst and Slovak Karst (1995, 2000); (4) Millenary Benedictine Abbey, Pannonhalma (1996); (5) Hortobágy National Park – the Puszta (1999); (6) Tokaj Wine Region Historic Cultural Landscape (2002); (7) Fertö / Neusiedlersee Cultural Landscape (2001)

Poland: (1) Cracow's Historic Centre (1978); (2) Wieliczka Salt Mine (1978); (3) Auschwitz (Oswiecim) Concentration Camp (1979); (4) Kalwaria Zebrzydowska: the Mannerist Architectural and Park Landscape Complex and Pilgrimage Park (1999); (5) Wooden Churches of Southern Little Poland (2003)

Romania: (1) Churches of Moldavia; (2) Monastery, Horezu; (3) Villages with Fortified Churches in Transylvania – Extension of "Biertan and its Fortified Church" (1993, 1999); (4) Dacian Fortresses of the Orastie Mountains (1999); (5) Historic Centre of Sighişoara (1999); (6) Wooden Churches of Maramureş (1999)

Slovakia: (1) Historic Town, Technical Monuments, Banská Štiavnica (1993); (2) Spišský Hrad, Associated Cultural Monuments (1993); (3) Vlkolínec (1993) – Žilina Region; (4) Caves of Aggtelek Karst and Slovak Karst (1995, 2000); (5) Bardejov Town Conservation Reserve (2000)

Ukraine: (1) L'viv – the Ensemble of the Historic Centre (1998)

Serbia: (1) Ravanica monastery

From the notebook...

There are 36 registered UNESCO World Heritage items in the Carpathian area;

Poland signed the agreement with UNESCO in 1976. Until 1997 no heritage site was nominated in the new territories, belonging formerly to Germany.

Romania signed the agreement in 1990. The first Saxonian city, Sighisoara was nominated in 1999.

A large part of Ukraine's valuable architectural heritage – the countries only renaissance castles and palaces are in the Carpathian area which was part of Poland, Austria and Hungary at that time. So far only the inner city of L'viv is nominated.

The Carpathian area had 4 million Jewish inhabitants before World War II. No Jewish quarters or buildings (synagogues) have been nominated so far from the region.¹

¹ *The Jewish Quarter of Třebíč in the Czech Republic is registered as World Heritage, but it is outside the Carpathian area in the Region of Vysocina.*

Turkish soldiers are carefully maintained and visitor centres erected. Large numbers of visitors come to these cemeteries, but in the Carpathian region monuments and facilities such as these are nonexistent. New nation states, those emerged after the First World War, feel neither obligated nor interested in caring for military services. There are a few committed amateur historians in the Polish Carpathians who are making efforts to identify, map, and mark the military cemeteries.

To establish these war memorials would require the common action of the Carpathian counties, Austria, Germany and Russia. This would be a symbolic action in honour of those who lost their lives in war just a century ago. Today, about 55 million descendants of these veterans live in Europe.

10.2.4 Sites of pilgrimage in the Carpathian area

The majority of inhabitants in the Carpathian region are Christian, most strong believers. Other than Ireland, the largest share of churchgoers in Europe can be found in Po-

land, Slovakia, and Romania. Among the Czechs and Hungarians the share of church-going people is lower.

The number of pilgrimage sites is very high in the Carpathian area. Only in the Carpathian Basin, that means within the mountain range of the Carpathians, there are more than 400 pilgrimage places. In the whole Carpathian area their number is about 700.

An overwhelming majority of pilgrimages are small and are of local significance; but there are 50 - 60 sites which have national and 10 - 15 sites which are of international significance.

The pilgrimage site is usually a church, chapel, or spring sometimes with a cabin. The ground of the site usually has a history for a sighting of the Holy Mary or Jesus, and consequently miracles occur.

In the socialist period, the communist state tolerated pilgrimages, but did nothing to facilitate the action, transportation, or accommodations.

The conditions in most historical sites have not yet changed. Hygienic conditions are unacceptable on most days and even worse on religious holidays when thousands of people gather at the most famous places. Pilgrimage can be regarded in these countries as the largest tourism movement and support – including EU Structural Funds support – should be allocated accordingly to create acceptable conditions in the 21st century.

The most famous and the most frequented pilgrimage site in the Carpathian region is the Jasna Góra monastery in Czestochowa, Poland. More recent and less famous is the “Pil-

grims Park” Kalvaria Zebrzydowska (UNESCO World Heritage), but it already attracts large masses of pilgrims.

Important sites of pilgrimage in Carpathian Poland are Wadowice (the birthplace of pope John Paul II), Łagiewniki in Cracow. In the Czech Carpathian region more significant sites of pilgrimage are: Svatý Hostin, Velehrad, Svatý Kopeček, Zlaté Hory and Křtiny. In Slovakia, the main (national) pilgrimage places are Nitra, Banská Bistrica, Levoča Marianka, Rajecka Lesná, Staré Hory, L'utina, Šaštín, Turzovka.

Carpathian Project Experience

The Carpathian Project has analysed the cultural heritage within several reports, published separately.

Other than natural resources the Carpathians feature a variety of cultural values that attracts tourism. Since prehistoric times they have been the contact place for empires, ethnic groups and cultures and have also been part of several states and empires. Many traditions, artefacts, ruins as well as archaeological sites and monuments have been preserved.

Elements of a Carpathian culture date back to the Paleolithic and Neolithic Ages with items such as pottery, bronze and iron objects discovered in various mountainous and inter-montane sites. Highlights include the 22.000 year-old Venus of Mosavany statuette found carved into a mammoth tusk in Slovakia, and Sarmizegetusa in the former Geto-Dacian capital located in the Southern Carpathians, with a solar monument similar to the one in Stonehenge.

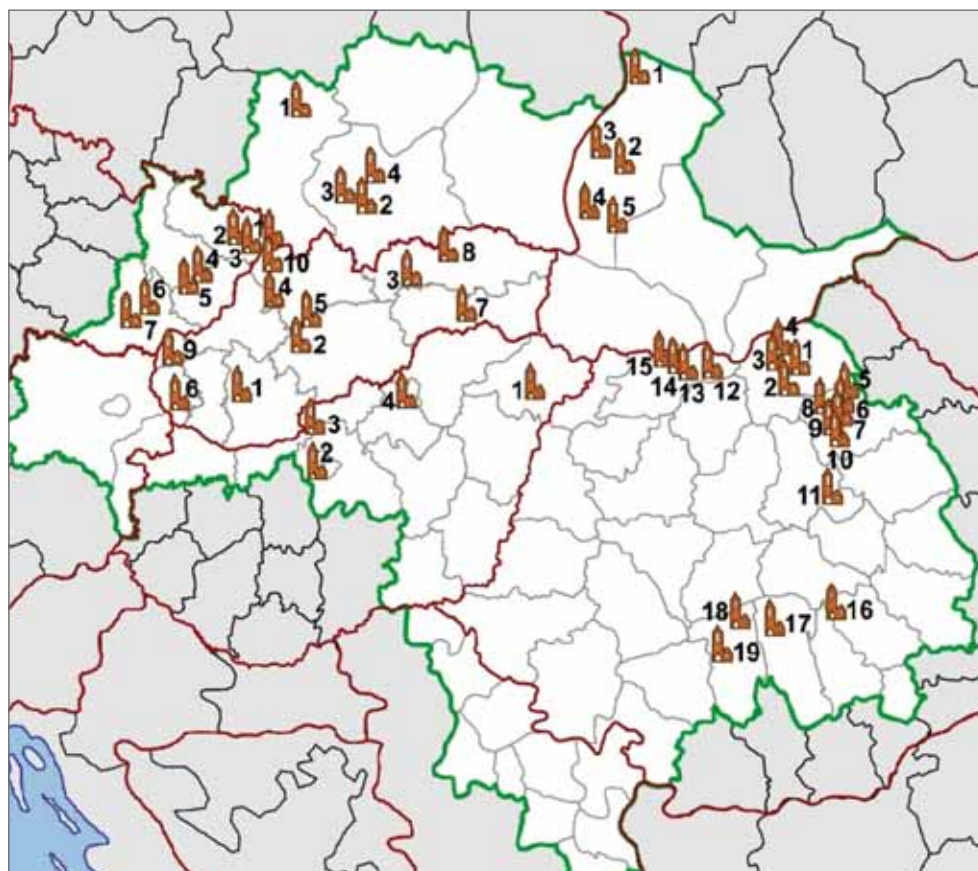
Many remnants from the Romans have been preserved too. These include ruins of Roman settlements and roads; in the Northwestern and Southwestern Carpathians Roman fortified cities, mines, and spas are preserved.

Traditional occupations such as raising livestock, coal mining, woodworking, and agriculture resulted in forest area reduction. The traditions of many ethnic groups can still be found in many existing Carpathian settlements, with elements of traditional architecture, wooden churches, folklore elements, handicraft and artistic work.. Traditional land use also supported the formation of interesting cultural landscapes, like vineyards, etc.

Mountains and valleys shelter medieval castles and ruins in the Carpathians, and are host monuments and historical city centres that are also important cultural heritage sites.

The religious past is filled with pre-Christian traditions and festivals. A large number of monasteries and churches, such as those in Romania, also reflect religious activities and are of great cultural value.

Figure 27: Pilgrimage sites in the Carpathian area



Source: Author's construction

Legend:

Poland: (1) Czestochowa; (2) "Pilgrims Park" Kalvaria Zebrzydowska; (3) Wadowice (the birthplace of pope John Paul II); (4) Łagiewniki, Cracow

Czech Republic: (1) Guty; (2) Frydek-Mistek; (3) Kunčice; (4) Hostin; (5) Kroměříž; (6) Křtiny; (7) Brno

Slovakia: (1) Nitra; (2) Banská Bistrica; (3) Levoča Marianka; (4) Rajecká Lesná; (5) Staré Hory; (6) Bratislava; (7) Košice; (8) L'utina; (9) Šaštín; (10) Turzovka

Hungary: (1) Máriapócs (Greek Catholic Basilica); (2) Máriaremete; (3) Márianosztra; (4) Belpátfalva

Romania: (1) Humor; (2) Voronet; (3) Moldovita; (4) Sucevita; (5) Neamt; (6) Secu; (7) Agapia; (8) Sihatria; (9) Varatec; (10) Bistrita; (11) Șumuleu Ciuc/Csiksomlyó; (12) Moisei; (13) Bogdan Voda; (14) Rozavlea; (15) Barsana; (16) Sinaia; (17) Curtea de Arges; (18) Cozia; (19) Hurezi

Ukraine: (1) Univ; (2) Krekhiv; (3) Lviv; (4) Hrushiv; (5) Hoshiv

In the Hungarian Carpathian region the most famous pilgrimage site is Máriapócs (Greek Catholic Basilica), Máriaremete, Márianosztra, BÉlapátfalva.

In Romania, orthodox monasteries can be regarded as the main pilgrimage destinations. There are four main concentration areas of these pilgrimage monasteries:

(1) the monasteries of Bucovina (Humor, Voronet, Moldovita, Sucevita), (2) Neamt region (Neamt, Secu, Vovidenia, Agapia,

Sihatria, Varatec), (3) the valley of the river Olt (Hurezi, Curtea de Arges, Cozia, Bistrita, Sinaia) and (4) Maramures (Moisei, Bogdan Voda, Rozavlea, Barsana).

The main pilgrimage place of the Hungarians in Romania is the church and monastery in Csíksomlyó (Șumuleu Ciuc). The main pilgrimage sites in the Carpathian Ukraine are: Univ, Krekhiv, Lviv, Hrushiv, Hoshiv and Prylbichi.

Carpathian Project Experience

The Carpathian Project report “Carpathian Cultural Heritage - Identity and Regions of traditional Culture” identifies a variety of traditional culture in the Carpathians with numerous common elements (e.g. wooden churches) occurring, disappearing and emerging along the mountain range. The complicated political history of the area as well as voluntary and forced migrations in 19th and 20th centuries further contribute to this picture. In spite of the visible influence of Walachian migrations along the whole mountain range in the 15th century and in spite of numerous other common cultural features, the common Carpathian identity has not developed among inhabitants of these mountains. Instead, the highland identity of distinct ethnographic groups developed in plain countries such as the Lemko, Boyko, Hutsul in Ukraine or the Gorale in Poland. These groups are usually conscious of the difference between them and other groups living at the foothills of the mountains and on plains. Sometimes, in the instance of Slovakia, an entire country may have a Carpathian identity equal to that of a national identity. In Hungary and Romania the pattern of local identities is not so closely related to the geological relief.

This variety of cultures has developed due to different environmental and accessibility conditions in mountain areas. The future of traditional culture is unclear because of changes in the last decades with dependency on local natural resources and accessibility; culture, therefore, will rely on how local communities adapt. If local communities value their traditions as part of their lives and not only a source of income, then local cultural values can exist further. Policy is thus required to be responsible for those aspects in their development decisions. If the local communities value it as part of their lives and not only as a source of income, local culture values can further exist. Policy action is thus required to consider these aspects in development decisions.

10.3 Policy Recommendations On Specific Problems Of The Natural Heritage

A network of National Parks and other forms of high level protection has been established in the Carpathians. Areas with more permissive regulations must be extended; especially protected landscapes where human activities and natural processes are in harmony.

- A priority is to enhance the integrated management of protected areas.
- Regulations between the two types of protection should be clearly differentiated. National Parks should enforce more strict regulations. For example, areas belonging to a national park should not be allowed to be privatized. In other protected areas, human economic activity should be allowed but carefully regulated. The exploitation of forests and meadows in protected areas should be regulated differently and more carefully.

With the Pan-European Ecological Network (PEEN) and the Framework Convention on the Protection and Sustainable development of the Carpathians (Carpathian Convention) the Carpathian countries are provided with two important tools aiming to establish and further develop an ecological network in the region.

While the PEEN aims to establish a European-wide link of the different European and national protected areas and ecological networks⁴, the Carpathian Convention focuses on the further development of the ecological-

network in the Carpathian Region⁵. The first thematic Protocol to the Framework "Carpathian Convention" – the Protocol on Conservation and Sustainable Use of Biological and Landscape Diversity (Bucharest, 2008) - provides concrete fields of action for the management of the natural heritage in Carpathian Countries:

- Improve and ensure continuity and connectivity of natural and semi-natural habitats, allowing dispersal and migration of wild species populations, and genetic exchange between such populations in the Carpathians;
- Maintain, manage, and if needed, expand existing protected areas and encourage the designation and management of new protected areas in the Carpathians;
- Cooperate on establishing an ecological network in the Carpathians;
- Adopt a list of endangered flora and fauna species native to the Carpathians (Carpathian Red List of Species) based on internationally recognized principles and criteria;
- Ensure the long-term conservation or sustainable use and recovery of endangered species, including endemic species of flora and fauna native to the Carpathians;

⁴ As declared during the 3rd Conference of Ministers "An Environment for Europe" in Sofia, on 25 October 1995: "The Pan-European Ecological Network will contribute to achieving the main goals of the Strategy by ensuring that a full range of ecosystems, habitats, species and their genetic diversity, and landscapes of European importance are conserved; habitats are large enough to place species in a favourable conservation status; there are sufficient opportunities for the dispersal and migration".

⁵ Article 4 (5) of the Framework Convention on the Protection and Sustainable Development of the Carpathians (Kyiv, 2003) provides for further development of the ecological network in the Carpathians ("The Parties shall cooperate in developing an ecological network in the Carpathians, as a constituent part of the Pan-European Ecological Network, in establishing and supporting a Carpathian Network of Protected Areas, as well as enhance conservation and sustainable management in the areas outside of protected areas.").

- Cooperate on activities aiming at reintroduction of native species of fauna and flora;
- Pursue policies aiming at the prevention of introduction or release of invasive alien species and/or genetically modified organisms which are likely to have adverse environmental impacts that could affect the biological diversity, ecosystems, habitats or species of the Carpathians;
- Support and facilitate cooperation under the Carpathian Network of Protected Areas;
- Enhance conservation and sustainable management in the areas outside of protected areas with the objective of improving and ensuring connectivity between existing protected areas and other areas and habitats significant for biological and landscape diversity of the Carpathians ;
- Harmonise and coordinate measures undertaken in border areas in the Carpathians, in particular, in transboundary protected areas; (see 10.3.1)
- Cooperate within existing transboundary protected areas and harmonise the management objectives and measures applied and, if needed, encourage the expansion of existing or creation of new transboundary protected areas in the Carpathians;(see 10.3.1)
- Cooperate on harmonisation of their environmental monitoring systems and develop a joint information system on biological and landscape diversity in the Carpathians;
- Facilitate international cooperation among the scientific institutions, in particular, on the harmonisation of monitoring systems, the provision and harmonisation of databases, and undertaking common research programs and projects in the Carpathians.

10.3.1 Transboundary cooperation on protected areas

The Carpathian region has a long lasting history of official transboundary cooperation on protected areas. In 1932 the first transboundary protected area in Europe was established in the Carpathians in Pieniny Mountains at the Polish-Slovak border. Also the World's first UNESCO-MaB trilateral transboundary Biosphere Reserve (East Carpathians BR) was officially designated in the Polish-Slovak-Ukrainian border region between 1992 (bilateral BR) and 1998 (trilateral BR).

According to the definition from the Carpathian "Biodiversity Protocol" - "a transboundary protected area means an area composed of two or more protected areas located within the territories of two or more Parties, adjacent to the state border, each remaining under jurisdiction of the respective Party".

As of 2009 there are 12 transboundary protected area complexes in the Carpathians where either the protected area or their official designated external buffer zones are adjacent across the state boarder, thus providing for the ecological continuity and connectivity on the local scale (See Table 8).

However, in several cases coordination remains insufficient, but enhanced common actions and harmonization of regulations would be desirable everywhere. The preamble of the Carpathian Convention emphasizes the added value of transboundary cooperation in achieving ecological coherence. It's Protocol on Conservation and Sustainable Use of Biological and Landscape Diversity (Bucharest, 2008) calls on the contract partners to cooperate within existing transboundary protected areas in the Carpathians and harmonise the management objectives and measures applied and, if needed, encourage the expansion of existing transboundary

protected areas or creation of new transboundary protected areas in the Carpathians.

Furthermore cooperative arrangements and agreements between administrations responsible for protected areas being parts of transboundary protected areas should be encouraged and supported. Special should be paid to the harmonization of their management objectives and measures applied, with the objective to:

- Improve and ensure continuity and connectivity of endangered natural and semi-natural habitat types;
- Protect mainstays, priority connecting corridors and migratory routes of species listed in the Carpathian Red List of Species, allowing their dispersal and migration, and genetic exchange between their populations, across the state borders in the Carpathians;

- Ensure the conservation of the endangered species listed in the Carpathian Red List of Species and, as may be necessary, recovery of those species and their natural habitats in transboundary protected areas in the Carpathians, where the natural habitat of the endangered species is located on both sides of the state border between the Parties.

The following listed transboundary protected areas are the best available pilot sites where transnational cooperation between the Parties to the Carpathian Convention could be tested and enhanced. The issues of ecological continuity and connectivity within transboundary protected areas are vital for the harmonized common management of natural areas shared by neighbouring countries, being not only a common treasure, but also a common responsibility.



