

A Heightened Perspective

Regional Assessment of the Policy, Legislative and Institutional Frameworks Implementing the Carpathian Convention



REGIONAL ENVIRONMENTAL CENTER



Ministry for the Environment
Land and Sea



EURAC
research

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Prepared by

The Regional Environmental Center for Central and Eastern Europe
and the **European Academy Bolzano** with the support of national experts

December 2007



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About the REC

The Regional Environmental Center for Central and Eastern Europe (REC) is a non-partisan, non-advocacy, not-for-profit international organisation with a mission to assist in solving environmental problems in Central and Eastern Europe (CEE). The center fulfils this mission by promoting cooperation among non-governmental organisations, governments, businesses and other environmental stakeholders, and by supporting the free exchange of information and public participation in environmental decision making.

The REC was established in 1990 by the United States, the European Commission and Hungary. Today, the REC is legally based on a charter signed by the governments of 29 countries and the European Commission, and on an international agreement with the government of Hungary. The REC has its head office in Szentendre, Hungary, and country offices and field offices in 17 beneficiary countries, which are: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia and Turkey.

Recent donors are the European Commission and the governments of Austria, Belgium, Bosnia and Herzegovina, Bulgaria, the Czech Republic, Croatia, Denmark, Estonia, Finland, Germany, Hungary, Italy, Japan, Latvia, Lithuania, the Netherlands, Norway, Poland, Slovakia, Slovenia, Sweden, Switzerland, the United Kingdom, and the United States, as well as other inter-governmental and private institutions.

About EURAC

The European Academy (EURAC) is an innovative institute for research and scientific training, located in Bolzano, Italy (www.eurac.edu). Founded in 1992, it is divided into nine research institutes. The institute's international character is especially noticeable in the diverse origins of its staff: 120 researchers from 11 different European countries are currently working at EURAC.

Located in the central Alps, EURAC is in an ideal position to carry out applied research in mountainous regions, and is proud to host the outpost seat of the permanent secretariat of the Alpine Convention.

One of the research institutes of the EURAC is the Coordination Unit "Alpine Convention-IMA (International Mountain Agreements)" that is directly involved in the consulting activities that the European Academy gives to Italian institutions, such as the Italian Ministry for the Environment, Land and Sea, and to international institutions such as the UNEP, OECD, the European Commission and the Mountain Partnership.

In the framework of the Carpathian Convention EURAC has been very active since the Italian Presidency of the Alpine Convention, (2001-2002) together with UNEP and some countries from the Carpathian area in the promotion of this Convention; for example EURAC organised and hosted the first negotiation meeting for the Carpathian Convention in June 2002, and the last one where the draft of the Convention was finalised in March 2003.

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CAP	Common Agricultural Policy	OECD	Organisation for Economic Co-operation and Development
CC	Carpathian Convention	OKTVF	Hungarian National General Directorate for Environment, Nature Protection and Water
CERI	Center for International Studies and Research	PEEN	Pan-European Environmental Network
CEE	Central and Eastern Europe	PRTR	Protocol on Pollutant Release and Transfer Registers
EIA	Environmental impact assessment	REC	Regional Environmental Center for Central and Eastern Europe
EAGGF	European Agriculture Guidance and Guarantee Fund	SAP	Stabilisation and Association process
EU	European Union	SAPARD	Special Accession Programme for Agriculture and Rural Development
EURAC	European Academy Bolzano	SARD	Sustainable Agriculture and Rural Development
IWRM	Integrated water resources management	SFM	Sustainable forest management
FOMI	Hungarian Institute of Geodesy, Cartography and Remote Sensing	SEA	Strategic environmental assessment
IPPC	Integrated pollution prevention and control	SEE	South Eastern Europe
ISCC	Interim Secretariat of the Carpathian Convention	UNECE	United Nations Economic Commission for Europe
LANDEP	Landscape ecological planning	UNDP	United Nations Development Programme
MARD	Hungarian Ministry of Agriculture and Rural Development	UNEP/ROE	United Nations Environment Programme – Regional Office for Europe
MEA	Multilateral environmental agreement	UNESCO	United Nations Educational, Scientific and Cultural Organization
MEW	Hungarian Ministry of Environment and Water	UNIDROIT	International Institute for the Unification of Private Law
MRD	Hungarian Ministry for Regional Development	UNWTO	World Tourism Organization
NDP	Hungarian National Development Plan	WHO	World Health Organization
NEP	Hungarian National Environmental Programme		
NGO	Non-governmental organisation		

Disclaimer: This regional assessment is largely based on the results of national assessments that were prepared by independent national experts. The national assessments are available at <www.rec.org/REC/Programs/environmentallaw/carpathian/outputs.html> in both English and in the relevant national languages. The opinions expressed in the national assessments are those of the independent authors and not necessarily opinions of the REC, EURAC or the Italian Ministry for Environment, Land and Sea. The present study covers all policy and legal developments up to October 2005, however taking into account three milestone developments which have occurred after this date: firstly, that Serbia and Montenegro have become two separate states since June 2006; secondly, that Romania joined the European Union in January 2007; and thirdly, that Serbia ratified the Carpathian Convention in October 2007.

Foreword

The Regional Assessment on the Carpathian Convention, together with the Handbook on the Carpathian Convention (2007), are intended to contribute to the sustainable development of the Carpathian region, as both studies are expected to raise awareness of the value of these mountains and of the functioning of the legal instrument protecting them. I am convinced that local authorities, along with all of the institutions and people that are involved in the management of the Carpathian Mountains, could benefit from the present publication and the handbook as well. The works provide a clear picture of the common priorities of the Carpathian countries and of the issues that most urgently need to be addressed to ensure effective implementation of the convention itself.

The assessment also reconfirms the consolidated collaboration among the different institutions (the Regional Environmental Center for Central and Eastern Europe, the European Academy, and the United Nations Environment Programme) and the national experts of the countries involved that combined their expertise and know-how. This cooperative work pleased the Italian Ministry for Environment, Land and Sea, which had promoted and facilitated the process of cooperation among the Carpathian countries from the beginning.

We are therefore proud to be involved and to support the very first phase of implementation of the Carpathian Convention, and we think that, thanks to this contribution, the Carpathian process could benefit from the experience acquired by the Italian Ministry for Environment, Land and Sea during the implementation of the Convention for the Protection of the Alps, signed in 1991 and entered into force in 1995.

Corrado Clini

Director-General

Italian Ministry for Environment, Land and Sea

Preface

The Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention) entered into force on January 4, 2006. It has been a highly successful convention to date and constitutes a vital instrument for managing and protecting the region of the Carpathian Mountains.

For the millions living in this region, particularly those in local communities, the Carpathians are an integral part of everyday life. The region is a hot-spot for cultural customs and traditions, as well as for ecological and recreational activities. The Carpathians are also unique in Europe for their large reservoir of biodiversity, including rare species such as the brown bear, wolf, European bison, golden eagle and unique insects. Furthermore, mountain regions have special geographic, topographic and climatic characteristics and are, thus, sensitive to large changes. Hence, it is crucial to strike a balance between development and protection of the Carpathian Mountains.

Under the umbrella project Support for the Implementation of the Carpathian Convention in the Framework of the Alpine-Carpathian Partnership, the REC, in partnership with European Academy Bolzano (EURAC) and with financial assistance from the Italian Ministry for Environment, Land and Sea, undertakes several projects designed to facilitate the implementation of the convention. These project activities include the publication of the Handbook on the Carpathian Convention, national assessments and this regional assessment. A number of workshops will be carried out in spring 2008 with the overall objective of raising awareness of the Carpathian Convention among local authorities and other stakeholders.

This regional assessment is designed to be a useful tool in mapping out the achievements, deficiencies and challenges found in the Carpathian region. This assessment also contains recommendations for authorities involved in the development, implementation and application of the national legislation and policy framework ensuring compliance with the commitments under the convention.

Marta Szigeti Bonifert
Executive Director, REC

Effective implementation of a convention depends on having a clear and broad perspective of the actual situation of the implementing country concerning the subject matter of the convention. In this context, the regional assessment of the Carpathian Convention provides a comparative analysis of the legal and administrative situation of the seven Carpathian countries from an environmental point of view, highlighting the main fields where urgent intervention is needed in order to implement the convention itself and providing recommendations to be followed by all the actors involved, both at local and national level.