Table 8: Protected areas constituting a transboundary protected area complex

No	Names of protected areas constituting a transboundary protected area complex	Country
1.	Bilé Karpaty Protected Landscape Area / Biosphere Reserve Biele Karpaty Protected Landscape Area	CZ SK
2.	Beskydy Protected Landscape Area Kysuce Protected Landscape Area (western part)	CZ SK
3.	Kysuce Protected Landscape Area (eastern part) Żywiecki Landscape Park Babiogórski National Park / Biosphere Reserve Horná Orava Protected Landscape Area	SK PL PL SK
4.	Tatransky National Park / Biosphere Reserve Tatrzański National Park / Biosphere Reserve	SK PL
5.	Pieniński National Park Pieninsky National Park Popradzki Landscape Park	PL SK PL
6.	Magurski National Park Východné Karpaty Protected Landscape Area Jaśliski Landscape Park Ciśniańsko-Wetliński Landscape Park / East Carpathians Biosphere Reserve san Valley (Doliny Sanu) Landscape Park / East Carpathians Biosphere Reserve Bieszczady National Park / East Carpathians Biosphere Reserve Poloniny National Park / East Carpathians Biosphere Reserve Uzhansky National Nature Park / East Carpathians Biosphere Reserve Nadsyanskyi Regional Landscape Park / East Carpathians Biosphere Reserve	PL SK PL PL PL PL SK UA UA
7.	Slonne Mountains (Gór Słonnych) Landscape Park Przemysl Highlands (Pogórza Przemyskiego) Landscape Park Verchniodnistrovske Beskidy Nature Reserve	PL PL UA
8.	Carpathian Biosphere Reserve (parts: Kuziyskyi Massif and Marmarosskyi Massif) Maramures Mountains (Munții Maramureșului) Nature Park Rodnei Mountains (Munții Rodnei) National Park / Biosphere Reserve	UA RO RO
9.	Aggteleki National Park / Biosphere Reserve Slovenský Kras National Park / Biosphere Reserve	H SK
10.	Bükk National Park Cerová vrchovina Protected Landscape Area	H SK
11.	Duna Ipoly National Park Kovacovske kopce National Nature Reserve (northern part)	H SK
12.	Portile de Fier Natural Park Djerdap National Park	RO SRB



► Apuseni Natural Park, Romania



► Steam engine in Maramuresului Mountains National Park, Romania

11 TRANSPORT IN THE CARPATHIAN AREA

11.1 Situation And Problems

The Carpathian region's transport infrastructure has been affected by the changes of the political and economic system in the following ways and intensity:

- Of the main railway lines and roads the overwhelming part of resources has been allocated to the development of international corridors (Helsinki/PEN/TEN and partly TINA).
- The Bratislava-Zilina-Košice section of the 5/a corridor is under preparation. A motorway has been built from Bratislava to Zilina in the Valley of River Vah and the section between Low-Tatra and High-Tatra with a tunnel in Branisko. Significant progress has been made on the railway line in the same direction (some areas averaging 150 km/h) with electrified double tracks. The intercity train service between the two biggest cities in Slovakia has intensive passenger traffic.
- The 4th corridor between Berlin and Istanbul connects Germany with one of its biggest market and labour force source in Europe. Two parts of this corridor are crossing the Carpathian region. On the Bratislava-Komárno-Budapest railway section the quasi high-speed train service can be introduced in 2007 and some sections of the Bratislava-Nitra-Zvolen dual carriageway have already been completed.
- The other planned part of the corridor is crossing South-Transylvania (along the Maros Valley) through the South-Carpathi-

ans reaching the Black Sea at Constanta. The motorway is crossing the Carpathians at Turnu Rosu, while the corridor railway line — at Predeal Pass. The Romanian section of the 4th corridor is under preparation and its railway line is undergoing a partial modernisation.

- The M3 motorway in Northern Hungary is a part of the 5th corridor. It was completed up to the Debrecen/Nyíregyháza and is planned to continue to the Carpathian-Ukraine. Although there have been declarations on building it further until Kiev, it is doubtful that this project can be completed.
- The Daunbe waterway is the 7th corridor. However, navigation along the Bratislava-Vác-Budapest section is difficult for ships above the EU economical threshold (1350-1500 tons) because of low water level at the end of summer and autumn seasons. Although maintaining the continuity of navigation on the Slovakian-Austrian, Slovakian-Hungarian, Hungarian and Romanian Bulgarian river sections is a priority task of EU Quick Start Programme, no major steps have been done so far for the achievement of this target.

The primary mission of corridors is to provide quick transportation between capital cities and their big economic centres such as those from Prague, Bratislava, Budapest, and Trieste. They are serving as means for internal cohesion within the European Union as a complex system of

transportation facilities providing quick access in several sub-sectors.

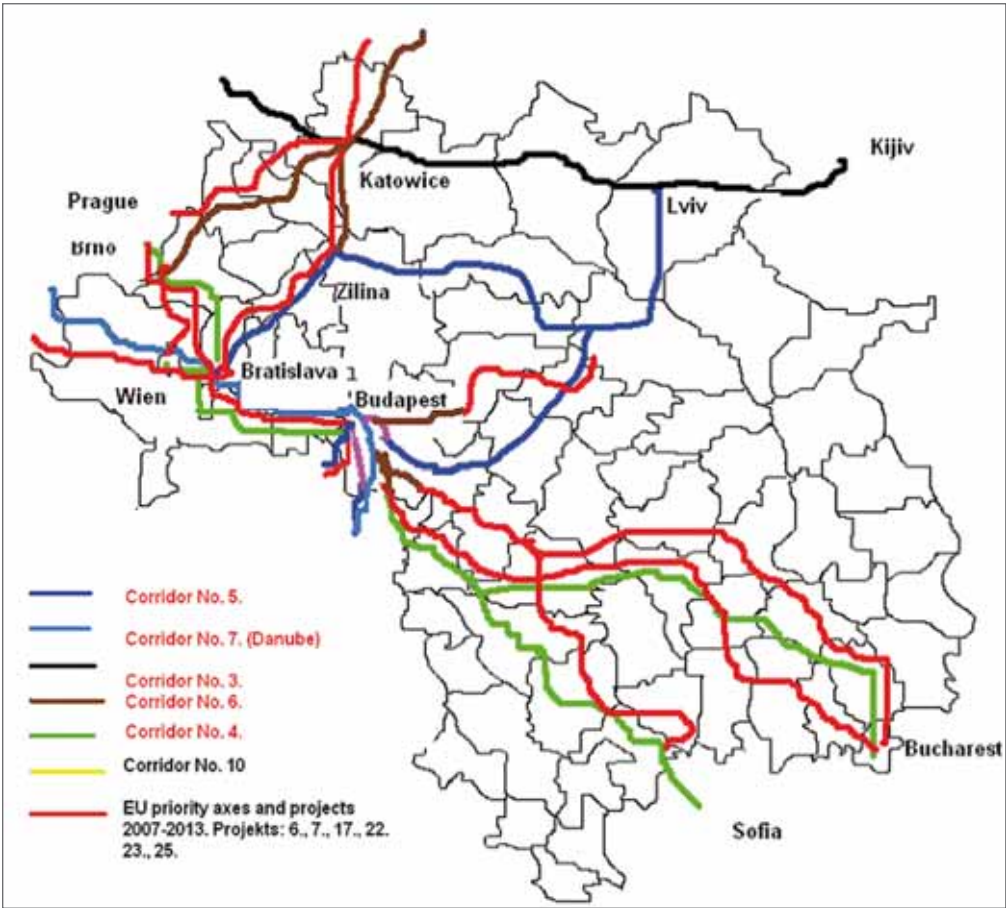
There is a big difference in the completion stage of these corridors which depends mostly on the degree of their funding. There have been spectacular improvements in those projects that had received heady funds from national resources and loans for implementation. Until 2004 the EU had funded the costs of preparatory plans, feasibility studies, environmental impact assess-

ments, and the guarantee interest sums of loans having been disbursed by the banks of the European Community. However, in the future, EU member countries may receive more significant EU grants (e.g. from Cohesion Fund).

The territorial impacts of these corridors are rather ambivalent:

They contribute directly to the increase flow of goods and labour force. Indirectly,

Figure 28: Helsinki corridors and EU priority projects in the Carpathian area



Source: Maciej Borsa, Urbanproject (Romania)

they are accelerating information and capital flow, as well. At the same time, they have a strong attractive force in the hinterlands generating effects of exhaustion in these areas. Along the corridors, several new factories of innovative industries are built with logistic and distribution centres that attract the potential labour force of the skilled young generation from their hinterland. Agricultural production segments in their neighbourhood are producing high quality, transport intensive, valuable products (greenhouse flower and fresh vegetable farming, biotechnology based knowledge intensive production methods etc.).

What remains in the peripheral areas of the corridors are an aging population, a critically high rate of unskilled labour. The out-migration of qualified population will accelerate demographic erosion both in quantitative and qualitative aspects.

Big airports of the Carpathians are located at the edge of a region Vienna-

Schwechat has an annual passenger traffic of 17 million people, Prague has 11 million, Budapest with 8 million, Bucharest with 3 million, Belgrade with 1.8 million, Bratislava with 1.5 million. Airports outside of the region such as Krakow and Katowice exceed 1 million.

The annual air passenger traffic of Timisoara belongs to the category of 0.5-1.0 million, while of Košice and Cluj-Napoca (and Constanta) into the 0.3-0.4 million. The annual air passenger traffic of the remaining airports (Tirgu Mures, Oradea, Satu Mare, Sibiu, Bacau, Jassi, Suceava, Debrecen, Użgorod, Cernovitz, Posten, Sliac, Poprad-Tatry, Rzesov) is below 0.2 million (the majority has some ten thousands only annually). A growing number of regional airports are running international air services (mostly in the summer tourist seasons by charter flights, carrying tourists into the holiday resorts of the Mediterranean region).

Crossing Carpathians today ...



Development of transportation systems that cross the Carpathians could be of great importance for the economical growth of new countries in the European Union. It also creates a good opportunity for increasing security on Carpathians roads and for easy accessibility of out of reach tourist and environmental attractions. In fact, diverting international trade transports on the new highways of TEN Corridors could dramatically reduce traffic on the other roads, with great advantage for local and tourist traffic, particularly in the mountainous districts.

Crossing today by road ...

Two major Corridors (number 5: line Bratislava-Zilina-L'viv, and number 6: lines Katowice-Bielko Biala-Zilina and Katowice-Ostrava-Brno) cross the Carpathians, while two other Corridors lie respectively in the northern (number 3: line Katowice-Krakow-L'viv) and in the southern part of the region (number 4: a line almost entirely crossing the Romanian territories of Timisoara, Sibiu and Bucharest). They are multi-modal Corridors, and the modal split is favourable to roads, along which about 70% of goods are transported.

In these Corridors technical characteristics and the quality of facilities of roads change. In fact, a single road can have characteristics of a highway, two roadways with two or three lanes for each direction, to one roadway with one lane for each direction.

On a working day about 20,000-25,000 vehicles run, in both directions, on the roads of the two main Corridors, particularly along the lines Katowice-Bielsko-Biala-Zilina and Katowice-Ostrava-Brno. About 20-40% of the total traffic is freight traffic. The Romanian trans-Carpathian Corridor (route E 60: Oradea-Julia-Sibiu-Pitesti) is crossed by 15,000 vehicles per day. About 25% of the total traffic is freight traffic.

This traffic runs on roads that mostly have only one lane for each direction (each 8-9 meters wide), that cross numerous villages and towns and it is not only long-distance freight traffic but also local and tourist traffic — a fact — this clearly causes heavy problems to people living in the area.

Freight traffic along Corridors 5 and 6 is progressively increasing as a consequence of the increased industrialization (in large part due to automobile industries: FIAT, GM, Toyota, PSA) of the Ostrava-Zilina-Bielsko Biala area. This forces to plan the construction of infrastructures adequate to the increasing traffic, especially in the north-east/south-west directions.

Even if there is less traffic than in Corridors 5 and 6, the same problems exist for Corridor 4, which connects Budapest with Constance (Black Sea) crossing the mountainous area of Hunedoara, Sebes and Sibiu. These roads are inadequate for the traffic needs and have a high level of car accidents.

In consideration of these problems and in order to ameliorate the situation of the traffic, works are presently in progress on the two more important Corridors, number 5 and 6. They consist of the completion of the highway Povaska-Milowka, line Bratislava-Zilina-Bielsko Biala, and of the completion of the highways Zilina-Liskova and Vazec-Presov (in the Carpathian territory of Slovakia) and Uzhorod-Kosice (in the Ukrainian-Slovak area).

Completing these traffic systems will also reduce the traffic on the nearest and most crowded roads and other important roads such as the Cadca-Bystrice tract on the Czech-Slovak pass as well

Unfortunately the new highways appear to be greatly disfiguring the natural scenery, particularly in the areas of Breskydy Morava (Skalite), Javorniky (Bytca) and to the south of Tatra Park..

Crossing today by rail ...



The most important Trans-European corridors include the major railways. Presently, railways play an important role in the modal split of passenger and freight traffic in the Carpathians; with mean quotas larger than the railway lines that cross the Alps.

The more important role played by railways in the Carpathian traffic is a consequence of the social and productive shape of the region and of the inheritance of the collectivism, typical for the socialist countries. The new political order in the Carpathians and the opening to the market is producing an increase in freight and passenger traffic and, as a consequence, an increased importance of road systems. However, 30% of traffic in the Carpathian area is on railways, an important share considering the low quality of trains and infrastructure. railway stations and so on. But passenger transport

has a good standard of punctuality and reliability, especially on double track lines at the border between Poland, Slovakia and Czech Republic (Trencin-Olomouc, Zilina-Cesky Tesin) or on the Ukrainian line Turka-Velikyi-Berenznyi-Uzhorod.

The necessity of a modal integration of transport systems and the aim of privileging the long distance railway transport has caused an increase of railway connectivity with newly industrialized areas and of inter-modal terminals in the Carpathian area. Consequently, some railway stations near Carpathian mountain passes are gaining strategic importance for the distribution of goods in the railway network. Many stations, like Skalite, cause problems in passenger conveyance.

11.1.1 The main transport indicators of Carpathian countries

There are substantial differences among Carpathian countries with respect to transport infrastructure and transport performance. Nevertheless, with the exception of Austria, all the

Carpathian countries have to make serious efforts to comply with the European standards.

Policy recommendations for transport development for the Carpathian countries are divided according to local, regional and international transport

Figure 29: Transnational transport networks in the Carpathian Region - synthesis of the national spatial development documents



Source: Maciej Borsia, Urbanproiect, Carpathian Project Strategic Workshop for Spatial Planning

Table 9: Indicators of the road network

Country	Length of motorways km 2003	per 1000 inhabitants	per 1000km ²	Legth of other roads km	per 1000 inhabitants	per km ²	of which: state roads
Austria	1670	0.2057	19.91	105040	12.94	1.25	...
Czech Republic	518	0.0507	6.57	127229	12.46	1.61	54929
Hungary	542	0.0536	5.83	160215	15.84	1.72	30536
Poland	405	0.0106	1.30	377289	9.88	1.21	18253
Romania	113	0.0052	0.47	73061	3.37	0.31	9182
Slovakia	313	0.0582	6.38	17459	3.25	0.36	3335

Source: UN ECE statistics

Table 10: Indicators of the rail network

Country	Length of railway network km	per 1000 inhabitants	per 1000km ²	Standard gauge network	Double track network
Austria	...				
Czech Republic	9602	0.94	121.75	9500	1845
Hungary	7681	0.76	82.56	7432	1292
Poland	20665	0.54	66.09	19748	8896
Romania	11077	0.51	46.47	10946	2965
Slovakia	3675	0.68	74.95	3507	1020

Source: UN ECE statistics

Table 11: Indicators of tkm performance of road and rail transport

Country	Road transport					Rail transport	
	million tkm performance	per 1000 inhabitants	of which: national	export-import	transit crossing	million tkm performance	per 1000 inhabitants
Austria	18141	2.23	12487	4981	673	16879	2.08
Czech Republic	46564	4.56	17395	26022	3147	15862	1.55
Hungary	18199	1.80	10669	7137	393	8028	0.79
Poland	78160	2.05	42379	34740	1041	49595	1.30
Romania	30854	1.42	13637	17146	71	15039	0.69
Slovakia	16859	3.13	5246	8931	2682	10113	1.88

Source: UN ECE statistics

Table 12: Indicators of passenger traffic

Country	Railway passenger km-s (million)	Number of passenger cars 1993	Number of passenger cars 2003	per 100 inhabitants 2003	Increase % 2003/1993
Austria		3367626	4054000	49.94	120.4
Czech Republic	174179	2833143	3706012	36.29	130.8
Hungary	159871	2093529	2777000	27.45	132.6
Poland	283359	6770557	11243800	29.43	166.1
Romania	94810	1793054	3087600	14.24	172.2
Slovakia	51274	994933	1356200	25.21	136.3

Source: UN ECE statistics

11.2 Policy Recommendations For Transport Development For Carpathian Countries

11.2.1 Recommendations for local transport

The access to highland settlements (villages, forest farms, mining sites and recreational villages) can only be guaranteed by a network of public (and partially private) roads with technical parameters adapted to current traffic situations, providing easy access to main roads.

Although local stone for road building can easily and cheaply be accessed from a short distance, this has no relevance to the total cost of construction. Building costs of road construction increase as it becomes necessary to overcome mountain slopes. Due to the expansion of motorized road transportation, the number of traditional local instruments of wood transportation (long lumber slides, cable ropeways and narrow-gauge wood transportation railways) has strongly diminished. However, the quality of roads, especially in the mountains of Romania and Poland, is very poor and the asphalt cover of roads has been strongly damaged.

The assessment of the real demands for mountain side-roads (including the future demands as well) should carefully consider the local environment with special regard to meeting the requirements of environmental sustainability.

Under the conditions of mountainous surface and low population density:

- A denser and better quality road network is needed in areas exposed to big tourist traffic but the impacts of its higher environmental load should also be foreseen (including the building of a bicycle road network which

is considered as an acceptable infrastructure of eco-tourism). Strict limitations should be applied regarding motocross and quad cycling which heavily damages forest plants and soil, accelerating the erosion process. These unfriendly for nature activities generate big noise, disturb and scare away wild animals and tourists searching for peace and quiet. Therefore, they should only be permitted in a few places.

- Motorcycles should be banned from tourist paths and walkways. Truck traffic on one-lane roads should be limited in time for some hours' period only (ensuring just the provision of local shops with the essential goods for tourists and locals).
- Car traffic and road usage should be minimized in the territory of wild forests which are valuable for the ecosystem and are still 'untouched'.
- The mini railways in forests should be preserved because their passengers enjoy the beauties of nature and are less harmful for the environment than any other mode of transportation. When tourists are attracted to nature and relatively small groundwork is needed for the building of a narrow-gauge railway line, the construction of a forest mini-train is advisable. For exploring those parts of national parks that are open to the public, battery powered electrical mini- and middle-size buses (operated by light sulphur/sodium batteries) are the most suitable means of transport.

Carpathian Project Experience

The Carpathian Project's document "Study on Transport System in the Carpathian Space" analyzes and provides a comprehensive overview on the main features and different aspects of transport in the Carpathians for strengthening internal cohesion of the Carpathian Region.

In four chapters the situation of transport and its environmental impacts is explained in terms of system of roads and highways, railways, local bus transport systems as well as Carpathian freight internal navigations. A special focus in the analysis was put on environmentally sensitive areas. Furthermore, transport policies and programmes in the Carpathian countries are outlined and discussed.

These chapters also identify problems of present day limitations to transport in the Carpathians, such as different levels of transport system development, the inadequacy of communicating lines, the lack of coordination for the needs of different traffic types, low standards in road security, the need for adequate infrastructure, and the possible negative environmental effects from the construction of great transport corridors.

The study outlines actions needed to assure the infrastructural functionality of the transport network and to improve urban and tourist accessibility of the Carpathian region. A participatory approach would contribute to socio-economic development which is balanced and provides development opportunities for local communities of the region. Furthermore, the study suggests appropriate actions to limit the environmental impact of infrastructure and to develop advanced transport management systems. It also highlights the need to develop a multi-modal network in the Carpathian countries in order to assure better accessibility standards and also to develop sustainable and environmentally friendly mobility systems within the most valuable natural and tourist areas. The analysis of the situation of the Carpathian transport system provides the basis for possible intervention strategies and recommendations.

Moreover it involves two case studies on two main issues of expanding international traffic flows towards the East and preserving the natural beauties and biodiversity.

Strategy for the future development of sustainable transport, infrastructure, industry and energy for the Carpathian region – the place of tourist and forest railways in sustainable regional regeneration.

Environmentally protected areas: Highway D47 – Migration study and proposals for the assurance of the permeability of the construction for big mammals.

11.2.2 Recommendations for regional and interregional transport in the Carpathians

Transport policy objectives in respect to connections between provincial cities and in urban agglomerations should be the preservation of the present role of railway services or at least halting the radically dropping tendency of their use. The use of small trains with scheduled services is recommended.

Bus services in areas with low passenger traffic should be reorganised by introducing flexible, demand-oriented bus services with call-centre based minibuses or bigger share taxis following the example of the systems implemented in the Italian Apennines. In short-distance cargo delivery the use of railway can be profitable only in exceptional cases (e.g. the delivery of bulked mining products into power plants) in other cases cargo transportation by trucks and lorries has more reality.

Carpathian Project Experience

The document “Study on Transport System in the Carpathian Space” analyses and provides a comprehensive overview on the different aspects of transport in the Carpathians and also the connections with the European territory outside of the Carpathian Space for strengthening external cohesion.

In different chapters an overall view is given on the system of (trans-national) road and highway as well as railway systems and local transport systems.

Furthermore, the infrastructure system and the functioning of transport systems as well as related policies and scheduling are described in detail for four countries – Ukraine, Romania, Czech Republic and Poland.

All chapters are complemented by a set of maps, charts and photographs taken of examples in the Carpathian area.

In this study problems and needs are identified that are tightly linked to the external cohesion of the Carpathian area with the European territory.

These problems and needs comprise of the following:

- Long distance freight traffic runs on roads that cross numerous villages and towns, and together with local and tourist traffic causes heavy problems for people living in the area.
- Due to increasing road traffic and – at the same time - lower or changing stages of road expansion, several areas are to a high degree prone to vehicle accidents
- The most important trans-european corridors include major railways, and play an important role in the modal split of passenger and freight traffic in the Carpathian area. Quotas are on the average larger than in the Alps for instance. Relevant multiplication of railway lines connected with the newly industrialized areas and of inter-modal terminals in the Carpathian area took place to enhance modal integration of transport systems and the aim of privileging the long distance railways transport.
- While some railway stations near Carpathian mountain passes are gaining strategic importance for the distribution of goods in the railway network, this situation can cause problems in passenger conveyance - which has generally good standards in terms of punctuality and reliability.
- Freight traffic to and through the Carpathians is increasing, and for many, even though they are multi-modal, the modal split is favourable to roads (e.g. Corridor 5 and 6 in large parts due to automobile industries)
- In the frame of TERN corridors, that are co-funded by the European Union, construction of highways is very useful for the trans-national traffic — for example, for easing the situation in terms of road safety and crowded roads. In addition these corridors are of great importance for the economic growth of the „new countries“ of the European Union. But on the negative impact side they strongly disfigure natural scenery, particularly in the vicinity of protect areas.
- Accessibility to tourist and natural areas has to be improved.

Furthermore the document also involves a case study that takes the example of Highway D47 for carrying out research on wildlife migration. There the problem of the fragmentation of habitats and eco-corridors caused by construction of major road infrastructure has been identified. The case study results in a proposal for provisions for the assurance of the permeability of this infrastructure for big mammals.

In certain places rafts and small ships may have been used as alternative means of timber transportation. For example, national transport concepts mentioning Upper-Tisza, Hernad, and also the lower sections of Vah and Hron rivers.

In respect to domestic passenger transportation between regional centres, the use of fast, modern, and comfortable IC train services should be priority. Cargo can be delivered by fast light trains. For faster access to cities, dual carriageways or motorways should be built and air taxi services should be launched.

11.2.3 Recommendations for international (cross border) transport in the region

The international traffic in the Carpathian region is carried out not in high mountain areas, but rather in mountain slope zones and basins.

Unfortunately, the number of railway border crossings and the number of road border stations across the Carpathians is still very low. These borders are already borders inside the EU, (since the 21st of December 2007 even within the Schengen zone). One of the main priorities should be the improvement of the present cross-Carpathian lines and the establishing of new ones.

Considering the intensity and the structural features of international traffic between cities, the Carpathian region:

- Should be connected with a greater number of directions and with higher intensity into the system of international rail services (Eurocity, Euronight, IC and express trains).
- Air connection should be established with a wider circle of cities.

- Carefully planned complex systems of high-speed road should be planned consisting of dual carriageways and motorways oriented towards such directions that are not disturbing seriously any country's national interests.

The proposed network of highways and high-speed rails prepared by the TINA project have not been sufficiently coordinated between countries or with the TEN networks of Former EU member States. E.g. there are still other undecided alternatives of road and railway tracks between Poland and the Czech Republic or between Austria and German. Consider what is the more efficient way of transport between Poland and Slovakia? Crossing the Carpathians directly, through the Czech Republic, or using the Silesian Gate's well established infrastructure.

Uncertainty is also revealed in the new ideas concerning the track of the cross-Romanian international motorway to Western Europe. The original line was the Southern line through Timisoara-Nadlac. The next one was the Central track through Brasov-Cluj-Napoca and Oradea. Recently there emerged new ideas about a Northern line Chisinau-Iasi-Satu Mare-Oradea. It is clear that different regional, political, and economic interests are behind these variants, but too many project ideas are delaying the implementation of the one which is realistic.



► Beech forest in Bukki National Park, Hungary

12.1 Situation And Problems

The Carpathian Mountain Region represents a unique and dynamic common living space, both ecologically valuable and important in terms of human heritage. The region has enormous ecological and economic potential, and currently faces rapid environmental social and political changes. The challenge is to preserve and fulfil the region's potential and specificity while increasing its sustainability. This will require adequate responsible actions taking into account global, regional, and transboundary contexts in order to enhance both the Carpathian environment and human livelihoods.

The current development pattern in the Carpathian region is leading to the loss of traditional knowledge, livelihood, practices and values. Since the fall of communism and over the last 18 years of transition, changes in urban and natural environment and its forms and structures were significant. For example, rural de-population menaces the traditional character of the Carpathian countryside is therefore extremely important that culturally sustainable and coherent policies be formulated and implemented in the Carpathians in order to slow down or reverse this trend. Policy measures must be implemented and incentives developed, so that people remain in their villages as guardians of the landscape, traditional knowledge and way of life. Education, communication, and public participation in environmental practices form the bases for creating a sustainable Carpathian region.

The Carpathian Mountains are the largest in area, longest, most twisted and fragmented mountain range in Europe, although it has a lower average altitude than the Alps. Stretching over 8 countries, and dominated by middle and low mountains, they are severely affected by human activity. Land use changes, deforestation, extreme climatic events, and environmental change increase the vulnerability of mountains to various natural and anthro-

pogenic phenomena. They exhibit great fragility, with some of the major threats including deforestation, over-exploitation of niche resources (wood and certain mineral ores), land use changes (land abandonment) and related land degradation and elimination of traditional livelihoods.

The Carpathian Mountains include many unique landscapes, and natural and cultural sites which express geographical diversity and a distinctive pattern of regional evolution in human ecology. The Carpathians were put on the WWF "Global 2000" list among the major eco-regions of the world for the conservation of habitats and biodiversity.

From a bio-geographical point of view the Carpathian Mountains represent a link between the taiga forests of Northern Europe and the Mediterranean ecosystems to the south; they are home to the largest pristine forests on the continent. The rich variety of endemic plants and animals that are characteristic of the Carpathian ecosystems is an integral part of European biodiversity. The Carpathians are considered to be a region rich in biodiversity with an estimated population of at least 60,000 wild species. Also, the largest population of large carnivores in Europe are found in the Carpathians.

Efforts to maintain the diverse landscape and native flora and fauna resulted in a well developed network of protected areas (national and natural parks) that currently cover up to 13% of the Carpathian

Mountains. The Implementation of the Nature 2000 Network in the five EU member states should ultimately lead to the protection of at least 15 % of the total Carpathian land area.

Carpathian Project Experience

The Carpathian Project has analyzed the natural assets within the KEP (Carpathian Environmental Outlook, published separately) and other Actions' reports. The Carpathians represent an ecologically valuable living space. They form a link between the taiga of Northern Europe and the Mediterranean ecosystems and comprise a wide variety of species and landscapes.

Many interesting landforms and geological monuments are situated in the Carpathians. The Iron Gate is one of the largest gorges in Europe, caverns and landforms shaped by erosion of volcanic rocks and massive knots over 2000 meters that alternate with middle and low mountains. Limestone areas hold many caves, and the karst plateau Padix in the Apuseni Mountains is one of the most complex in Europe. The Northwestern Carpathians have an impressive, glacier-shaped alpine relief with large glacial cirques and valleys. The western side of the Eastern Carpathians presents the longest volcanic chain in Europe; with volcanoes no longer active but leaving the heritage of fumaroles and over 2000 mineral springs used in spas. The Southern Carpathians, Transylvania, are shaped by alpine and sub-alpine pasture and an environment for transhuman sheepherding.

The Carpathians is a high mountain zone with numerous lakes situated in cirques, glacial valleys, limestone depressions, and landslide prone locations. They are also home to a volcanic crater and an extended river network draining in the Black Sea.

The Carpathians exhibit the largest pristine forests in Western and Central Europe, and hosts the most extensive primeval forests in the Southern and Eastern Carpathians and Tatra Mountains. Deforestation and land use conversion in the Western and Southern Carpathians has been present since medieval times. It is estimated that young forests and deforested areas now constitute over 50 percent of total forest area, while mature forests only account for 11%. But forests are still vital with many virgin forests that are rich in species and of high social, environmental, and economic value. Changes are now taking place that will influence further processes in the heritage forests, especially concerning its use, privatization, and conservation.

A broad range of biodiversity is a significant feature of the Carpathian area. Many landscapes, habitats, flora and fauna show unique characteristics occurring mainly in the Carpathians. Endemic, alpine, relict habitats and species are the result of long term evolution, irrigation, and adaptation processes that took place already before any human influence in the area. Other interesting groups comprise of species living on the edge of their geographical range as well as migrant plants that entered the area with human settlement and agriculture.

Carpathian ecosystems also represent animal characteristics specific to the area, with endemic species and an outstanding vital community of large European carnivores that face extinction in

other mountain areas in Europe (brown bear, lynx, and wolf). Specific bird species like the Imperial Eagle or Ural Owl are protected.

Human activities, especially during the Communist regimes, have resulted in adverse and important affects on biodiversity in the Carpathians. Climate change leads habitat loss and a regression in the range of species. Mass tourism favour the introduction of new invasive species, new infrastructure development, and the change of land management forms; air, water, and mining pollution also have adverse affects on the biodiversity of the Carpathians.

Small scale land use patches are a special characteristic of the Carpathians landscape. Besides patches of large forests, other land use types such as urban settlement, grassland, agriculture, and pastures are small. This unique land space pattern was influenced highly by traditional agriculture. Aspects of local agriculture traditions are still well preserved in the seasonal pasturing of mountain meadows, while sheep and cattle breeding and agricultural production decreased significantly since the 1990s. Since then much farmland was abandoned and large areas were left unploughed. This was due to the political and structural changes that lead to reduced domestic consumption linked to economic decline and the discontinuation of subsidizing fertilizers. Reforms in the agricultural sector changes land ownership and significantly shift traditional land use, which are likely to result in changes of cultural landscape diversity.

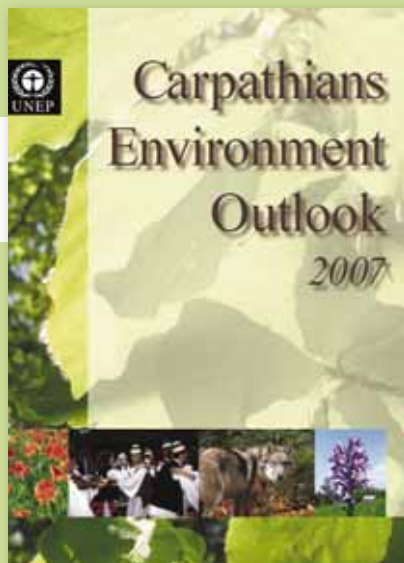
In an environmental context the most important consequence of inappropriate agriculture and forest management in mountain areas is soil erosion. Beside natural processes human activities with pastures, forest management, tourism and recreation are significant for this development.

The Carpathians were put on the WWF "Global 2000" list of major eco-regions in need of biodiversity and habitat conservation. In 1999 the Carpathian Ecoregion Initiative (CERI) started. CERI focuses on the integrated conservation of their natural and cultural heritage and sustainable cross-border development. Significant parks and biosphere reserves were founded and are maintained. Together they form the "Carpathian Network of Protected Areas".

Carpathian Project Special

Much more information and detailed guidelines on the Carpathian natural heritage can be found in the separate publication of the Carpathian Project - Carpathian Environment Outlook (KEO), also available on the Internet as well.

VASICA's chapter 12.2.3 and 12.22 are directly based on KEO.



12.2 Policy Recommendations For Environmental Protection

12.2.1 The preservation of primeval virgin forests

Figure 30: Forest cover in the Carpathians (2003)



Source: Corine Land Cover/PELCOM

Much of the Carpathian range is covered by vast areas of forests. Average forest cover is nearly 60% but varies considerably. The largest forest complexes are in the Eastern Carpathians. In the Western and Southern Carpathians, important areas were deforested and converted to other land use. Deforestation and fragmentation increases from the region's main ridge to the peripheries.

The Carpathian area is famous for its relatively large share of natural and semi-natural forests occurring in areas of high elevations and rugged land with limited access. It is expected that these ecosystems provide shelter to a rich vari-

ety of rare species, now extinct elsewhere due to intense forms of forest management. A char-

acteristic feature of natural Carpathian forests is the large volume of dead wood. Natural forest floors maintain over 100 cubic meters of dead wood per hectare, while in managed forests dead wood amounts to nearly 10 cubic meters per hectare. The lack of dead wood implies a substantial lack of biodiversity (e.g. plants fungi and invertebrates that depend on this particular substrate for their survival). Dead wood has many environmental values, the most important one — carbon sequestration, particularly at higher altitudes. Recently the EU proposed a new agro-environmental scheme of financial support during the period from 2007 to 2013

that would provide opportunities for increasing the area of old wood refuges.

Nearly all the remnants of natural and semi-natural forests in the Western Carpathians are now protected by national parks in the Czech Republic, Poland, Hungary, and Slovakia. Much larger areas of primeval and natural forests exist in Romania and Ukraine. Much larger areas of primeval and natural forests exist in Romania and in Ukraine. Not all of these areas are protected by law, but now even in these areas selective cutting systems are employed and efforts are made to limit forest exploitation. Forest regeneration is mostly natural, while the plant-

ing of tree seedlings is widely used as a way to convert secondary Norway spruce stands (plantations) into more diverse forest stands.

Annual timber cutting in the Carpathians is lower than the gross annual increase in the volume of wood. Nevertheless, deforestation processes are occurring in the region and can be observed in Romania and Ukraine. Beyond excessive timber cutting

these processes are the results of increasing soil pollution and acidification, or of the establishment of new ski trails. The opening of forest margins leads to an altered microclimate and makes the forests susceptible to bark-beetle outbreaks. Illegal clear-cutting, poaching and the over exploitation of other forest products such as mushrooms, berries, rare plants, and animals are alarming phenomena that are on an upswing.

Carpathian Project Experience

The Carpathian Project report “Current state of Forest Resources in the Carpathian” provides an analysis of the current state of forest in the Carpathians. It describes the natural resources of forests, the state of nature protection, forest health, and analyzes forest management systems.



The overview on resources of forests shows the significance of forest cover in the Carpathians with Romania having 50 % of all Carpathian forests, with large forest areas in Slovakia and Poland and with Serbia having the smallest share of forests. Forest cover shows an increasing trend with land abandonment processes and specific reforestation measures in degraded lands. Together with an increasing stock the Carpathian forests work as a carbon sink for greenhouse gas emissions of about 3.5 million people.

The Carpathians present a high percentage of forest with a fully natural species composition. The forest tree composition is indeed quite different from the natural one: In the Last centuries reforestation was mainly cultivated with coniferous trees; the structure of forests was also prone to human intervention with even-aged stands instead of a even distribution of age classes which is fundamental for sustainable timber production. Currently forest management policies are oriented to more natural silvi-cultural methods, for example a promotion of FSC-certification of forests.

Past human activities lead to a state of forests that are often very vulnerable to threats such as air pollution, wind, floods, droughts, and biotic agents. Human disturbance factors include illegal logging and increasingly tourism. Increasing market pressure resulting in construction of tourism infrastructures, waste problems and applications for big sporting events do lead to great damage. It shows that the current protected area system is not sufficient for protecting biodiversity. Response strategies in Romania comprise of better cooperation between tourism and forestry authorities and the development of eco-tourism. Additionally the need for adequate protection of primeval forests is clearly identified in the report, also in the context of restitution processes.

The structure of forest ownership in the Carpathians has changed rapidly over the last two decades. In the 1990s the majority of forests were state-owned: nearly 100 % in Ukraine, over 90 % in Romania, more than 80 % in Hungary and Poland. The subsequent re-privatisation and restitution of forests to private owners has changed this situation. Today, privately owned forests constitute 43% of all forests in Hungary, 41% in Slovakia, 40% in the Czech Republic, 20% in Poland, 8% in Romania and there are no private forests in Ukraine. Private ownership often results in a disintegration of forest management and fragmentation of stands. Forest privatization also tends to place more value on economic benefits rather than on ecological and social values.

Timber production remains a major source of income in the Carpathian region. However in some small areas, small sawmills and other wood processing industries have a more social than economic character, such as preventing local unemployment. A growing source of income from forests is tourism and recreation. Forest tourism trails, hunting areas, and guest rooms in mountain villages are all successful economic activities competing with wood processing in the Carpathians.