The assessment represents a tangible sign of the consolidated cooperation between the Regional Environmental Center for Central and Eastern Europe (REC) and the European Academy (EURAC), under the umbrella project Support for the Implementation of the Carpathian Convention in the Framework of the Alpine-Carpathian Partnership. Based on a partnership agreement stipulated in 2003 by the United Nations Environmental Programme (UNEP), the Italian Ministry for Environment, Land and Sea and the REC, the project aims at facilitating the implementation of the Carpathian Convention by providing scientific support and targeted expertise to solve critical issues. In 2004 the European Academy also acceded to the agreement. In this framework, the project benefits from the advanced expertise that EURAC has gained, giving technical support to the Italian Ministry for Environment, Land and Sea in the development of studies and applied projects related to the application of the Alpine Convention.

Considering what has been highlighted by the Alpine experience, that is to say the fundamental importance that local authorities and stakeholders cover in the practical implementation of a convention, EURAC trusts that this study, being a comparative study mainly addressed to local authorities, constitutes an incisive instrument that will guide public administrations, organisations and civil society through the practical implementation of the principles included in the convention.

Stephan Ortner
Director, EURAC

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This regional assessment was produced by the Regional Environmental Center for Central and Eastern Europe (REC) in partnership with European Academy Bolzano (EURAC) under the umbrella project Support for the Implementation of the Carpathian Convention in the Framework of the Alpine-Carpathian Partnership involving the United Nations Environment Programme (UNEP), the REC and EURAC. The Steering Committee included Paolo Angelini, Marta Szigeti Bonifert, Harald Egerer, Stephen Stec and, at various times, Lorenzo Rilasciati and Stefania Romano.

This assessment is mainly based on the results of national assessments of the policy, legal and institutional frameworks related to the implementation of the convention. Hence, we would first of all like to pay tribute to the national experts who performed these assessments: Ingrid Belcakova, Fiona Borthwick, Tetyana Budyakova, Emilian Burdusel, Jelka Crnobrnja-Isailovic, Yaroslav Dovhanych, Jana Hajduchova, Laszlo Mathe, Rada Matic, Wojciech Mroz, Anatoly Pavelko and Dmytro Skrylnikov.

The results of the national assessments have been analysed, digested, and broken down to form part of this overall regional assessment, which aims at presenting the state of play of the Carpathian countries in implementing the convention. The assessment was written by, in alphabetical order, Arianna Broggiato, Tsvetelina Borissova Filipova, Giacomo Luciani, Miriam Markus-Johansson, Cecile Monnier, Dana Carmen Romanescu, Ludovic Rousseau, Pier Carlo Sandei and Stephen Stec. Special thanks go to Professor Tommaso Anfodillo from the University of Padova, who provided the authors with valuable comments and input. Harald Egerer from the Secretariat of the Carpathian Convention is also gratefully acknowledged for his support. We are also grateful to the REC publishing team for their work on the copy-editing, proofreading and lay-out of the regional assessment.

Finally, we would also like to acknowledge and thank the Italian Ministry for Environment, Land and Sea and the Italian Trust Fund for the generous financial support for this project.

Introduction

The present regional assessment analyses the legal, policy and institutional frameworks of the seven Carpathian countries (**Czech Republic, Hungary, Poland, Romania, Serbia,* Slovakia and Ukraine**) with respect to the environmental field of action covered by the Carpathian Convention. The aim of this audit is to assess these frameworks in order to evaluate, both on the national and regional levels, the readiness of Carpathian countries to effectively implement the Carpathian Convention and to deliver on the commitments undertaken.

The assessment identifies common priority issues for the Carpathian countries in their implementation of the Carpathian Convention and formulates a set of comprehensive recommendations for streamlining implementation efforts targeted at government at all levels, donors, and civil society organisations.

The assessment is based on the findings of national assessments drafted by independent experts from each of the Carpathian countries. These experts were commissioned to answer specific questions dealing with the relevant legislative, institutional and policy frameworks in their countries on the basis of a questionnaire developed by the project partners. The questionnaire touched upon all the issues covered by the convention: land resources management, biological and landscape diversity, water management, agriculture and forestry, transport, tourism, industry and energy, cultural heritage, environmental impact assessment, education and public participation.

The national assessments provided the basis for an article by article analysis and comparison on a regional level in order to identify priority issues for which intervention measures are needed in line with the recommendations made. A sectoral approach was taken in line with the structure of the convention. However, it became evident that consideration also had to be given to certain cross-cutting issues, including NGOs' involvement, international initiatives and transboundary cooperation. Furthermore, a table on financial mechanisms has also been included to illustrate the main sources of funding (internal, European and international) for each country in relation to each topic area of the convention. Finally, the report also contains an annex on the status of participation of Carpathian countries in the relevant multilateral environmental agreements.