12.2.2 Waste and hazardous materials disposal

Waste disposal should be one of the most important measures in the Carpathian region. Between 1990 and 1997 waste production decreased substantially, nevertheless, this decrease was mostly due to the dramatic decline in industrial and agricultural production. Since 1998 the volume of waste is increasing dynamically again, especially the waste produced by households. Waste dumping is on the rise as old dumps are full and a lack of acceptance of new sites being placed in local communities. Furthermore,

in mountainous areas there are less suitable than dumping in the plains, and underground water streams can transport dangerous materials more rapidly and further than on the plains. Key issues related to waste management in the Carpathian countries are the predominance of land filling as a waste management option and low recycling rates.

The greatest problem appears to be municipal waste where generation is worse than 17 years ago. The existence of obsolete hazardous chemicals remains a major issue. One emerging problem concerns new hazardous chemicals, and the recent "hazardous waste market". A special category of problems is presented by brown-fields and the numerous sites which had been ruined by a variety of waste related problems.

Moreover, major new construction projects (e.g. large dams, highways, factories, harmful mining technologies, mountain winter sport resorts) have led to severe negative impacts on nature and landscapes, as well as producing additional wastes.

The import and mass-utilisation of non-recyclable materials have increased problems associated with waste management, especially at local level, including a significant rise in the total amount of municipal waste. Finally, legislative, conceptual, organisational and technical ignorance of the scope of problems such as communal waste has caused the proliferation of thousands of small local waste sites, both informal and illegal.

Municipal Waste

During the communist period municipal waste management received little attention and funding. In the majority of Carpathian countries neither relevant legislation nor institutions did exist. There were tens of thou-

sands of illegal deposits located in forests and along country roads. After 1990, the municipal waste situation worsened partly because of the collapse of the existing system of paper and glass collection, but also because of the increasing use of the non-reusable packages and the lack of waste recycling. With more processed food products and with the spread of hypermarkets and other large chain stores, increased human consumption has resulted in greater waste production.

Hazardous Waste

Hazardous wastes and their management are a substantial programme in the majority of the Carpathian countries. The share of processing industries is only 27-29%. This may suggest that a very large number of new small industrial firms are producing a fairly large part of industrial waste, but they do not report any waste in order to avoid fees and fines.

In Hungary, a programme to build a network of regional hazardous waste landfills and incinerator plants was elaborated in the mid-1980s, but has not been fully completed due to limited financial resources.

An important emerging problem is the illegal or "semi-legal" import of hazardous waste and toxic chemicals from one Carpathian county to the other. Hazardous and non-hazardous waste was transported from Germany to Hungary, simultaneously hazardous materials were transported from Hungary to Ukraine, to Lviv and Zakarpathia regions.

The annual volume of solid waste generated in the Carpathian countries and regions will continue to grow during the next decade due to the increasing affluence of residents, changing life styles, and consumption patterns. Waste management practices need to improve as well. It is probable that a higher



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share of municipal waste will be recycled, and that the environmental standards both for landfill disposals and incinerators will improve.

The majority of landfills in the Carpathian EU member states do not comply with the standards, elaborated in the EU Landfill Directive. The non-complying landfills will have to be either closed down and the sites rehabilitated or updated to comply with EU standards. Considerable investment is thus needed in this area.

Waste legislation at the EU level is evolving, particularly with the recent revision of the Waste Framework Directive in June 2007. It addresses the challenge of establishing a system of efficient and environment-friendly incineration of waste characterized energy recovery and cross-border trade of waste between EU member states. The Directive also introduces a five-step hierarchical "order of priority" for dealing with wastes as follows:

- Prevention of wastes
- Re-use of products
- Recycling/composting
- Recovering of energy by incineration and
- Landfill disposal.

This hierarchy is to be applied "flexibly" by member states whose first priorities in the Carpathian region must still be considered as the needs to reduce landfill disposals and to increase the recycled share of waste.

Carpathian Project Experience

The Carpathian Project's "Report on water resources and natural disasters (climate change) and flood risk mapping" provides a comprehensive insight on the status of waters in the Carpathians, the situation of water resources and basic data on factors important to water situation.

Pressures and impact on rivers and their basins are explained, taking into consideration the issues of climate change, natural hazards and the fact that most problems can only be worked on trans-national level. The report also provides a great number of figures and tables giving overviews on the situation in the whole Carpathian area and its nations.

Concluding, the report points out three main areas of importance for water management: water use, drought, flood problems, and legal transposition of EU-policy.

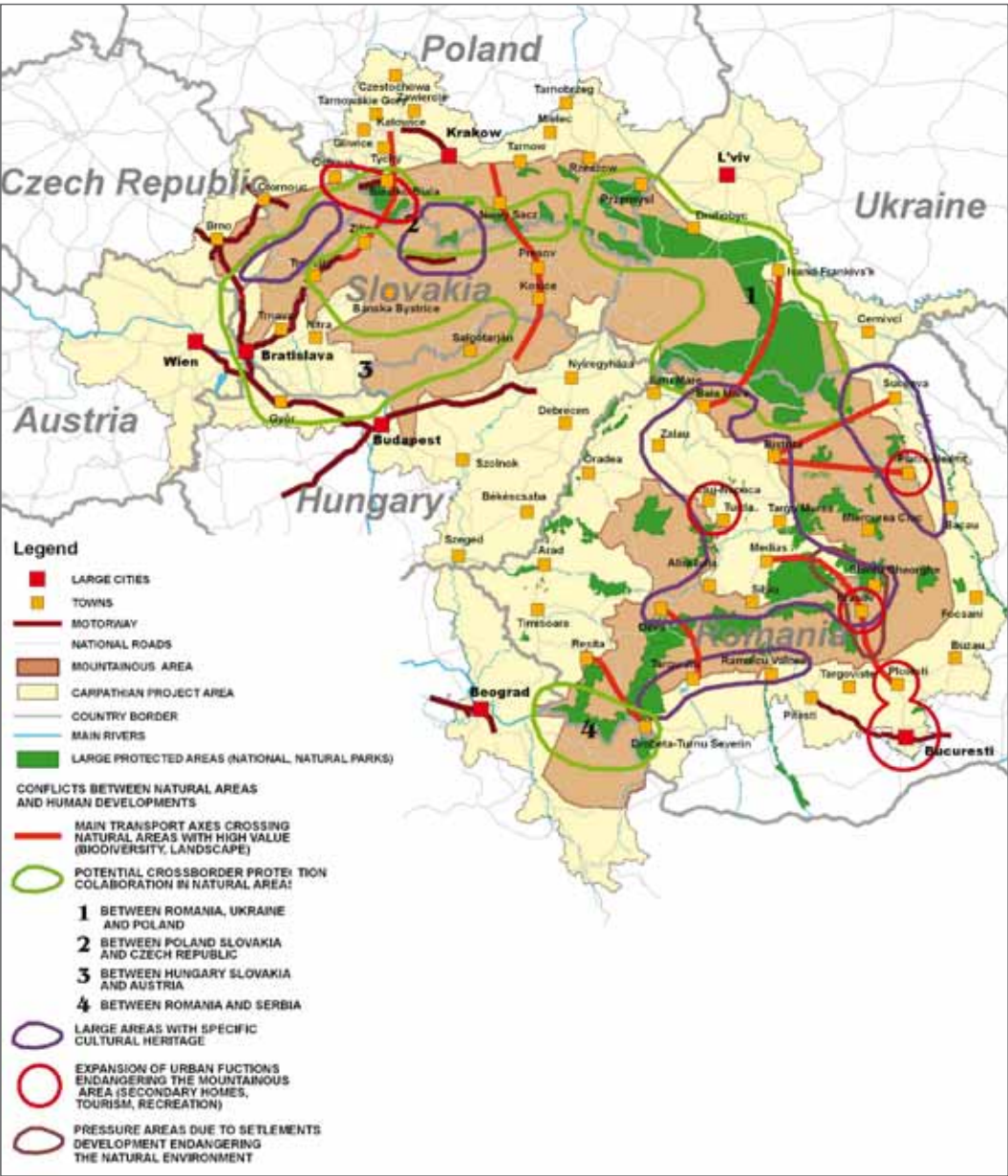
The first point, water use, summarizes the man-made impacts affecting water quality and quantity as well as the reduction of biodiversity in certain parts of the region.

The reasons for these problems lie in pollution (nutrients, heavy metals, other organic pollution) caused by inadequately treated waste water, diffuse pollution by agriculture, industrial accidents, and floods. One reason that affects water quantity is the exploitation of surface and groundwater resources and man-made changes in river-flow patterns. Degradation and loss of wetlands contributed significantly to a degradation of water ecosystems.

Droughts and flood hazards are identified as a second area relevant to water management. Both events are expected to become more extreme according to predictions on the impacts of climate change. Besides human-induced global warming and thus changing rainfall regimes hazards are worsened due to land use changes like deforestation and land movement. Impacts of these hazards have gotten stronger; floods take lives and cause enormous economic damage. The economical impact of droughts has increased significantly. Structural and non-structural means of catastrophe damage mitigation are increasingly implemented; propagation of participation by various entities in flood prevention and preparation.

The third point of importance is the legal transposition of the EU policy. The European Water Framework Directive is pointed out as having the objective to reach good status by 2015 for all waters. This objective shall be met with integrated management at a river basin scale and through the institution of basin authorities and management plans. Serbia and Ukraine as non-EU countries have their own legal provisions for water management not focused on a river basin approach. Ukraine intensively cooperates in international projects in this field.

Figure 31: Conflicts and synergies between natural protection and human activities in the Carpathian Region - synthesis of the national spatial development documents.



Source: Maciej Bors, Urbanproiect, Carpathian Project Strategic Workshop for Spatial Planning



► View on Bucura Lake, Retezat Mountains, Romania

13 TOURISM IN THE CARPATHIAN AREA

13.1 Situation And Problems

13.1.1 Transnational cooperation

Transnational cooperation can be a useful method to reduce conflicts between protection of natural resources and human activities. In the Carpathians the most environmentally valuable areas cross state borders. Therefore the cooperation in this field seems to be obvious. Within the Carpathian Project there were several areas of special interests or significance defined, which are shown on the map below.

Table 13: Number of hotel accommodations in the Carpathian countries 1996-2006

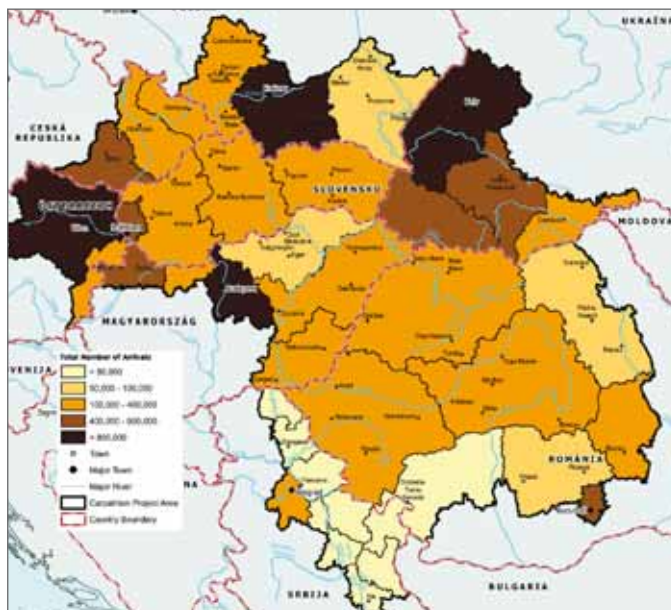
Country	Number of hotels			Number of hotel beds		
	1996	2006	Increase in %	1996	2006	Increase in %
Czech Republic	2737	4314	157.62	167058	236104	141.33
Hungary	1687	1921	113.87	127650	154060	120.69
Poland	1247	2301	184.52	102272	178056	174.10
Romania	2362	4125	174.64	204374	226383	110.77
Slovakia	476	922	193.70	41700	57985	139.05
Total	8509	13583	159.63	643054	852588	132.58

Table 14: Nights spent in the hotels 1996-2006

Country	Nights spent in hotels (in 1000s)								
	by residents			by non-residents			together		
	1996	2006	Increase in %	1996	2006	Increase in %	1996	2006	Increase in %
Czech Republic	9908	8854	89.36	10858	17035	156.89	20766	25889	124.67
Hungary	4135	6622	160.15	7449	9127	122.53	11584	15749	135.95
Poland	4633	13910	300.24	3391	7911	233.29	8024	21821	271.95
Romania	16254	14929	91.85	2210	3169	143.39	18464	18098	98.02
Slovakia	3103	3142	101.26	3911	3650	93.33	7014	6792	96.83
Total	38033	47454	124.77	27819	40892	146.99	65852	88346	134.16

Tourism is one of the most dynamically developing branches of economy in the Carpathian countries. Before the system change, it presupposed a bureaucratic procedure to get a passport and via to travel abroad. Because of the inconvertibility of Central European currencies it was a very expensive decision to travel and few people could afford it. After the system change, most of these obstacles ceased to exist. Visa obligations had been abolished in most relations and Central European currencies became convertible. It became every citizen's right to have a passport. Both international and domestic tourism increased in a parallel manner. This led to an increase of investments in tourism.

Figure 32: Total number of arrivals - 2005



Source: EURAC

The main indicators of tourism in Carpathian countries are the following:

The number of hotels has increased by nearly 60 percent in ten years. The number of beds increased slower because new hotels were small on average. The number of guests (non-resident) increased meeting capacity utilization. The foreign guests increased from 42 to 46 percent.

Of the four different types of tourism, it is important to concentrate on those which are most beneficial to the mountainous areas of the Carpathian region.

Figure 33: Number of arrivals per 1000 inhabitants - 2005



Source: EURAC

Figure 34: Total number of bed places - 2005



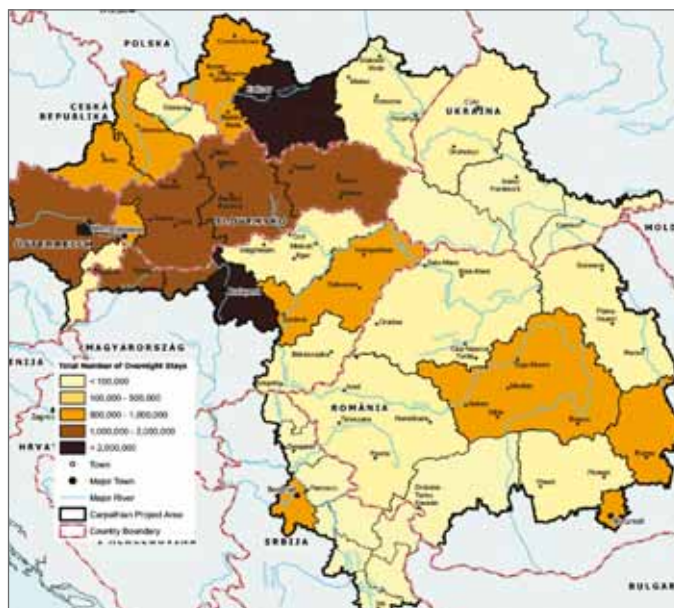
Source: EURAC

13.1.2 Winter sports tourism

The best winter sport facilities in the Carpathian region are in Slovakia, Poland and Romania. The best Czech skiing resorts are outside of the Carpathian region, the Ukrainian resorts are not yet developed, and Hungary's ski trails are in a rather poor condition.

Slovakia is in a special position from this aspect. Here, winter sport tourism is the most important kind of tourism for the whole country, while other countries this significance is not so outstanding. More than 30 % of all tourists in Slovakia come here in the winter season.

Figure 35: Total number of overnight stays - 2005



Source: EURAC

In 2004 and 2005 a windstorm spoiled the winter season, in 2006-2007 there was hardly any snow in this part of Europe, and in 2007-2008 experts expected a good long season for winter sport tourism. Domestic financial groups have invested a lot into hotels and residence parks, but they wanted to also invest in ski trails and lifts. A new controversy emerged between financial interests and environmentalists. Investors want to establish new ski lifts in the places of perished forests. The representatives of Tatra National Park (TANAP) are not against sport and tourism but would like to see it restricted to pedestrians and bicycles; skiing in winter. They insist that at least half of the National Park

must remain intact. Today, there is tree felling economic activity in all lower areas of the National Park; only clear-felling is prohibited (that is the consequence of the large scale, but ambiguously defined NP creation, not only in Slovakia, but in all Carpathian countries). Conflicts concerning the establishment of the new ski-lifts emerged in other Carpathian countries (Poland, Ukraine) as well.

Today there is a spatial concentration of winter sport. Skiers are choosing the best equipped, most fashionable skiing resorts. E.g. Hungarian skiers first abandoned the domestic skiing areas and then partly also the Slovakian pistes (which have earlier been the main destination for skiing); now they are choosing Austrian resorts.

For the first time domestic tourism in Slovakia surpassed international numbers. 42 percent of tourists were Slovaks, 32 percent Czechs, and Hungarians and Polish each 8 percent. Ukraine and Russia would represent a new tourism potential, but visa problems are a serious obstacle.

In the future, however, Austrian and Slovak ski resorts have to prepare to face a larger challenge with a much longer duration. It is the challenge of climate change. It is to be expected that the occurrence of winters with insufficient or no snow will be more and more frequent. Mountain resorts have to find other attractions for tourism such as new sports and entertainment. In some countries like Austria, it is not only local but also a national problem.

Figure 36: Change in overnight stays 2000 - 2005



Source: EURAC

13.1.3 Rural (village) tourism

Rural tourism is the most vital type of tourism in the Carpathian tourism. Yet it cannot be compared to Austrian or German standards, but its significance is enormous especially if one considers that this type of tourism did not exist 20 years ago. Back then it was prohibited to put up a foreigner in your home for even one night, and those that violated this rule could expect severe punishment. Today there are villages where every second else has a sign claiming that they are a member of the rural tourism network.

Rural tourism has many advantages and positive impacts:

- It yields additional activity and income for the rural population and in this way it is an instrument against the depopulation of rural areas

- It enables closer contact between host and guest, and if there is no language barrier it helps to get more genuine information about life and customs of the place of visitation than in an international standard hotel. But tourism forces also the hosts to get to know the strangers coming into their region.

But, undoubtedly rural tourism also has some dangers as seen in the following:

- It contributes to the differentiation of villages in a certain area. Not all villages have equal access to tourism possibilities. Villages having some historic, natural, or literary sights; or closer to tourist routes or highways have better chance to host rural tourists than others. With time this can create substantial welfare differences. It can even sharpen national conflicts if German tourists are accommodated in German villages and Hungarians in Hungarian villages, while Romanian villages are excluded from this money making opportunity.
- Rural tourism can alter the image of villages. Hosts, in order to meet growing tourism demand, enlarge their houses or build different buildings for guests which do not fit the old village standard. It can be avoided if the building stock is under protection, but only a few villages can be protected.
- Rural tourism can also alter the people and their customs in the village. It is possible that they can lose their traditions by performing a false image of rural life to tourists.

In spite of these dangers, rural tourism is the most promising kind of tourism in the Carpathian area and must be enhanced by several degrees, but similarly to all other types of tourism it can have harmful impacts. Therefore it should be extended and distributed in the most equitable way, to the extend possible.

13.1.4 “Nostalgia” tourism

Nostalgia tourism is very specific and unique to the Central European and especially Carpathian area. The name “nostalgia” does not fully express the essence of this kind of tourism, but another name could not be found. This should be mentioned because it covers a fairly large share of tourism in the Carpathian area.

During the wars of the 20th century, state borders in Central Europe changed substantially and several millions of people were resettled from their homes to other areas far away from their homeland. Most of these people have already died, but their children and grandchildren are alive and the memories of old homelands and changed borders have been passed over to them by their parents, and they want to see these places. But communist governments wanted to repress this memory. Only after the system change these desires resurfaced but not always in the most fortunate way. Millions of Germans, Hungarians, Polish and Hebrews wish to see the places, cities, and villages which were part of their family's history or their national history. Poles represent the largest group of tourists in some Ukrainian towns and cities; Germans in Poland, the Czech Republic, Slovakia and Romania; Hungarians in Slovakia, Ukraine and Romania. In recent times, American and Israeli Jewish tourists have visited some towns and regions in growing numbers searching for the roots of their families.

The nostalgia tourists were not always welcomed by the new residents, and the visitors have not always behaved adequately. Nostalgia tourism, however is profitable for both parties and despite difficulties, it contributes to the mutual acquaintance and overcoming bad prejudices.

European borders do not represent any obstacles to tourism and travel. Nostalgia tourism will gradually lose its original intention and character. Tourists, when travelling, should be aware that it is another country with a different language, values, and culture which they

have to comply. The hosts should accept that their region has a shared history with the visitors, and that the visitors have some right of nostalgia. They can even profit from this type of tourism by offering guidance and brochures on the language of their visitors.

Carpathian Project Experience

Two specific pilot actions of the Carpathian Project were dedicated to the tourism infrastructure development in Făgăraș Mountains in Romania. Tourism infrastructure, as for example mountain huts, is an important base for tourism development and for generating income by longer duration of stays of tourists in the region and by offering potential for new jobs. Sustainable tourism focuses thereby on using or revitalizing already existing infrastructure.

The Făgăraș Mountains in Romania have a long tradition of hiking reaching back to the 19th century with hiking paths that are well maintained. However, the condition of mountain huts is quite bad as well as the hut infrastructure is not sufficient for allowing several days' hikes. Another problem is in the lack of infrastructure for waste disposal; common littering, and the lack of information of public transport. There are different organizations and initiatives dealing with mountain tourism, eco-tourism, environmental protection, and mountain guiding; but there is no networking between them and there are different approaches to what eco-tourism is.

Against this background the activity in the project focused on the planning and the implementation of an improved mountain hut and path structure and building a network of existing initiatives with similar aims in the selected regions of the Făgăraș Mountains.

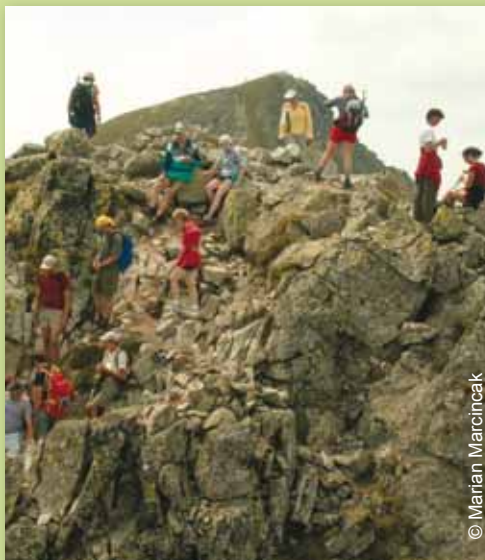
In close cooperation with local players, a survey of local and regional activities in mountain tourism was carried out. The results showed weak points and development potentials. Based on the findings a transdisciplinary concept for sustainable tourism development was elaborated taking into consideration social, ecological, and economic dimensions.

The first workshop was held with the participation of representatives from all initiatives and organizations. A catalogue of measures was elaborated and the organizations decided to establish a joint umbrella organization to lobby for their demands. In further cooperation with the local players, more steps were carried out with the transfer of experience from the German Alpine club, the Club Arc-Alpin and the International Federation of Mountain Guides Association.

On the basis of a subsequent survey that focused on all accommodation units in the pilot region relevant to mountain tourism a brochure "Accommodation in the Făgăraș Mountains" was published. It also includes information for hikers such as bus timetables, maps of trails, and contact information for mountain huts. In the course of the project the brochure was

further enhanced and now is available in a second edition in all huts and mountain inns in the region, urban information centres as well as in bookshops.

A second workshop was used for the presentation and discussion of activities carried out by different organizations. These activities comprised the planning for an umbrella organization, rebuilding shelters, activities for qualification courses, the development of unitary standards for the mountain guide, a bilingual website with information for hikers, and garbage collection activities. A knowledge gap was closed by having a presentation of national funding programmes in the field of tourism. Besides these activities, issues addressing an exhibition on hiking culture and qualification needs of tourism employees were discussed and planned with the networks of players and NGOs.



The exhibition was implemented in the course of the occasion that Sibiu was the 2007 “Cultural capital of the year”. It focused on the mountaineering and hiking tradition in Sibiu, also considering the European influences and the multi-ethnic development of it. Littering in the area of Lac Avrig was tackled by raising tourism awareness by distributing leaflets to hiking tourists and hut managers, and an action for litter removal was carried out.

The strong inclusion of local players and the possibility to allow networking between them was one of the main success factors of the project. The project was strongly supported by a few extremely active local individuals. Additionally it should be noted that the cooperation among them lead to an intensification of activities by some NGOs.

The private ownership of huts remains a problem as competition is still considered to be more important than to join forces for the needed repairs and common negotiations with state authorities.

In the course of the project, needs and ideas were identified that will be dealt with in these follow-up projects:

- The Via Carpatica – a long distance Carpathian hiking trail which shall be implemented in the transnational strand of the Territorial Cooperation programmes.
- A training of local partners in sustainable management of mountain huts and inns – sponsoring is considered by a German and a Central European Initiative

13.2 Policy Recommendations For Tourism In The Carpathian Region

13.2.1 To create conditions for sustainable tourism in the Carpathian region

The Carpathian Mountains, with their diverse natural treasures and long preserved traditions, present ideal sites for tourism development. In some regions there has no one has taken advantage of these values, while in quite a number of other destinations in the Carpathians, mass tourism development has already begun.

However if tourism development is to be sustainable in the future, the development of the Carpathian Mountains should be based on the same overall goals. Long-term economic prosperity of local communities, the preservation of tourism's basis, and ensuring visitor satisfaction are goals that perfectly support each other and are applicable to all kinds of potential tourist destinations.

Areas where uncontrolled or mass tourism already plays an important role should try to become more conversant with the principles of sustainability. In other rural regions with high unemployment, poor local economy, and migration to urban centres; starting sustainable tourism development can offer a viable option with benefits for the entire community. Moreover, sustainable tourism development can also serve as an alternative economic solution where less environmentally and socially friendly economic activities threaten the local nature and culture.

Benefits of sustainable tourism for areas with many visitors

A beautiful environment and rich cultural heritage may draw the attention of a lot of visitors to an area, even if the tourism industry is fragmentary or nonexistent. In these cases the negative impacts of tourism may be particularly

critical as unplanned development of singular tourist businesses leads to unmanageable threats to nature. The consequence thereof can be the irretrievable ruin of the region's treasures and thus of its tourism-related potential. In order to prevent such threats and to allow for a controlled development that benefits the whole local community and its environment in the long-term, comprehensive sustainable tourism development represents a suitable alternative.

Sustainable tourism has potential in areas where tourism is not yet developed

Development approaches very often focus on the economic sector, not taking into account the impacts of their activities on sensitive local cultures and environments in the Carpathian Mountains. On the other hand, environmentalists who are active in the Carpathians concentrate solely on the conservation of nature without paying attention to the necessity of the local population to make a living. The comprehensive approach of sustainable tourism based on the CBD Guidelines takes into account both important factors: the need to use natural resources for well being of the local population and the obligation to maintain the natural environment as intrinsic value and as a long-term source for the economic viability of tourism development.

Sustainable tourism as a better alternative

Natural resources represent one of the most important factors for economic development in the Carpathian countries. Very often, these resources are used in a rather short-term manner, namely by exploitation through logging and mining. Two facts have to be mentioned pointing out the economic problems which follow these from these forms of use. First, the resources can be capitalized on only once, and second, that the benefits derived are not equally shared among the local population.

Sustainable tourism development strives to avoid these shortcomings and thus represents a good alternative. It aims at conserving natural resources for the sake of enduring economic viability (continual use of resources) while at the same time using them in order to achieve benefits for the local people.

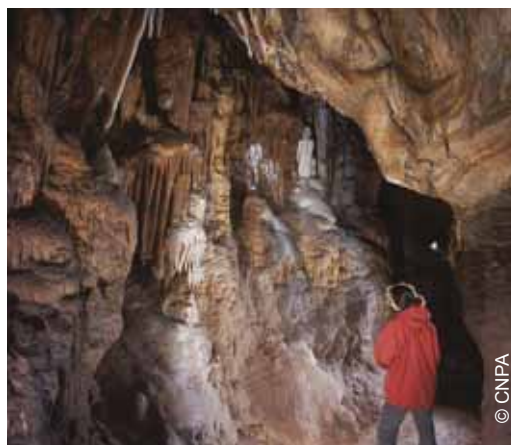
13.2.2 The Via Carpatica

All Carpathian countries have a network of tourist tracks running through the most picturesque landscapes and cultural and natural heritage sites of the respective countries. One of the Carpathian Project's actions is the development of "Via Carpatica", a trail network that runs through all of the Carpathian countries and combines projects and sites with sustainable tourism development. This trail network will not only underline the importance of a joint strategic approach across the Carpathians, but will also support the individual sites in a practical manner through the exchange of best practices and common publicity.

An increasing flow of visitors will benefit from this network. In this respect an increase of accommodation capacities must be taken into account. Large accommodation facilities (hotels, motels) and car access must be avoided at high altitudes; instead huts and camps have to be built in new key locations.

The mountain huts in the Romanian Carpathians became insufficient in the recent decades due to the inability to meet the needs of travellers as regards to the number of places and comfort.

An important number of mountain huts must be created, with adequate capacities and services; this type of accommodation being easier to build, the most environmental friendly and educative for the public.



Mountain culture must be promoted by the specialized associations all over this network in order to inform the tourists for better understanding of nature and the limitations imposed by this special environment..

13.2.3 Reconstruction or development of Forest Railways for tourism purposes

For many tourist areas, transport infrastructure in one form or another already exists. It may to an extent be suitable for use or for development as a part of a tourist strategy. An impact assessment of its use for what may be new purposes should be carried out. Thus, many rural areas in the mountain region have narrow gauge forestry or other industry railways whose industrial use is either reducing, or has disappeared. The infrastructure, or works associated with the line of route, may still exist and can be economically reused. This can often be an economical option when compared with opening up sensitive rural areas by the development of other modal access, particularly uncontrolled modes such as roads.

In this respect, the term Tourist Railways includes railways of any track gauge and history that can provide a positive benefit to an area's development by the sustainable provi-

Carpathian Project Experience

In order to strengthen professional skills in tourism within the Carpathian Project several pilot actions were undertaken. Some of them have focused on the capacity enhancement of selected stakeholders in the Ukrainian part of the Carpathians. The elaborated training packages were based on experiences in developing professional skills in sustainable tourism in the Rhodopi Mountains of Greece and then were customized to the training needs in Ukraine.

The training package developed comprises of 3 modules; first module dealing with strategic tourism development focusing on rural and eco-tourism. The second module looks at sustainable tourism product development as well as marketing, and the third addresses quality improvement in the business of tourism, especially by means of quality management and labelling systems. Each of these modules contains a document on the respective topic including appropriate case studies. For each subchapter within a module, presentations for training sessions were prepared. Furthermore, guidelines were elaborated on how to best implement a specific lesson with proposed teaching methods; supported by activity sheets with working tasks for the trainees to reflect and apply the input given in the lecture.

A “Training of Trainers” seminar was held in Greece for Ukrainians with this training material for different levels of management (managers of tourist organizations, heads of organizations on the district levels, university instructors, and rural green tourism operators). In pilot regions (Rakhiv district of Zakarpattia oblast and Kosiv district of Ivano-Frankivsk oblast) trainers then taught the persons involved in tourism, mostly agro-tourist farm owners. Main aspects of these workshops were rural tourism development and marketing, the rational use of natural resources, rural communities’ social development as well as fund-raising and applying for grants. Additionally a delegation of persons involved in green tourism activity from Ukrainian Carpathian region made a study tour on sustainable green tourism development to Rhodopi Mountains in Greece.

Further training related to studying the current status of tourism development, including rural and ecological tourism topics, was implemented for key stakeholders in the regions (e.g. representatives of local self-governance bodies etc.).

The Ukrainian web site on “Rural Green Tourism” was reconstructed and information materials on the introduction of a system of voluntary certification of rural farms disseminated. Marketing research was conducted and a strategy for the sustainable development of rural tourism in the region was elaborated and quantitative indicators of rural tourism development identified.

The “Handbook for local authorities and development actors” is an additional result based on the pilot activities carried out in the Ukrainian Carpathians, Romania (Fagaras Mountains) and Poland (Podkarpackie region) and also on results of other activities and baseline studies performed by other partners of the Carpathian Project. It defines a short-medium term development plan with a transnational perspective to be used as tool by public and private stakeholders to promote sustainable tourism in the Carpathians. It is tailored to the needs of the pilot areas that represent the common platform to set up and implement ways to sustainable tourism that can be easily transferred to other Carpathian regions. The plan outlines the development strategy of the “Carpathian tourist system” breaking it down into four strategic axes: Tourism development model and branding policy, infrastructure, SME’s creation and consolidation and training. The handbook also identifies a trans-regional governance body as a strategic management tool and proposes indicators for a monitoring of the implementation process. The handbook is available as a separate publication of the Carpathian Project.

sion of environmentally friendly access to the area or to the specific attraction concerned. In most cases, the railway will have been part of the area for many years. The recycling of its assets to serve for developing a tourism industry provides an alternative use to scarce resources. This will serve many cases where the only potential source of regeneration for an area and fostering of support for a sustainable economy for the local population. It can be observed in many countries that there is a positive "steam effect" that delivers extra visitor numbers where historic locomotives and rolling stock are used on tourist trains.

For many years, the planned economies of the Carpathian countries have tended to separate public transport from local interest as being one of the services provided by national government. This has prevented changes in local economies being reflected in changes of local railways resulting in alternative solutions such as road transportation being founded by the population. The resulting downward spiral in the economics of local railway operation has led to the inevitable closure decision at the national level.

Before it is too late, the need is to follow the example of other countries that faced the same situation and to pass the ownership of local rail-

ways to local authorities and community. That means local decisions can be made which reflect the needs of the local community. Whether it is to run trains at different times for market days or special events, or to get the local community and children to help tidy up their local station, or even to sell off redundant buildings to local businesses for conversion for other uses, the best decisions for local and tourist railways are always going to be the local decisions.

This can be seen in practical examples across the tourist railways already existing in every member-state of the Carpathian Convention carrying varying visitor numbers. Alongside those which operate today there are many potential projects that could contribute to the regeneration of their local communities as part of a robust strategy for sustainable tourism paralleling conservation. To achieve that, there is a need for the recognition of financial support and security to go hand in hand with local community support sites.

Governments are asked to sign up to a recognition that tourist railways, particularly those making use of existing heritage equipment and structures that have been part of their local landscape for many years, can play a vital part in a sustainable tourism strategy.



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► Water as live giving element in the Carpathian Mountains

14 EUROPEAN TERRITORIAL COOPERATION WITHIN THE CARPATHIAN AREA

14.1. Situation And Problems

From the notebook...

The Carpathian region is a specific area of Europe, even from the perspective of European/international cooperation. There are few places in the world where, in a relatively small area, the borders of so many countries meet. The most outstanding example can be found in the North-Eastern Carpathians. By drawing a circle with a 60 km radius around the town of Mukacheve, Ukraine five countries will be covered by the circle (Poland, Slovakia, Ukraine, Hungary, and Romania). There are only few places in the world with a similar situation: Darjiling, India (India, Bangladesh, Nepal, Bhutan, and China) and Katuna Mulilo, Namibia (Namibia, Botswana, Zimbabwe, Zambia, and Angola)..

Policies should be put in place to ensure that assets are protected against predatory destruction or sale of short-term gain, privately or by public authorities.

Policies are needed to make it possible to transfer ownership and responsibility for local railways into the care of local communities authorized for making decisions on maximizing the contribution of railways to sustainable regeneration. Such transfers should be supported by funding agreements to provide financial resources for the initial transition to local control and development of a sustainable business structure in a robust manner.

Positive encouragement is needed to make partnerships of differing organisations working on brightening the long term future of their region. This includes the encouragement of cross-boarder partnerships of groups with common interests that could make them more eligible for trans-national project funding.

Tourist Railways are a success story in many countries of the world. The Carpathian countries, entrusted with one of the few

remaining unspoiled mountain areas in Europe, is able to take steps to ensure that their success can be spread through this region in partnership with ecological policies to protect the landscape.

If there is one area in Europe for which European cooperation is of vital importance, then it is the Carpathian region. The area which was delineated for the project includes 14 state border sections in 4466 km length (AT-CZ, PL-CZ, CZ-SK, PL-SK, PL-UA, SK-UA, SK-HU, SK-AT, HU-AT, HU-UA, HU-RO, RO-UA, HU-SRB, RO-SRB). It includes 81 NUTS3 units, of which, according to EU definition, 52 are border regions. Most of its large rivers are flowing through several countries. The Danube catchment area covers all eight Carpathian countries. Tisa catchment area covers 5 countries. The new member states, with the exception of the Czech Republic, are all on the external border of the EU. It is therefore justified that the 6 EU member countries in the Carpathian region have a 28 percent share of the "European cooperation" Structural Funds support of the EU (2173 thousand Euro, 2004 prices for 2007-2013).

Carpathian Project Experience

The Carpathian Project Report on “Lessons Learned” contains information, experiences, and conclusions on cross-border and transnational cooperation initiatives, programmes, and projects. It can be used as contribution for strategic documents for the Carpathians and as input for the Follow-up-Platform and project development.

Major government programmes of the last century are described and evaluated. The conclusions showed that none of the outlined programmes were successful due to changes in political and economic systems. The need for integrating Ukraine and Serbia and a cross-sector approach is possible in a future “Carpathian Space Programme”.

The description of existing structures, implemented programmes, and projects in the Alpine Space shows that this region has a long tradition of cross-border and transnational cooperation on different levels and programmes. The most programme recent being the INTERREG IIIB Alpine Space Programme. The topics comprise the sectors of spatial development, economic development, sustainable transport, accessibility, natural and cultural heritage, and hazard prevention and mitigation.

Cross-border regional cooperations in the Carpathian area emerged mainly with the EU-regions in the 90s. At present, there are 20 Euro-regions or “Euroregion type” organisations in the Carpathian area. The organisational structure and competence for decision making in many organizations is weak. Thus far, only few Euro-regions have achieved tangible results and are of political significance, signalling the intention to cooperate.

The main features description of cross-border Structural Funds Programmes in the Carpathian Space, show that experiences were made and that the new programming period holds many opportunities for cross-border cooperation.

The programme area CADSES (2000-2006) comprised the whole Carpathian Space; beside the “Carpathian Project,” several projects in other fields were implemented covering parts of the Carpathians. Additionally, a case study from Romania shows which and how the country implemented projects on national, cross-boarder and transnational levels.