* At the time of the adoption of the convention, the relevant state was the Union of Serbia and Montenegro. This union dissolved following the constitutional referendum for the independence of Montenegro (May 21, 2006). The national assessment was conducted before this date and describes the situation before the independence. However, for the sake of simplicity and to reflect the current status of the country, we refer to only Serbia.

General Issues

General Issues

The general part covers basic issues related to the convention's scope and entry into force, and aims at summarising common priority issues in the implementation of the Carpathian Convention, including a set of comprehensive recommendations for streamlining implementation efforts targeted at donors, governments and civil society organisations.

Delimitation of the Carpathian Mountains on the national level

Assessing whether a particular law, policy or institution is relevant to the Carpathian Convention depends in the first place on the scope of the convention, in particular its geographical scope. The identification of the "Carpathian region"¹ belonging to each country is therefore of fundamental importance.

The convention leaves the definition of the Carpathian region to the Conference of the Parties (COP), which did not endorse any proposal at its first meeting in December 2006. To identify the portion of the territory belonging to the Carpathian Mountains, the national assessments have variously referred to ministerial decisions, national laws or statistical data of national or international research centres.

In **Romania**, following the formulation of a reservation on the geographical scope of the convention at the time of its signature, the criteria for the delimitation (32.6 percent of the whole territory) are stated in the Law on the Mountain Region (no. 347/2004) and the governmental decisions 949/2002 and 1779/2004. In the **Czech Republic**, the delineation of the Carpathian area (9.05 percent of the whole territory) was done by the Ministry of the Environment based on geomorphology. The proportion of the territory of **Poland** covered by the Carpathians is 5.48 percent, but this percentage can increase if the administrative borders are taken into account.² In **Slovakia**, in line with the scientific findings of the European Academy (EURAC),³ it was estimated that 71.5 percent of the whole territory is occupied by the Carpathians.

For the other three countries the question of defining the territorial range of the Carpathians was in 2007 still under discussion and has not yet been resolved. In

Serbia, and according to the Geographical Institute of the Serbian Academy of Science and Arts, the Carpathian Mountains cover 0.35 percent of the territory. However, opinions about which part of the territory should be considered as the Carpathian Region are not unanimous. The **Ukrainian** government had not yet defined the territorial coverage but has expressed its intention to make a final decision at the second meeting of the Parties to the Convention. Awaiting this decision, the Ministry of Environmental Protection decided to use provisionally the delineation developed by EURAC and elaborated by the Institute of Ecology of the Carpathians of Ukraine, according to which the Carpathian Region represents 6.1 percent of the national territory. However, some experts from national research centres in Ukraine did not agree with this approach: some because it includes territory that, from a physical-geographic perspective, is not mountainous, others because they consider the approach too geographical. In **Hungary**, various approaches had been taken on the delineation of the Hungarian Carpathians, based on geomorphology and on a broader understanding of areas dependent on the mountains. The Carpathian Ecoregion Initiative (CEI) has made a map to delineate the Hungarian Carpathians which forms the basis for the Ministry of Environment's proposal for the Hungarian delineation of the Carpathians.⁴

The designation of the administrative units laying within the scope of application upon which to concentrate the analysis of the assessment is the most important step in practical delimitation. Only **Romania**, **Serbia** and **Ukraine** communicated precise administrative units subject to the national assessments.

Ratification and entry into force of the Carpathian Convention

According to article 21.3 of the convention it "shall enter into force on the ninetieth day after the date of deposit of the fourth instrument of ratification, approval, acceptance or accession." The first four countries to ratify the convention were the **Czech Republic**,⁵ **Hungary**,⁶ **Slovakia**⁷ and **Ukraine**⁸ and the last of these to deposit its instrument of ratification was

Hungary on October 6, 2005. Thus, the Convention entered into force on January 4, 2006. **Poland**,⁹ **Romania**¹⁰ and **Serbia** subsequently ratified the convention and for them the convention entered into force at a later date. From the respective dates of entry into force all the obligations of the convention became binding upon the states parties.