Experience with Cooperation in EU-regions, EU-funded cross-border and especially transnational cooperation shows that the implementation of international projects need time. Often, the first tangible result is getting to know each other, getting familiar with different legal structures and approaches. Administrative obstacles, in terms of partner cooperation and EU management, have to be overcome. Lessons can be learned from already implemented programmes and projects; especially those that were already organized in the programming period 2000-2006 with the Lead Partner principle and one common management structure.

In the now running Programming Period, the former CADSES region is split in two parts dividing the Carpathian Space, while the Alpine Space is still intact. There are difficulties in the integration of the Carpathian Convention Secretariat as project partner. It is acting under international law and the tight administrative framework on national rules for control is given priority to strategic cooperation in the Carpathian Space. A Carpathian wide approach towards sustainable economic development, natural and cultural heritage and spatial development standards as well as coordinated cooperation in the issue of transport and sustainable solutions are thus further lagged.

Cross-border cooperation between Carpathian countries has two main forms:

- Bottom-up initiatives can enjoy EU support. Such initiatives are the Euro-regions and Working Communities;
- Top-down initiatives of the European Commission, that is the cross-border and Transnational Structural Funds programmes.

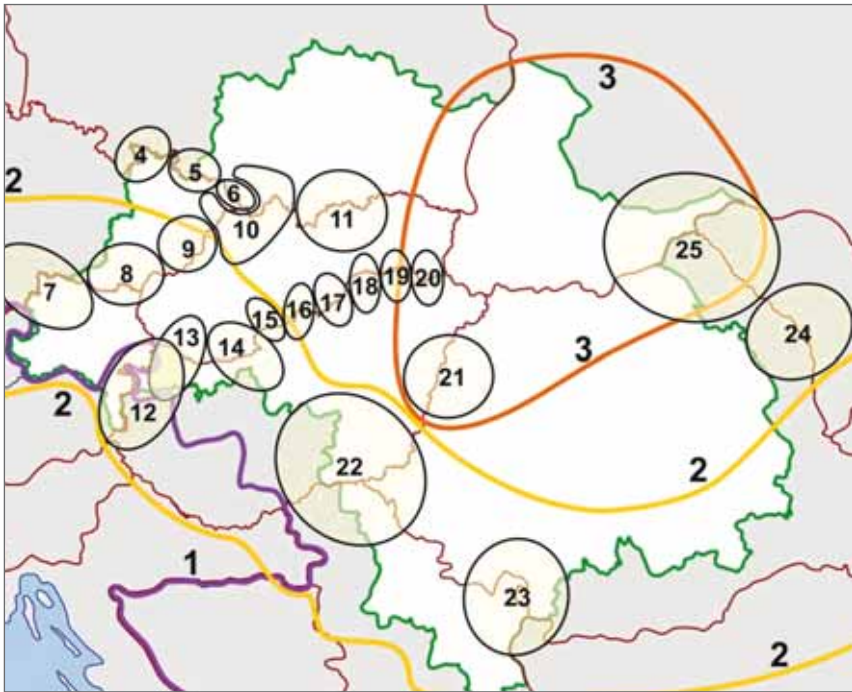
14.1.1 Bottom-up initiatives:

The main types of bottom-up cross-border regional cooperations in the Carpathian area are the EU-regions or Euroregions. The prototype of these regions was established in the 1970s

on the German-Dutch border. Its organisational structures served as a model for later formally established regions. They emerged first along the western borders of Germany. After the political change in 1990, they also appeared along the eastern borders of Germany and later there was diffusion to other Eastern borders. Now, the German-Polish, the German-Czech, the Polish-Czech, the Polish-Slovak, the Slovak-Hungarian and the Austria-Hungarian borders are fully covered by Euro-regions.

The similarity to the model of the Dutch-German EU-region is, however, only in the appearance. The competencies and powers of Carpathian Euroregions are radically different from the original model. Their established

Figure 37: Euro-regions in the Carpathians



Source: author's construction

Table 15: Euroregions in the Carpathians

Number	Name of the Euroregion	Countries	NUTS2 level regions, where the cooperation takes place
1.	Euroregion „Tatry”	PL, SK	Podkarpackie, Východné Slovensko
2.	Euroregion „Beskidy”	PL, SK	Malopolskie, Stredné Slovensko
3.	Euroregion „Tešínské Slezsko – Śląsk Cieszinskiy”	PL, CZ	Śląskie, Moravskoslezsko
4.	Euroregion „Pradęd – Pradziad”	PL, CZ	Opolskie, Severovýchod
5.	Euroregion „Silesia”	PL, CZ	Śląskie, Moravskoslezsko
6.	Euroregion „Neisse – Nysa – Nisa	PL, CZ, D	Dolnośląskie, Severovýchod, Dresden
7.	Waldviertel – Pomoravie - Zahorie	CZ, A, SK	Jihovýchod, Niederösterreich, Západné Slovensko
8.	Bilé – Biele Karpaty	CZ, SK	Střední Morava, Západné Slovensko
9.	Euroregion Ister-Granum	SK, HU	Közép Dunántúl, Západné Slovensko, Stredné Slovensko
10.	Váh – Danube - Ipoly	SK, HU	Észak Magyarország, Západné Slovensko, Stredné Slovensko
11.	Ipoly – Ipel’	SK, HU	Észak Magyarország, Západné Slovensko, Stredné Slovensko
12.	Euroregion „Neogradensis”	SK, HU	Észak Magyarország, Stredné Slovensko
13.	Euroregion „Sajó-Rima – Slaná-Rimava”	SK, HU	Észak Magyarország, Stredné Slovensko, Východné Slovensko
14.	Euroregion „Košice – Miskolc”	SK, HU	Észak Magyarország, Východné Slovensko
15.	Euroregion „Kras”	SK, HU	Észak Magyarország, Východné Slovensko
16.	Euroregion „West Pannonia”	A, HU	Burgenland, Nyugat Dunántúl
17.	Euroregion „Bihar-Bihor”	RO, HU	Nord-Vest, Észak Alföld
18.	Euroregion „Upper Prut”	MD, RO, UA	Moldova, Nord-Est, Chernivtsi
19.	Euroregion „Danube-Maros-Tisa-Kris”	HU, RO, YU	Dél-Alföld, Vest, Vojvodina
20.	Euroregion „Danube 21st Century” (Iron Gate)	BG, RO, YU	Sud, Sud-Vest, Severozapaden, East Serbia

common boards do not dispose over any genuine decision-making competencies; they can adopt only recommendations. Even these recommendations are mostly of rather general and vague character. The partner regions are able to pay a very modest membership fee, which is hardly enough to pay one or two employees in a secretariat, and to host the rotat-

ing meetings of the board. Like any other juristic or natural person, the Euro-regions and their members can submit an application for INTERREG and PHARE-CBC project support. The organisational framework of the Euro-region facilitates some coordination of these project proposals and applications, and it is an advantage of this organisations. But, for the

One example:

The Carpathian Euroregion - Its birth and its activities since 1992

After the democratic change in Central and Eastern Europe, enthusiasm for cross-border and transnational cooperation increased both within the respective countries and outside the region. A New York based institute, the Institute for East-west Studies took the initiative in 1991, and proposed to establish a cooperation system in the North-Eastern Carpathian area. The family of the director of the Institute, Mr. John Edwin Mroz, stemmed from this area. That was one reason for his institute's commitment to the cause of transnational cooperation in the region.

But already after the first months of general enthusiasm, the first steps of organization met some difficulties. Initially, in 1992, counties and districts from all 5 counties applied for membership in the cooperation scheme. But the governments of Slovakia and Romania vetoed their application with the argument: their regions were not entitled for entering into international contractual relationship without the permission of the central government. So, the Slovak and Romania regions did not become members but only observers in the new Euroregion. Later, however, they joined the Carpathian Euroregion.

In the first years after the foundation, the Institute for East-West Studies persuaded the Sasakawa foundation of Japan to support the Carpathian Euroregion financially. The Council of Europe included several publications their contribution to the foundation of the Carpathian Euroregion. But after the foundation they never contacted the region. Concerning the European Union, the Carpathian Euroregion was not eligible for EU support since none of the founding countries were members of the EU by the time of founding. It was a strange situation. A European region on a very critical point of the continent could be established and could only operate with the organisational help of an American institute and with the financial help of a Japanese foundation.

Later the Carpathian Euroregion lost one of its most important financing sources. The only substantial funding resource remained the membership fee of the participating regions. But the Ukrainian regions, from the beginning, were unable to pay for membership fees; the same applies to the Romanian and Slovak regions which joined later. Only the Hungarian and Polish regions paid the membership fee, but under the circumstances, these became quite high. Some Hungarian members found the costs of membership higher than its benefits and left the Euroregion.

Beyond financial problems, there were organisational and logistic problems as well. The first seat of the common secretariat was located, as a symbolic act, to Uzhgorod, Ukraine in the Transcarpathia region. It soon turned out that this choice entailed a lot of logistic difficulties: Phone contact to

Ukraine was extremely difficult, electronic (e-mail, internet) contact was almost impossible. The city of Uzhgorod is 23 km from the Hungarian and 6 km from the Slovak border but border crossing required several hours because of the slow and bureaucratic procedures. Consequently, the Secretariat had to be transferred to Debrecen, Hungary later to Nyíregyháza. The seat of the Carpathian Foundation was initially Košice in Slovakia, later it was also relocated to Eger, Hungary.

Difficulties arose also from the fact that the roles, competencies and the autonomy of regions in the participating countries were quite different. Members of the Council of the Euroregion were exclusively heads or leading officials of regional governments, no representatives of the business or scientific community and no NGOs.

The experts of the Euroregion prepared an excellent strategic document for the development of the area, a good operational programme and several project proposals. Unfortunately, with the exception of some conferences and study tours (and the cooperation of respective universities) nothing was implemented from these strategies, programmes, and projects during the 15 years in the existence of the Euroregion. The main reason for it was the lack of financial resources, but the inability of decision making and lack of communication with the business community were also important roles in the failure. Another important factor was the lack of an effective neighbourhood policy of the EU in these years.

Since 2007, there were possibilities for the efficient support of transnational cooperation in this area. The institutions, instruments, legal regulations and resources are in place. Unfortunately, in the meantime the Carpathian Euroregion has lost its dynamics, enthusiasm, and also a large part of its membership. Perhaps it was established too early.

time being, establishing a Euroregion is rather of political significance, signalling the intention to cooperate. There are only few Euroregions which can boast with tangible results.

Presently, there are 20 Euroregion organizations in the Carpathian area (see Table 15). It is more than 20% of all organizations in Europe.

But organisational consolidation did not follow the quantitative increase. In many cases, the organisational form is not yet cleared. Sometimes national governments do not know how many Euroregions are on their borders, because Euroregions are subjects neither to Association Act, nor to Corporation Act and there is no obligation to register the establishment of a Euroregion. Therefore Table 15 can only be considered of tentative character.

The recent regulations of the European Commission concerning “European Groupings of territorial cooperation” might facilitate and promote the activities of Euroregions in the Carpathian area.

14.1.2 Top-down initiatives: the Structural Funds and Territorial cooperation programmes

INTERREG was a Community initiative which aimed to stimulate interregional cooperation in the European Union. It started in 1989 financed under the European Regional Development Fund (ERDF), and was designed to stimulate cooperation between the member states of the European Union on different levels. One of its main targets was to diminish the influence of national

borders in order to attain equal economic, social and cultural development in the European Union. INTERREG was launched as INTERREG I for the programming period 1989-93, and continued as INTERREG II for the subsequent period 1994-99. It has moved on to INTERREG III for the period 2000-2006. Candidate countries could join the programme from 1995 (those who had an EU member neighbour). From 1996, the programme was extended to borders between candidate states (it was financed from the PHARE pre-accession financial support instrument).

In this first period there were several problems during the implementation of INTERREG-PHARE-CBC programmes:

- Candidate countries were obliged to spend the largest part of their PHARE-CBC allocation on the border to EU member states, while most needs and problems emerged on other borders;
- INTERREG was financed from the Structural Funds, PHARE-CBC from pre-accession aid. The two financial support funds were managed by two different DGs in the European Commission. Their regulations, methodologies, timetables were totally different. Under such conditions it was extremely difficult to implement a common programme.
- Not only regulations but also basic objectives were different. Basic investment needs in the border regions of member states were satisfied from national resources and from Objective 1 support. INTERREG was used mainly for the satisfaction of secondary, non-basic and urgent needs. In contrast, PHARE-CBC was the only source of EU support in the border regions of candidate states and they used it

to satisfy basic needs) (water supply, sewage systems, access roads). PHARE-CBC was very useful, but programmes could not be regarded as common ones, rather they were parallel ones.

- A serious problem was that these funds could not be used along borders with non-member and non-candidate states, even though these border regions were in the worst and most critical condition.

The situation turned for the better after 2004 when candidate states became members and had access to the Structural Funds. It improved further in 2007 when the neighbourhood programmes and the ENPI (European Neighbourhood and Partnership Instrument) was introduced. The new instruments enabled non-member states to participate in these programmes on equal conditions. Regulations became more harmonised. Other than cross-border programmes, neighbourhood programmes play a more important role in European cooperation.

ERDF allocations to these programmes between 2004-2006 and 2007-2013 have increased six to ten times. This means that substantially more and larger projects can be implemented.

The other strand of INTERREG (Territorial cooperation) is trans-national cooperation. This strand aims at the cooperation within large European regions, including regions from several states. Until 2006, the Carpathian region belonged to the CADSES (Central European, Adriatic, Danubian and Southeast European Space) programme area, including 17 states from Poland to Greece. By preparing for the next – 2007-2013 programming period, the Commission and some member states found this space too large for trans-national

Table 16: The main financial data of the EU transborder programmes in the Carpathians

Programme	Financial resources 2004-2006		Financial resources 2004-2006	
	Total million €	ERDF contrib. million €	Total million €	ERDF contrib. million €
POLAND - SLOVAKIA cross- border programmes		21	185,2	157,4
CZECH REPUBLIC - SLOVAKIA cross border programmes	18.2	13.7	109.1	92.7
HUNGARY - ROMANIA cross-border programmes	42	23.9	275	224
HUNGARY - SLOVAKIA cross-border programmes	27.8	23.8	176.4	207.6
CZECH REPUBLIC - POLAND cross-border programmes	46.0	34.5		219.4
AUSTRIA - CZECH REPUBLIC cross-border programmes	69.2	38.3		107.4
AUSTRIA - SLOVAKIA cross-border programmes		19.0		59.9
AUSTRIA - HUNGARY cross-border programmes	77	71	96.8	82.3
POLAND-BELARUS-UKRAINE neighbourhood programmes		37.8		186.2
HUNGARY - (ROMANIA) - SLOVAKIA - UKRAINE neighbourhood programme		31.7		68.6

cooperation and divided the CADSES area into two cooperation areas: Central Europe (including the Carpathian countries Austria, Hungary, Czech Republic, Poland and Slovakia), and Southeast Europe (including the Carpathian countries Austria, Slovakia, Hungary, Romania and Serbia). The Carpathian area has been divided in two. Launching projects, embracing the whole Carpathian area will be not impossible, but undoubtedly more difficult than before.

Nevertheless, even in the past period very few CADSES projects were devoted to the problems of the Carpathian area. Out of the 1,600 project partners of the CADSES projects, only 70 (4.3%) were located in the Carpathian area. Out of the 134 lead project partners, only 4 (3%) were located in the Carpathian area (Krakow, Vsetin, Karviná, Miskolc). Even out of these four, only one was engaged in the problems of mountainous areas (Shinig Mountains, Miskolc)

14.2 Policy Recommendations On Territorial Cooperation Programmes

- The promotion of European territorial cooperation should be one of the main objectives of Structural Funds supports. Territorial cooperation had been “promoted” to one of the three priorities of the Structural Funds objectives. A substantial share of support was allocated to the new member states and was a step in the right direction. Nevertheless, funds devoted to trans-national cooperation did not increase; considering inflation, they decreased in this period. This is regrettable, namely for Carpathian cooperation. The most suitable form of cooperation is trans-national cooperation.
- In the framework of cross-border programmes one should aim at launching common, or “mirror” projects. Only projects of this kind contribute to eliminating borders as obstacles of cooperation.
- Beyond bilateral cross-border programmes, larger emphasis should be given to neighbourhood programmes, including the participation of non-member states in the Carpathian area. Without the participation of Ukraine, it is impossible to prepare a really integrated programme for the Carpathians. Experience has shown that most problems of territorial cooperation are concentrated in those relatively small areas where the borders of three countries meet.
- Mountainous areas should receive more attention in territorial cooperation projects. The significance and weight of the problem is much larger than the attention which was devoted to it in the framework of CADSES programme.
- In the Alpine space, much more experience has been accumulated concerning project themes and approaches in mountainous areas. The Central European programme space ensures possibilities for projects handling the problems of the Alps and the Carpathians. There is much to learn from the Alpine praxis in this respect.
- Despite the division of the Carpathian area into two programme spaces, there are possibilities for implementing comprehensive Carpathian projects and for comprehensive Carpathian participation. According to Structural Funds regulations, 20% of programme allocations can be used outside the programme area and 10% outside the EU. Projects should take advantage of this regulation.

Carpathian Project Experience

In the frame of the INTERREG IIIB CADSES Carpathian Project a Follow-up Platform was established. Its aim is a standing follow-up platform for regions, local authorities and NGOs. The Carpathian Convention Interim-Secretariat provides the platform to the coordinated identification and drafting of possible spin-off and follow-up projects.

Within this task the Secretariat also prepares lists of project ideas, assesses the future funding potential and gives recommendations for further action to be taken. Furthermore the Secretariat supports project development and clarifies with different programmes the funding and participation possibilities.

Possible funding programmes are EU Objective 1 programmes; EU European Territorial Cooperation programmes on cross-border, transnational, and interregional levels; the EU-Life-Programme; the "Intelligent Energy Europe Programme"; Swiss enlargement contribution; EEA funds from Scandinavia; and additional ones from Norway.

This follow-up platform shall be further active after the finalization of the Carpathian Project. It shall be an open platform, facilitated by ISCC for consultation of project ideas and giving input on important topics or projects ideas relevant for sustainable development of the Carpathian Space. It thus strengthens common Carpathian Space focused project idea development, coordination of ideas, and cooperation between Carpathian countries.

As the EU CADSES Programme Area was divided into two parts in the new programming period (2007-2013) it shall act as an independent platform for the support of the development and implementation of the Carpathian-related projects with the most suited funding sources; with a view to the possible future establishment of an EU-Carpathian Space Programme.

The project ideas, outlined in Table 17, were developed in cooperation with ministries, regional authorities and NGOs in the different fields of the Carpathian Convention activities (given along the Carpathian Convention Working Groups and other core activities activities. Possible overlapping is due to the cross-sector character of the respective project and thus is outlined under the topic the main focus is put on).



Table 17: Carpathian Project's follow-up platform

Working Group Topics/ Other Activity Topics	Project Idea	Suitable funding source/ Programme
Process of the implementation of a mountain convention	European Mountain ABC – Alpine Experience, Balkan Future, Carpathian Opportunity; Multi-Level Governance and Conservation Economy	ETC-Programme INTERREG IVC
Education and dissemination	Move4Nature – education and dissemination on sustainability	Company funded (OMV)
Science for the Carpathian Space	Science for the Carpathians (S4C)	COST
Sustainable industry, energy, transport and infrastructure	RENEC – Renewable energy in the Carpathians Soft Tourism and Sustainable Mobility in the Alps and the Carpathians	CIP – SubProgramme “Intelligent Energy Europe ETC-Programme CENTRAL EUROPE SOUTH EAST EUROPE
Spatial planning	Identifying future potential in European mountain areas	ESPON
Sustainable agriculture, rural development and forestry	Network Mountain Forest II	ETC-Programme INTERREG IVC
Cultural heritage and traditional knowledge	Carpathian Heritage Inventory	ETC-Programme CENTRAL EUROPE SOUTH EAST EUROPE-LEADER



► High Tatras, Vysoké, Slovakia

15 CONCLUSIONS

The Carpathian Project strongly contributed to the implementation of the Carpathian Convention by forming a strategic basis for the transnational political platform. At the same time, the Carpathian Project benefited from the existing transnational platform of the Carpathian Convention. Ministers of Environment from seven Parties (Czech Republic, Hungary, Poland, Romania, Serbia, Slovak Republic, Ukraine) and observers (Alpine States, international organizations, national, regional and local authorities, as well as non-governmental organizations) constitute the supreme governing body of the Convention which also guides the activities of the Carpathian Project's Lead Partner, the Interim Secretariat of the Carpathian Convention. The Secretariat is provided by the United Nations Environment Programme (UNEP) and hosted by Austria in the Vienna International Centre.

From its inception, the Carpathian Convention process established strong links with the Alpine Convention that serves as archetype for the establishment of policy structures in sustainable mountain areas development. The experiences in the Alpine Space as well as examples in the Carpathians demonstrate that mountains can offer considerable development potentials respecting the value of natural and cultural heritage and its future preservation.

The Carpathian project with 18 project partners from 10 countries joined efforts to work on common and harmonized data and maps of the Carpathian Space. The intent was to develop analyses, recommendations, and a common conceptual document covering the contents of the Carpathian Convention as well as to implement pilot activities Convention (biodiversity; natural and cultural heritage; sustainable rural development; agriculture and forestry; sustainable transport; infrastructure; industry and energy; spatial planning;) and to implement pilot activities for selected topics like sustainable tourism.

The output of the project gave a detailed survey of the Carpathian region which included the conditions of eight Central and Eastern

European countries. A handbook for local authorities and development stakeholders was compiled which contains pilot actions and best practice examples. Additionally, training and awareness raising measures were carried out. The Carpathian Environment Outlook is an integrated and strategic environmental assessment of the mountain region. It reviews over the past 30 years dealing with physical characteristics, biodiversity, culture, economy, energy, natural resources and illustrates possible future development scenarios up to 2020. Furthermore a transnational and integrated Carpathian Spatial Development Vision, described in VASICA, was elaborated, based on detailed sectors and overall analyses. A Carpathian Atlas was produced which contains databases including several spatial and environment indicators, such as the development of population, the infrastructure or cultural and natural heritage.

All these project outcomes prepared the basis for the six transnational thematic Working Groups in the field of biodiversity and natural heritage, cultural heritage, sustainable rural development, agriculture and forestry, sustainable transport, infrastructure, industry and energy, sustainable tourism and spatial development and subsequently the

intergovernmental platform on the Carpathian Convention topics. Thus the project outcomes contribute strongly to the adoption of internationally legally agreed tools, starting with the adoption and signature of the Biodiversity Protocol. Further protocols on transport, tourism and forestry have been initiated, together with regional programmatic approaches for renewable energy, for sustainable agriculture and rural development in the mountains, for the promotion of the Carpathian identity based on its natural and cultural heritage, for a transnational strategy for the adaptation to climate change, amongst others. The Conference of the Parties to the Carpathian Convention — bringing together the authorized governmental representatives of the Carpathian countries - served as the high-level Intergovernmental Platform of the Carpathian Project, allowing to cast the strategic recommendations of the project into agreed transnational policy instruments (such as the adoption of international legal or policy instruments - see reference to Protocols above).

The Carpathian Project resulted in the description and recognition of the Carpathian space as an area of economic, social, and environmental progress and sustainability in the heart of Europe. It built on the regions' advantages and potentials and is addressing the challenges of mountain regions in an innovative and coordinated manner. As the Carpathian Projects came to an end on 31 August 2008, due attention was given to its sustainability and the follow-up. For this purpose, the follow-up platform under the Carpathian Convention was established, allowing the coordination of ongoing and future project development in support of the Carpathian Space.

The Carpathian Project received funds from the EU-Community Initiative Programme for transnational cooperation: INTERREG CADSES in the Programming Period 2000-

2006. In the new and current programming period 2007- 2013, EU funds can be made available for a number of thematic fields and activities of interest for the Carpathian Space, such as innovation, accessibility, urban environment or competitiveness. Whereas the Strategic Environmental Assessments of the CENTRAL and SOUTH-EAST EUROPE-Programmes are calling for the full consideration of the Carpathian Convention in programme implementation, the new programmes make little reference to the importance of the protection and sustainable development of the Carpathians and the Carpathian Convention. Therefore, work will continue to make sure that the new programmes become cornerstones for balancing the protection and the sustainable development of the Carpathian region by ensuring that the Carpathian Convention will fully comply within the new EU programmes' implementation.

However, for the new 2007-2013 programming period, the former CADSES area was divided into two areas and programmes, the Central Europe Programme and the South East Europe Programme, "cutting the Carpathians into two pieces". Whereas the Alpine region also in the 2007-13 programming period has an Alpine Space Programme at its disposal, the Carpathians - the largest mountain region of Europe - are now divided into two European programme areas. Although these programmes allow for a certain degree of flexibility in their geographical scope, the situation will still complicate the possibility of carrying out projects for the integrity of the Carpathians in the new European programmes until the establishment of a proposed future Carpathian Space programme.

Fortunately, the Carpathian Convention offers one consistent transnational framework of cooperation available for the protection and sustainable development of the Carpathians, which can provide the crucial link



► Conference of the Parties to the Carpathian Convention
17-19 June 2008, Bucharest, Romania

between different programme areas and support the implementation of the EU Policies at the pan-Carpathian scale. Therefore, further efforts to strengthen and operate the existing transnational Carpathian framework will be highly beneficial.

In order to bring the vision of the Carpathian Space to life, a two-phased approach is necessary. In the current programming period (Central and the South East Europe programmes), the structural support for the Carpathian region should continue through the approval of projects prioritised in the framework of the follow-up platform of the Carpathian Convention in the main strategic fields, which include:

- Environmental risk prevention and adaptation to climate change
- Nature, Agriculture and Forestry, Landscape
- Mobility, Accessibility, Transit

- Sustainable industry and energy
- Society, Culture, Identity
- Tourism, Leisure, Sports

As the second phase, in the upcoming programming period 2014-2020, a full-fledged "Carpathian Space" programme, following the successful example of the Alpine Space programme, has to become operational; possibly in combination with existing programmes or as a stand alone new programme for the new period. At this stage, the establishment of a feedback mechanism between the Carpathian Convention with the programme bodies responsible for the Carpathian Space can gradually replace the development of specific projects in the Carpathian Convention follow-up platform. VASICA forms the substantial basis for these further activities.

FRAMEWORK CONVENTION ON THE PROTECTION AND SUSTAINABLE DEVELOPMENT OF THE CARPATHIANS *(22 May 2003, Kiev, Ukraine)*

“The Parties”,

ACKNOWLEDGING that the Carpathians are a unique natural treasure of great beauty and ecological value, an important reservoir of biodiversity, the headwaters of major rivers, an essential habitat and refuge for many endangered species of plants and animals and Europe's largest area of virgin forests, and AWARE that the Carpathians constitute a major ecological, economic, cultural, recreational and living environment in the heart of Europe, shared by numerous peoples and countries;

REALIZING the importance and ecological, cultural and socio-economic value of mountain regions, which prompted the United Nations General Assembly to declare 2002 the International Year of Mountains; RECOGNIZING the importance of Mountain areas, as enshrined in Chapter 13 (Sustainable Mountain Development) of the Declaration on Environment and Development (“Agenda 21”, Rio de Janeiro, 1992), and in the Plan of Implementation of the World Summit on Sustainable Development;

RECALLING the Declaration on Environment and Sustainable Development in the Carpathian and Danube Region (Bucharest, 2001);

NOTING the pertinent provisions of and principles enshrined in relevant global, regional and sub-regional environmental legal instruments, strategies and programmes;

AIMING at ensuring a more effective implementation of such already existing instruments, and BUILDING upon other international programmes;

RECOGNIZING that the Carpathians constitute the living environment for the local people, and ACKNOWLEDGING the contribution of the local people to sustainable social, cultural and economic development, and to preserving traditional knowledge in the Carpathians;

ACKNOWLEDGING the importance of sub-regional cooperation for the protection and sustainable development of the Carpathians in the context of the 'Environment for Europe' process;

RECOGNIZING the experience gained in the framework of the Convention on the Protection of the Alps (Salzburg, 1991) as a successful model for the protection of the environment and sustainable development of mountain regions, providing a sound basis for new partnership initiatives and further strengthening of cooperation between Alpine and Carpathian states;

BEING AWARE of the fact that efforts to protect, maintain and sustainably manage the natural resources of the Carpathians cannot be achieved by one country alone and require regional cooperation, and of the added value of transboundary cooperation in achieving ecological coherence;

Have agreed as follows:

Article 1: Geographical scope

1. The Convention applies to the Carpathian region (hereinafter referred to as the “Carpathians”), to be defined by the Conference of the Parties.

2. Each Party may extend the application of this Convention and its Protocols to additional parts of its national territory by making a declaration to the Depositary, provided that this is necessary to implement the provisions of the Convention.

Article 2: General objectives and principles

1. The Parties shall pursue a comprehensive policy and cooperate for the 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.

2. In order to achieve the objectives referred to in paragraph 1, the Parties shall take appropriate measures, in the areas covered by Articles 4 to 13 of this Convention by promoting:

- (a) the precaution and prevention principles,
- (b) the ‘polluter pays’ principle,
- (c) public participation and stakeholder involvement,
- (d) transboundary cooperation,
- (e) integrated planning and management of land and water resources,

(f) a programmatic approach, and

(g) the ecosystem approach.

3. To achieve the objectives set forth in this Convention and to ensure its implementation, the Parties may, as appropriate, develop and adopt Protocols.

Article 3: Integrated approach to the land resources management

The Parties shall apply the approach of the integrated land resources management as defined in Chapter 10 of the Agenda 21, by developing and implementing appropriate tools, such as integrated management plans, relating to the areas of this Convention.

Article 4: Conservation and sustainable use of biological and landscape diversity

1. The Parties shall pursue policies aiming at conservation, sustainable use and restoration of biological and landscape diversity throughout the Carpathians. The Parties shall take appropriate measures to ensure a high level of protection and sustainable use of natural and semi-natural habitats, their continuity and connectivity, and species of flora and fauna being characteristic to the Carpathians, in particular the protection of endangered species, endemic species and large carnivores.

2. The Parties shall promote adequate maintenance of semi-natural habitats, the restoration of degraded habitats, and support the development and implementation of relevant management plans.

3. The Parties shall pursue policies aiming at the prevention of introduction of alien invasive species and release of genetically modi-

fied organisms threatening ecosystems, habitats or species, their control or eradication.

4. The Parties shall develop and/or promote compatible monitoring systems, coordinated regional inventories of species and habitats, coordinated scientific research, and their networking.

5. The Parties shall cooperate in developing an ecological network in the Carpathians, as a constituent part of the Pan-European Ecological Network, in establishing and supporting a Carpathian Network of Protected Areas, as well as enhance conservation and sustainable management in the areas outside of protected areas.

6. The Parties shall take appropriate measures to integrate the objective of conservation and sustainable use of biological and landscape diversity into sectoral policies, such as mountain agriculture, mountain forestry, river basin management, tourism, transport and energy, industry and mining activities.

Article 5: Spatial planning

1. The Parties shall pursue policies of spatial planning aimed at the protection and sustainable development of the Carpathians, which shall take into account the specific ecological and socio-economic conditions in the Carpathians and their mountain ecosystems, and provide benefits to the local people.

2. 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 co-operation between relevant regional and local institutions.

3. In developing spatial planning policies

and programmes, particular attention should, inter alia, be paid to:

- (a) transboundary transport, energy and telecommunications infrastructure and services,
- (b) conservation and sustainable use of natural resources,
- (c) coherent town and country planning in border areas,
- (d) preventing the cross-border impact of pollution,
- (e) integrated land use planning, and environmental impact assessments.

Article 6: Sustainable and integrated water/river basin management

Taking into account the hydrological, biological and ecological, and other specificities of mountain river basins, the Parties shall:

- (a) take appropriate measures to promote policies integrating sustainable use of water resources, with land-use planning, and aim at pursuing policies and plans based on an integrated river basin management approach, recognizing the importance of pollution and flood management, prevention and control, and reducing water habitats fragmentation,
- (b) pursue policies aiming at sustainable management of surface and groundwater resources, ensuring adequate supply of good quality surface and groundwater as needed for sustainable, balanced and equitable water use, and adequate sanitation and treatment of waste water,
- (c) pursue policies aiming at conserving

natural watercourses, springs, lakes and groundwater resources as well as preserving and protecting wetlands and wetland ecosystems, and protecting against natural and anthropogenic detrimental effects such as flooding and accidental water pollution,

- (d) further develop a coordinated or joint system of measures, activities and early warning for transboundary impacts on the water regime of flooding and accidental water pollution, as well as co-operate in preventing and reducing the damages and giving assistance in restoration works.

Article 7: Sustainable agriculture and forestry

1. The Parties shall maintain the management of land traditionally cultivated in a sustainable manner, and take appropriate measures in designing and implementing their agricultural policies, taking into account the need of the protection of mountain ecosystems and landscapes, the importance of biological diversity, and the specific conditions of mountains as less favoured areas.

2. The Parties shall pursue policies aiming at developing and designing appropriate instruments, such as the crucially important agri-environmental programs in the Carpathians, enhancing integration of environmental concerns into agricultural policies and land management plans, while taking into account the high ecological importance of Carpathian mountain ecosystems, such as natural and semi-natural grasslands, as part of the ecological networks, landscapes and traditional land-use.

3. The Parties shall pursue policies aiming at promoting and supporting the use of instruments and programs, compatible with interna-

tionally agreed principles of sustainable forest management.

4. The Parties shall apply sustainable mountain forest management practices in the Carpathians, taking into account the multiple functions of forests, the high ecological importance of the Carpathian mountain ecosystems, as well as the less favourable conditions in mountain forests.

5. The Parties shall pursue policies aiming at designating protected areas in natural, especially virgin forests in sufficient size and number, with the purpose to restrict or adapt their use according to the objectives of conservation to be achieved.

6. The Parties shall promote practice of environmentally sound agricultural and forestry measures assuring appropriate retention of precipitation in the mountains with a view to better prevent flooding and increase safety of life and assets.

Article 8: Sustainable transport and infrastructure

1. The Parties shall pursue policies of sustainable transport and infrastructure planning and development, which take into account the specificities of the mountain environment, by taking into consideration the protection of sensitive areas, in particular biodiversity-rich areas, migration routes or areas of international importance, the protection of biodiversity and landscapes, and of areas of particular importance for tourism.

2. The Parties shall cooperate towards developing sustainable transport policies which provide the benefits of mobility and access in the Carpathians, while minimizing harmful effects on human health, landscapes, plants, animals,

and their habitats, and incorporating sustainable transport demand management in all stages of transport planning in the Carpathians.

3. In environmentally sensitive areas the Parties shall co-operate towards developing models of environmentally friendly transportation.

Article 9: Sustainable tourism

1. The Parties shall take measures to promote sustainable tourism in the Carpathians, providing benefits to the local people, based on the exceptional nature, landscapes and cultural heritage of the Carpathians, and shall increase cooperation to this effect.

2. Parties shall pursue policies aiming at promoting transboundary cooperation in order to facilitate sustainable tourism development, such as coordinated or joint management plans for transboundary or bordering protected areas, and other sites of touristic interest.

Article 10: Industry and energy

1. The Parties shall promote cleaner production technologies, in order to adequately prevent, respond to and remediate industrial accidents and their consequences, as well as to preserve human health and mountain ecosystems.

2. The Parties shall pursue policies aiming at introducing environmentally sound methods for the production, distribution and use of energy, which minimize adverse effects on the biodiversity and landscapes, including wider use of renewable energy sources and energy-saving measures, as appropriate.

3. Parties shall aim at reducing adverse impacts of mineral exploitation on the environment and ensuring adequate environmental surveillance on mining technologies and practices.

Article 11: Cultural heritage and traditional knowledge

The Parties shall pursue policies aiming at preservation and promotion of the cultural heritage and of traditional knowledge of the local people, crafting and marketing of local goods, arts and handicrafts. The Parties shall aim at preserving the traditional architecture, land-use patterns, local breeds of domestic animals and cultivated plant varieties, and sustainable use of wild plants in the Carpathians.

Article 12: Environmental assessment/ information system, monitoring and early warning

1. The Parties shall apply, where necessary, risk assessments, environmental impact assessments, and strategic environmental assessments, taking into account the specificities of the Carpathian mountain ecosystems, and shall consult on projects of transboundary character in the Carpathians, and assess their environmental impact, in order to avoid transboundary harmful effects.

2. The Parties shall pursue policies, using existing methods of monitoring and assessment, aiming at promoting:

- (a) cooperation in the carrying out of research activities and scientific assessments in the Carpathians,
- (b) joint or complementary monitoring programmes, including the systematic monitoring of the state of the environment,
- (c) comparability, complementarity and standardization of research methods and related data-acquisition activities,
- (d) harmonization of existing and develop-

ment of new environmental, social and economic indicators,

- (e) a system of early warning, monitoring and assessment of natural and man-made environmental risks and hazards, and
- (f) information system, accessible to all Parties.

Article 13: Awareness raising, education and public participation

1. The Parties shall pursue policies aiming at increasing environmental awareness and improving access of the public to information on the protection and sustainable development of the Carpathians, and promoting related education curricula and programmes.

2. The Parties shall pursue policies guaranteeing public participation in decision-making relating to the protection and sustainable development of the Carpathians, and the implementation of this Convention.

Article 14: Conference of the Parties

1. A Conference of the Parties (hereinafter referred to as the “Conference”) is hereby established.

2. The Conference shall discuss common concerns of the Parties and make the decisions necessary to promote the effective implementation of the Convention. In particular, it shall:

- (a) regularly review and support the implementation of the Convention and its Protocols,
- (b) adopt amendments to the Convention pursuant to Article 19,

(c) adopt Protocols, including amendments thereto, pursuant to Articles 18,

(d) nominate its President and establish an intersessional executive body, as appropriate and in accordance with its Rules of Procedure,

(e) establish such subsidiary bodies, including thematic working groups, as are deemed necessary for the implementation of the Convention, regularly review reports submitted by its subsidiary bodies and provide guidance to them,

(f) approve a work program, financial rules and budget for its activities, including those of its subsidiary bodies and the Secretariat, and undertake necessary arrangements for their financing pursuant to Article 17,

(g) adopt its Rules of Procedure,

(h) adopt or recommend measures to achieve the objectives laid down in Articles 2 to 13,

(i) as appropriate, seek the cooperation of competent bodies or agencies, whether national or international, governmental or non-governmental and promote and strengthen the relationship with other relevant conventions while avoiding duplication of efforts, and

(j) exercise other functions as may be necessary for the achievement of the objectives of the Convention.