Main driving forces for the convention's implementation

The process of adopting the European Community environmental *acquis communautaire* (EC *acquis*) contributes significantly to the implementation of the principles and concepts provided for in the convention. The five EU member states are under close scrutiny of the commission and they have to comply with the EC *acquis*, otherwise they could be subject to infringement proceedings. **Serbia** is proceeding with adopting the EC *acquis* and is eligible for EU financial assistance for these efforts. While **Ukraine** is in a different position, it still looks at EC environmental legislation as a possible model to follow when developing its own legislative system.

The EC *acquis* covers most areas regulated by the Carpathian Convention and provides efficient horizontal instruments for environmental protection systems, such as EIA and SEA, access to environmental information and public participation and the development of environmental information systems. As a concrete example of the influence of the *acquis* on industry-related topics in the convention, the EC legal requirements regarding prevention and management of major industrial accidents, integrated permitting and specific legislation for various industrial sectors are operational instruments implementing the convention's requirement to "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."

Another major driving force is compliance with multilateral environmental agreements (MEAs). The Carpathian countries are parties to the main international environmental agreements and as such they have assumed obligations that have to be complied with also in the Carpathian region. The UNECE Industrial Accidents Convention also puts into place an effective mechanism to prevent and mitigate the effects of industrial accidents.

Civil society organisations are becoming increasingly aware of international, European and national environmental standards and, hence, are stepping up the pressure on governments to devote more attention and resources to environmental issues. Such organisations are also a driving force in raising the awareness of local communities and local authorities about the exceptional nat-

ural and cultural value of the Carpathian region and the need for protection.

Donors may also influence to a large extent the process of implementation of the convention, through their funding programmes and the types of projects they are financing.

Mountain national planning and policy

The only countries that have adopted specific planning documents for the implementation of the Convention are **Poland** and **Ukraine**. **Ukraine** has developed a comprehensive plan for the implementation of the convention, the Primary Actions Plan, which was adopted in 2004. This detailed plan prescribes specific actions to be undertaken for the enforcement of the Law on the Ratification of the Framework Convention on the Protection and Sustainable Development of the Carpathians and sets out basic principles of sustainable development at the local level.

In **Poland** the implementation programme of the National Ecological Policy¹¹ includes a specific programme for implementation of the Carpathian Convention, and the Ministry of Environment is the responsible authority for implementing this programme. No other policy refers to Carpathian management, but those policies were drafted before the adoption of the Convention and the adoption of the next national development plan is expected in the first half of 2007.

Besides these, one Carpathian country has a national policy dedicated specifically to mountains. The **Romanian** government approved the Sustainable Development Strategy of the Mountain Region in 2004, which contains general objectives and measures for the sustainable development of mountainous areas. The responsibility to implement this strategy is given to the ministries which are part of the Inter-Ministerial Committee for the mountain region.¹²

Although the other countries do not have specific policies or strategies on mountains, some of them have developed general documents with reference to sustainable development in mountain areas. In the **Czech Republic**, the National Biodiversity Strategy deals with mountain ecosystems in a special chapter, requiring monitoring of the development of biodiversity and a reduction of damage to the mountain landscape and managing in a sustainable way non-forest semi-cultural and cultural ecosystems. In **Poland**, policies at the local level deal with sustainable development of mountain areas. In addition, **Slovakia** and **Ukraine** have adopted environmental policies and strategies, which to varying degrees deal with sustainable development and could have some influence on mountain planning.

Hungary and **Serbia** do not have any specific national mountain policies. Nevertheless, they have adopted general environmental policies applicable to the whole territory, including mountain areas.

The reasons for the lack of directed policy measures for the Carpathian mountains differ from country to country. For instance, in **Hungary** and **Serbia**, a very small proportion of the territory is mountainous so it is unlikely that these countries will develop policies and strategies focused specifically on the Carpathians. In **Poland** a number of points have been raised against specific measures for the development of a “Carpathian region,” including:

- concerns that favourable policies in the Carpathian region would put other mountain communities at a disadvantage, i.e. a form of discrimination;
- disagreement on whether it is fair that the determining criteria for being eligible for subsidy should be location in the Carpathian mountains; and
- the existence and possible overlap of other legal and financial mechanisms applicable for regional development.

Environmental legislation and the principles of the Carpathian Convention

According to Article 2.2 of the Carpathian Convention,¹³ the Carpathian countries are obliged to promote key environmental principles in the implementation of the convention: the polluter pays principle, public participation and stakeholder involvement, transboundary cooperation, integrated planning and management of land and water resources, a programmatic approach, and the ecosystem approach. For most of the countries (**Czech Republic, Hungary, Romania, Serbia, Ukraine**) these principles have been endorsed in environmental policies.

In only two countries does environmental legislation not prescribe the implementation of some of the principles. In the case of **Poland**, there is no reference to the precautionary and prevention principles or the integrated planning and management of land and water resources in the national policy or legislation. In **Slovakia**, policy and legislation do not extend to the programmatic and ecosystem approaches. Since no country, apart from **Romania**, has developed specific mountain policy, these principles are not sufficiently endorsed in mountain policy. Although **Romania's** national mountain policy endorses most of the environmental principles,¹⁴ it does not refer to the precautionary principle, the polluter pays principle or the transboundary cooperation principles.

Main role of institutions and authorities in promoting sustainable development and coordination

A main tool in attaining sustainable development is the integration of environmental, social and economic considerations. However, these three components are not always taken into consideration in the responsibilities of decision makers within the Carpathian countries.

In **Ukraine**, the Ministry of Environmental Protection and other relevant institutions have mandates that include the integration of environmental, social and economic considerations. Similar rules have been adopted in **Poland** and **Slovakia**.

Romania, through the Law on the Mountain Region, established the National Agency for the Mountain Area (NAMA) whose main competence is the development and protection of mountain communities and the environment, including the integration of environmental, social and economic considerations.

In **Serbia** the integration of environmental policy with economic and other sectoral policy remains weak, since policy making is formulated by sectoral planning and the responsibilities spread across several government institutions with poor horizontal and vertical coordination.

Only **Romania** and **Ukraine** have introduced coordinating mechanisms between various institutions to facilitate the integration of specific concerns and strategies. In **Romania**, the Inter-ministerial Committee (coordination at national level) and the Country Committees (coordination at local level) were established for the mountain region, in accordance with the Law of the Mountain Region and for the implementation of the Sustainable Development Strategy of the Mountain Region in order to coordinate and supervise projects, policies and sectoral strategies. The inter-ministerial committee includes representatives of various sectoral ministries and its secretariat is provided by the National Agency for Protected Areas, functioning under the Ministry of Agriculture, Forestry and Rural Development. In **Ukraine**, the Co-ordination Council for the Implementation of the Provisions of the Carpathian Convention was set up in accordance with the Primary Actions Plan.

Although no coordinating mechanisms have yet been put in place in the **Czech Republic** and **Hungary**, countries such as **Poland, Serbia** and **Slovakia** have established councils for sustainable development that have general coordinating responsibilities in the field of sustainable development also in mountain areas.

Cross-cutting issues

International initiatives and transboundary cooperation

The participation of the Carpathian countries in relevant multilateral environmental agreements (MEAs)¹⁵ dealing with biodiversity conservation, air pollution, climate change, desertification, international watercourses, liability, environmental impact assessment and public participation have been widely ratified by all the Carpathian countries except for **Serbia**, which still has to ratify a number of MEAs. Despite the positive involvement of the Carpathian countries in different international agreements, several factors hamper their effective implementation, such as insufficient awareness of the benefits of adopting certain MEAs, insufficient knowledge of their requirements and means of fulfilling the obligations, and lack of available funds.

Carpathian countries are involved in several initiatives developed under MEAs, such as the Trilateral Ramsar Initiative between Austria, **Slovakia** and the **Czech Republic**. In the field of water management, international cooperation is quite advanced: several MEAs concerning river protection are important in the Carpathians, including the Convention for the Protection and Sustainable Use of the River Danube under which the Transnational Monitoring Network has been created. This initiative is aimed at harmonising monitoring and assessment methods and at elaborating joint projects between riparian countries.

Carpathian countries have also joined existing processes at the international and regional levels such as the European Spatial Planning Observatory Network (ESPON), "Man and Biosphere," the Global Learning and Observations to Benefit the Environment (GLOBE) Programme, the Danube Co-operation Process and the International Partnership for Sustainable Development in Mountain Regions.