3. The first session of the Conference shall be convened not later than one year after the date of entry into force of the Convention. Unless otherwise decided by the Conference, ordinary sessions shall be held every three years.

4. Extraordinary sessions of the Conference shall be held at such other times as may be decided either by the Conference at ordinary session or at the written request of any Party, provided that, within three months of the request being communicated to all the other Parties by the Secretariat, it is supported by at least one third of the Parties.

5. The Parties may decide to admit as observers at the ordinary and extraordinary sessions of the Conference:

- (a) any other State,
- (b) any national, intergovernmental or non-governmental organization the activities of which are related to the Convention.

The conditions for the admission and participation of observers shall be established in the Rules of Procedure. Such observers may present any information or report relevant to the objectives of the Convention.

6. The Conference shall reach its decisions by consensus.

Article 15: Secretariat

1. A Secretariat is hereby established.
2. The functions of the Secretariat shall be:
 - (a) to make arrangements for sessions of the Conference and to provide them with services as required,
 - (b) to compile and transmit reports submitted to it,
 - (c) to coordinate its activities with the secretariats of other relevant international bodies and conventions,

- (d) to prepare reports on the exercising of its functions under this Convention and its Protocols, including financial reports, and present them to the Conference,

- (e) to facilitate research, communication and information exchange on matters relating to this Convention, and

- (f) to perform other secretariat functions as may be determined by the Conference.

Article 16: Subsidiary bodies

The subsidiary bodies, including thematic working groups established in accordance with Article 14 paragraph 2 (e), shall provide the Conference, as necessary, with technical assistance, information and advice on specific issues related to the protection and sustainable development of the Carpathians.

Article 17: Financial contributions

Each Party shall contribute to the regular budget of the Convention in accordance with a scale of contributions as determined by the Conference.

Article 18: Protocols

1. Any Party may propose Protocols to the Convention.

2. The draft Protocols shall be circulated to all Parties through the Secretariat not later than six months before the Conference session at which they are to be considered.

3. The Protocols shall be adopted and signed at the Conference sessions. The entry into force, amendment of and withdrawal from the Protocols shall be done *mutatis mutandis* in accordance with Articles 19, 21 paragraphs

2 to 4 and Article 22 of the Convention. Only a Party to the Convention may become Party to the Protocols.

Article 19: Amendments to the Convention

1. Any Party may propose amendments to the Convention.

2. The proposed amendments shall be circulated to all Parties to the Convention through the Secretariat not later than six months before the Conference session at which the amendments are to be considered.

3. The Conference shall adopt the proposed amendments to the Convention by consensus.

4. The amendments to the Convention shall be subject to ratification, approval or acceptance. The amendments shall enter into force on the ninetieth day after the date of deposit of the fourth instrument of ratification, approval or acceptance. Thereafter, the amendments shall enter into force for any other Party on the ninetieth day after the date of deposit of its instrument of ratification, approval or acceptance.

Article 20: Settlement of disputes

The Parties shall settle disputes arising from the interpretation or implementation of the Convention by negotiation or any other means of dispute settlement in accordance with international law.

Article 21: Entry into force

1. This Convention shall be open for signature at the Depositary from 22 May 2003 to 22 May 2004.

2. This Convention shall be subject to rati-

fication, acceptance, or approval by the Signatories. The Convention shall be open for accession by non-Signatories. Instruments of ratification, acceptance, approval and accession shall be deposited with the Depositary.

3. The Convention shall enter into force on the ninetieth day after the date of deposit of the fourth instrument of ratification, approval, acceptance or accession.

4. Thereafter the Convention shall enter into force for any other Party on the ninetieth day from the date of deposit of its instrument of ratification, acceptance, approval or accession.

Article 22: Withdrawal

Any Party may withdraw from the Convention by means of a notification in writing addressed to the Depositary. The withdrawal shall become effective on the one hundred eightieth day after the date of the receipt of the notification by the Depositary.

Article 23: Depositary

1. The Depositary of the Convention shall be the Government of Ukraine.

2. The Depositary shall notify all the other Parties of

(a) any signature of the Convention and its Protocols,

(b) the deposit of any instrument of ratification, acceptance, approval or accession,

(c) the date of entry into force of the Convention as well as its Protocols or amendments thereto, and the date of their entry into force for any other Party,

(d) any notifications of withdrawal from the Convention or its Protocols and the date on which such withdrawal becomes effective for a particular Party,

(e) the deposit of any declaration according to Article 1 paragraph 2.

Done at Kyiv, Ukraine on 22 May 2003 in one original in the English Language.

The original of the Convention shall be deposited with the Depositary, which shall distribute certified copies to all Parties.

IN WITNESS WHEREOF the undersigned, being duly authorized thereto, have signed this Convention:

- The Government of the Czech Republic
- The Government of the Republic of Hungary
- The Government of the Republic of Poland
- The Government of Romania
- The Council of Ministers of Serbia and Montenegro
- The Government of the Slovak Republic
- The Government of Ukraine

First Meeting of the Conference of the Parties (COP 1) to the Framework Convention on the Protection and Sustainable Development of the Carpathians

MINISTERIAL DECLARATION 11-13 December 2006, Kyiv, Ukraine

We, the Ministers and High Representatives of the seven Parties and Signatories to the Framework Convention on the Protection and Sustainable Development of the Carpathians (hereafter Carpathian Convention), the Czech Republic, the Republic of Hungary, the Republic of Poland, Romania, the Republic of Serbia, the Slovak Republic and Ukraine, gathering in Kyiv on 13 December 2006, for the First Meeting of the Conference of the Parties to the Carpathian Convention;

Reaffirming the commitment to implement the Rio Declaration on Environment and Development, the Johannesburg Declaration on Sustainable Development, other internationally agreed development goals, including the Millennium Development Goals as contained in the United Nations Millennium Declaration as the overall policy frameworks for sustainable development;

Recalling the UN General Assembly resolutions proclaiming and celebrating the International Year of Mountains in 2002 drawing attention of governments, organisations and individuals to the particular role mountains play for biodiversity, wildlife and cultural heritage preservation, water and energy supply, providing benefits for a significant proportion of humanity, in both mountain and lowland areas;

Appreciating the International Partnership for Sustainable Development in Mountain Regions ("Mountain Partnership") as an important platform for cooperation and experi-

ence-sharing between mountain regions of the world;

Underlining that the Carpathian Convention is an important instrument to enhance the protection and sustainable development of the Carpathian region, based on its exceptional natural and cultural heritage.

Have expressed the following:

Achievements

We express our satisfaction with the entry into force of the Carpathian Convention on 4 January 2006 and underline our commitment to faithfully implement the Carpathian Convention;

We note with satisfaction that the Carpathian Convention unites seven Carpathian countries in a unique partnership, providing a transnational framework for cooperation and multisectoral policy integration, an open forum for participation by stakeholders and the public, and a platform for developing and implementing transnational strategies, programmes and projects for protection and sustainable development;

We recognize the important political support provided by the European Community and its Member States to the implementation of the Carpathian Convention through the EU INTERREG III B CADSES "Carpathian Project". We furthermore appreciate the contribution of the other organizations and institutions to the implementation of the Carpathian Convention as reflected in the section on Cooperation and Partnerships;

We appreciate the activities of the interim Secretariat provided by UNEP in Vienna in preparation of COP 1, and welcome its activities in the development and leading of the Carpathian Project;

We underline the importance of the Carpathian Convention as an instrument to enhance the protection and sustainable development of the Carpathian region, based on its exceptional natural and cultural heritage of global importance.

Challenges

We are aware that the Carpathian region represents a unique and dynamic living environment, ecologically valuable and rich of cultural heritage, having enormous ecological and economic potential, but currently facing rapid environmental, social and political changes;

We note with concern that unbalanced and spontaneous development patterns in the Carpathian region can lead to loss of traditional knowledge and values, livelihoods, and local practices;

We emphasize that more environmentally-friendly practices and technologies will need to be implemented, along with appropriate policies to support the development of sustainable transport, organic farming, energy efficiency, renewable energy sources, sustainable forest management and sustainable tourism, creating new jobs in these sectors. Regional policy coherence and consistency between national policies are among the major prerequisites to achieve sustainability in the Carpathians;

We are aware that the challenge is to preserve and valorise the region's potential, spe-

cificity and uniqueness, while increasing its sustainability. This will require responsible actions, taking into account global, regional and trans-boundary contexts and linkages, in order to enhance both the Carpathian environment and human livelihoods;

We underline that the process of enlargement of the European Union provides the opportunity to strengthen the environmental protection and sustainable development in the Carpathian region, through the application and implementation of EU policies, programmes and legislation.

Cooperation and Partnerships

We recall with appreciation that the Alpine States have actively supported the development of the Carpathian Convention, and welcome the signature of the Memorandum of Understanding for the cooperation between the Alpine Convention and the Carpathian Convention;

We express our gratitude to the Government of Austria for its support to the Carpathian Convention, notably by continuing to host and co-finance the Secretariat of the Carpathian Convention on an interim basis;

We appreciate the continued support of the Italian Ministry of Environment, Land and Sea, and the efficient cooperation and partnership with UNEP, the European Academy EURAC in Bolzano, Italy, and the Regional Environmental Centre (REC);

We appreciate the successful cooperation with the FAO (Food and Agriculture Organisation), which resulted in the assessments of the SARD-M (sustainable agriculture and rural development in mountains);

We note with appreciation the contribution of the Carpathian Environmental Outlook (KEO), to develop a holistic, integrated and strategic environmental assessment of key issues in the Carpathian region for the implementation of the Carpathian Convention;

We appreciate the efforts of the Visegrad Group countries (the Czech Republic, the Republic of Hungary, the Republic of Poland and the Slovak Republic) to foster the dialogue with the European Commission;

We encourage full participation and involvement of the Carpathian communities in decision-making and implementation of relevant development policies, in accordance with the Aarhus principles;

We note that the experiences of cooperation of the “Alpine Space” reveal the need for long-lasting commitment and structural support by the European Union, to fully benefit of

the considerable potential of the mountains for regional development;

We express our conviction that cooperation with and support from the European Community and its Member States will be crucial to the development of the “Carpathian Space”, as an area of economic, social and environmental progress and sustainability in the heart of Europe, building on the region’s advantages and potentials, and addressing the challenges of mountain regions in an innovative and coordinated manner;

We invite the European Community to accede to the Carpathian Convention and also invite the European Community and its Member States to join the transnational platform of the Carpathian countries, and to continue to support the protection and sustainable development of the “Carpathian Space” through relevant instruments and programmes.

Done in Kyiv, Ukraine, 13 December 2006

Second Meeting of the Conference of the Parties (COP2) to the Framework Convention on the Protection and Sustainable Development of the Carpathians

MINISTERIAL DECLARATION 17-19 June 2008, Bucharest, Romania

We, the Ministers and other Heads of Delegations responsible for environment of the Czech Republic, the Republic of Hungary, the Republic of Poland, Romania, the Republic of Serbia, the Slovak Republic and Ukraine, attending the high-level segment of the Second Meeting of the Conference of the Parties to the Framework Convention on the Protection and Sustainable Development of the Carpathians (hereafter Carpathian Convention), held in Bucharest, Romania on 19 June 2008;

Recalling Resolution 62/196 of the General Assembly of the United Nations of 30 November 2007, which “notes with appreciation the Framework Convention on the Protection and Sustainable Development of the Carpathians, adopted and signed by the seven countries of the region to provide a framework for cooperation and multisectoral policy coordination, a platform for joint strategies for sustainable development and a forum for dialogue between all involved stakeholders”;

Recalling also the Ministerial Declaration of the Belgrade Conference held in October 2007, which welcomed “the mountain partnerships within and between the Alps, the Carpathians, the South-Eastern European mountain region, the Caucasus and the mountain regions of Central Asia”, recognized “the benefits from the existing legally binding instruments for the protection and sustainable development of the mountain regions like the Alpine and the Carpathian Convention”, welcomed “the initiative of South-Eastern Europe-

an and Caucasian countries to develop such instruments”, and encouraged the Mountain Partnership “to promote and foster exchanges of experience and expertise with other mountain regions in the world”;

Reaffirming the commitments made in the Carpathian Declaration and the decisions adopted at the First Meeting of the Conference of the Parties on 13 December 2006, in Kyiv, Ukraine;

Have declared the following:

We express our satisfaction with the ratification of the Carpathian Convention by all its seven Signatories;

We welcome the progress achieved in the implementation of the Carpathian Convention;

We take note of the important role of the Carpathian Convention as a coherent framework for transnational and cross-sectoral cooperation for the implementation of activities through out the Carpathian region;

We acknowledge the role and contribution of the Carpathian Convention in the implementation of the relevant global and regional programmes;

We stress the importance of participation and further involvement of the regional and local authorities as well as other stakeholders in the implementation of the Carpathian Convention;

We highly welcome the adoption of the Protocol on Conservation and Sustainable Use of

Biological and Landscape Diversity to the Carpathian Convention (hereinafter as the Biodiversity Protocol) and call for its ratification;

We look forward to developing the Strategic Action Plan as an implementation tool for the Biodiversity Protocol;

We appreciate the ongoing work on following protocols such as Protocol on Sustainable Forestry, Protocol on Sustainable Tourism and Protocol on Sustainable Transport and look forward to the finalization of these documents in order to enable more efficient implementation of the Convention and achieve its main objectives;

We welcome the development of a “Vision and Strategy for the Carpathian Area” as a strategic basis for the future sustainable development of the Carpathian region and other implementation strategies;

We welcome the successful work of the Carpathian Wetland Initiative as a partnership established in the framework of the Carpathian and Ramsar Conventions;

We note with appreciation the establishment of a regional platform for sustainable agriculture and rural development in the Carpathian region resulting of the fruitful cooperation with the FAO;

We support the development of an Inventory of Carpathian Heritage as well as other practical activities in support of cultural heritage and traditional knowledge of the local people;

We welcome the Carpathian renewable energy partnership and programme for a regional competence network established in cooperation with UNIDO and the FAO, which should promote sustainable use and produc-

tion of renewable energy while ensuring environmental sustainability;

We recognize the important support provided by the EU INTERREG III B CADSES “Carpathian Project” for the achievement of this progress in the implementation of the convention’s goals;

We underline the importance of continuing the structural support for the Carpathian region from the relevant European Union programmes, in particular the European Regional Development Fund, to support the follow-up projects prioritized in the framework of the Carpathian Convention;

We reiterate our call for the creation of a stand-alone “Carpathian Space” Programme of the European Regional Development Funds, following the successful example of the Alpine Space programme, supporting the general objectives of the Carpathian Convention, and request the interim Secretariat in cooperation with the EU Member States that are Parties to the Convention to undertake all necessary steps;

We appreciate the activities of the interim Secretariat provided by UNEP in Vienna in servicing the Carpathian Convention and leading the Carpathian Project, and we call upon the interim Secretariat to further support the Convention’s implementation by coordinating follow-up activities and projects;

We express our gratitude to the Government of Austria for its support to the Carpathian Convention, notably by continuing to host and co-finance the Secretariat of the Carpathian Convention on an interim basis;

We appreciate the continued support of the Italian Ministry of Environment, Land and Sea, and the efficient cooperation and partnership

with UNEP, the European Academy EURAC in Bolzano, Italy, and the Regional Environmental Centre (REC);

We express our gratitude to Switzerland for its commitment to support the Carpathian Convention implementation as part of the Swiss Contribution for EU enlargement;

We express our gratitude to ALPARC and the Task Force Protected Areas of the Alpine Convention for their support to the cooperation activities of the Carpathian Network of Protected Areas;

We reiterate our invitation to the European Community to accede to the Carpathian Convention;

We appreciate the signature of the Memorandum of Cooperation between the Alpine and Carpathian Conventions and the Convention on Biological Diversity, supporting

the implementation of the CBD in the Carpathian region;

We take note with concern of the impacts of climate change on mountainous areas and emphasize the need of a coordinated approach for coping with this global challenge within the Carpathian region;

We express our satisfaction with the Carpathian Convention joining the Mountain Partnership and emphasize our readiness to experience-sharing with other mountains regions;

We reaffirm our commitment to faithfully implement the Carpathian Convention;

We express our gratitude to the Government of Romania for having hosted the Second Meeting of the Conference of the Parties to the Carpathian Convention.

Done in Bucharest, Romania, 19 June 2008

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21 ACKNOWLEDGEMENTS

The Carpathian Project acknowledges the contributions made by the many individuals and institutions to the preparation and publication of the VASICA. Special thanks are extended to:

MAPS:

Daphne Institute of Applied Ecology, the Environmental Information Centre UNEP/GRID Warsaw, the European Academy, Carpathian Environmental Outlook (KEO) and Maciej Borsa - Urbanproject for providing the maps for the publication.

IMAGES:

Archiv Schko Beskydy, Carpathian Network of Protected Areas (CNPA), Edin Delic, Joachim Jaudas, Marian Marcincak, Balasz Miklos, Tamara Mitrofanenko, NASA, Mr. Nater, Adrian Radu Rey, Juhu Rahkonen, UNEP Vienna - ISCC and special thanks to Mircea Vergehet for providing the photographs.

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UNEP Vienna - Interim Secretariat of the Carpathian Convention (ISCC), Austria; RTI Polska, Poland; Hungarian Academy of Sciences - Centre for Regional Studies, Hungary; REC Slovakia, Slovakia; Retecamere, Italy; Podkarpackie region, Poland; Prefecture Authority of Drama - Kavala - Xanthi, Greece; University of Olomouc, Czech Republic; UNEP GRID Warsaw, Poland; WWF DCP, Austria; Academia Istropolitana Bratislava, Slovakia; Institute of Urban Development, Poland; Institute of Spaital and Cadastral Systems, Poland; ISF München (Social Research Institute), Germany; EURAC, Italy; CEEWEB, Hungary; Urbanproject Bucharest, Romania; International Charitable Foundation "Heifer Project International", Ukraine;



VASICA (Vision and Strategies in the Carpathian Area) is a transnational spatial development document and a key result of the EU CADSES Carpathian Project. Similar synthetic documents have been prepared for several large cooperation areas in Europe, the first and best known of these documents was the "Visions and Strategies around the Baltic Sea (VASAB)".

The Carpathian Project had to face a pioneering task. No common regional development strategy was prepared so far on the complex economic, environmental, social and spatial problems of the Carpathian area as a whole. Therefore,

VASICA deals first of all with the specific development opportunities and problems of the Carpathian area including its mountainous regions.

The Carpathian Convention (adopted and signed in Kyiv in May 2003) is, at present, the only multi-level governance mechanism covering the whole of the Carpathian area, allowing for cross-sector integration and broad stakeholder participation, so its significance in the context of VASICA cannot be exaggerated.

VASICA calls for the establishment of a support mechanism for the "Carpathian Space" in European Territorial Cooperation, following the success of the Alpine Space, to shift this transnational area from the periphery to a region of sustainable development in the heart of Europe, based on its exceptional cultural and natural heritage.

Thereby, VASICA can also contribute to the development of the future Danube region strategy, including vital environmental, economic and social aspects of sustainable regional development.