There are also many examples of cross-border cooperation between EU member states due to financial support and common EU programmes (e.g. PHARE, INTERREG, Euroregions, and other EU initiatives). For instance, cooperation between **Slovakia**, **Poland**, **Hungary** and the **Czech Republic** is being continuously developed since their EU accession, especially on nature and water issues, on biodiversity conservation and cultural heritage. The Visegrad process involving the **Czech Republic**, **Slovakia**, **Poland** and **Hungary** started in 1991 with the goal of adopting a common approach in the process of integration within the EU. It mainly serves as a political forum for cooperation and includes the Visegrad Fund, offering financing for cross-border cooperation between the concerned countries. The fund supports

projects in the areas of culture, science and research, education and youth exchange programmes, tourism development and transboundary cooperation. It does not explicitly take into account the principles of sustainable development.

Another example of effective cooperation is the NATURA 2000 network, which encompasses most of the Carpathian countries and is an important instrument in the field of monitoring, since it imposes a common format for data gathering and reporting on the status of protected natural habitats and species listed in the EU Habitats and Birds Directives. Moreover, the EU Neighborhood and Partnership Instrument may provide a good framework for supporting cross-border cooperation between all Carpathian countries, especially with regards to sustainable land use.

Finally, transboundary cooperation along Carpathian country borders is well developed, especially among local communities and NGOs. Transboundary cooperation is most successful in regard to biodiversity and nature protection, water management, culture and educational activities.

The **Slovakian** government has signed an agreement with **Poland** and **Ukraine** on the establishment and management of the joint Eastern Carpathians biosphere reserve. It influences local cooperation in this field (cultural events, folk festivals and days of culture of the neighbouring states). Two Euroregions have been established on the **Czech**, **Slovak** and **Polish** border within the Carpathian region. Many transboundary projects have been carried out but this potential has not been fully realised. **Serbia** and **Romania** are investigating the option of declaring the Iron Gate area a Transboundary Biosphere Reserve and developing a joint management plan. Several bilateral agreements regarding flood and emergency notification and response have been signed among neighbouring states (between **Romania** and the former **Federal Republic of Yugoslavia** in 1955, **Romania** and **Hungary** in 1986, **Romania** and **Ukraine** in 1997), establishing transboundary information and monitoring systems and early warning procedures.

Under certain frameworks, bilateral transboundary commissions have been created. The Romanian-Hungarian Commission functions well, meets regularly and evaluates the works of the sub-commissions. In the context of the severe flooding in 2005, the ministries of the environment of **Hungary** and **Romania** have engaged in efficient cooperation. In 2004, and following the establishment of a Tisza Forum on Flood Control, **Hungary**, **Romania**, (then) **Serbia and Montenegro**, **Slovakia** and **Ukraine** signed a Memorandum of Understanding for the Tisza River to set up a river basin management plan under the umbrella of the Convention on Cooperation for the Protection and Sus-

tainable Use of the Danube River. Moreover, cooperation between research institutes and universities is equally important for the Carpathians as it enables exchange of experience and expert networking.

NGO involvement

The approach taken by NGOs active in the environmental field in the Carpathian region differs from country to country. Generally speaking, NGO activities have contributed to an increase in the environmental awareness of civil society. This change in awareness is mainly a result of their projects, activities, campaigns, compilation of data, trainings, cooperation initiatives, etc. The biggest obstacles for NGOs include a lack of funds and a low level of cooperation with authorities. Furthermore, although their activities are diverse, NGOs tend to focus on single topics covered by the Carpathian Convention.

In the field of spatial planning and land resource management, many NGOs work on rural development issues, such as land reform support. The most common activity of NGOs is to participate in the development of spatial plans at the local level, for instance by formulating comments and suggestions during public consultations. However, in **Romania** and **Serbia**, few activities have been developed by the civil society in this respect.

In all Carpathian countries, NGOs play an important role in the field of conservation and sustainable use of biological and landscape diversity, as well as sustainable agriculture and forestry. Their work is mainly directed towards the establishment, management and protection of nature protection areas, the protection and conservation of endangered and rare species, and the sustainable management of forests.

For instance, in **Ukraine**, the Carpathians Zakarpatsky Ecoclub participates in activities related to the establishment of nature protection areas and regional eco-networks, and works on the preservation of large carnivores. **Ukrainian** NGOs such as Bureau of Environmental Investigation, Environment-People-Law and Ecopravo-Lviv provide free legal help to citizens, environmental NGOs and even the administration and personnel of nature protection areas on environmental protection issues. These NGOs also engage in public awareness raising and legal education on conservation issues.

In **Poland**, numerous activities focused on the protection of natural forests in the Carpathians, such as the transboundary project Green Carpathians carried out together with the **Slovakian** forest protection association VLK, which is involved in a number of projects oriented towards the protection of forests and forest animals, and is also very active in regeneration activities in the High Tatras. The project targets nature conservation

activities in the Polish and Slovakian Carpathians and includes ecological education, the creation of a point for legal consultations (“green phone”), training for local stakeholders, the building of local support for ideas on biodiversity conservation and the conservation of large carnivores.

The **Romanian** Working Group on Sustainable Agriculture and Biodiversity, made up of five regional NGOs, was created under the project The Development of Sustainable Agriculture in Romania financed by the Heinrich Boll Foundation (Germany) for the period 1996-1999. The main aim of the working group was to develop strategies for introducing and improving organic agriculture and low-input sustainable agriculture in Romania. One of its achievements was the successful lobbying for legislation establishing EU compatible organic standards in the country. Furthermore, in the **Czech Republic**, NGOs are particularly active in the region of the White Carpathians, promoting sheep and cattle grazing and the use of traditional fruit varieties.

There are several NGOs active in the field of sustainable water management. One is the Danube Environmental Forum, a non-governmental network of organisations registered in 2000, which is active in the Danube Regional Project financed by the UNDP/GEF and involves six Carpathian countries. This project also supports the Convention on Cooperation for the Protection and Sustainable Use of the Danube River.¹⁶

In the **Czech Republic**, the Ecological Institute Veronica was commended by the Ramsar Convention Secretariat for its long-term efforts in protecting the trilateral Ramsar site of the Morava and Danube rivers. In **Hungary**, NGOs are actively lobbying for the implementation of the EU Water Framework Directive, which has led to fruitful results. In **Poland**, the association Greenworks is dedicated to water river management in the mountains. It has implemented projects focusing on the conservation of mountain wetlands. However, the general public has voiced objections to further regulations of the Carpathian and sub-Carpathian rivers.

Regarding transport and infrastructure, the activities of NGOs are mainly focused on promoting sustainable transport systems and new infrastructure projects. One of the big projects in the region is the revival and development of a tourist route: the “Carpathian Tram,” based on the narrow-gauge railroad network in the Carpathian region. In **Czech Republic**, the Children of the Earth organise a wide-reaching campaign, Day without Cars, each year in September. During the 14-year history of this event, many other NGOs have joined the initiative and have organised a wide range of activities in support of sustainable transport, cycling and transport safety. Many municipalities support this activity by offering free public transport on this day.

In the Carpathian countries there is a wide network

of tourism NGOs, although very few are involved in activities related to sustainable tourism development. For instance, in **Romania** and **Slovakia**, the NGO activities in the sustainable tourism area are too diffuse and lack an overall focus and long-term vision. Despite this weakness, some NGOs promote interesting activities in these two countries, such as the **Romanian** Ecotourism Association (AER), which established a partnership for nature conservation and tourism development among tourism associations, and NGOs active in local development and nature conservation.

In **Serbia**, the Centre for Sustainable and Responsible Tourism Development (CenORT) conducts research and promotes education and raising awareness of the importance of tourism and its impact on economic and social development. The NGO's basic aim is to exert influence on decision and policy makers at all levels, promoting the implementation of the principles of sustainable and responsible tourism development in Serbia.

NGOs in the region are active in the energy sector, but less so in the field of industry. These activities are primarily oriented towards protests against the use of nuclear power or in favour of alternative, mainly renewable, energy sources. For example, the **Slovakian** Ekopolis Foundation runs the programme Alternatives to Nuclear Power, through which support is given to non-governmental organisations in their activities promoting the transfer from nuclear power to renewable resources of energy and increased energy efficiency. Many projects also relate to climate change, since improved access to cleaner and more secure energy resources will reduce resource depletion and slow down the growth of greenhouse gas emissions. One of the most active **Romanian** NGOs in the field of climate change and energy is Terra Mileniul III, which provides the secretariat of the Climate Action Network for Central and Eastern Europe (CANCEE) with an umbrella group, bringing together climate change-related NGOs from across Central and Eastern Europe.

NGOs are also active in protecting cultural heritage and traditional knowledge. For instance, in the **Czech Republic** several NGOs promote regional brands for products developed in the region that use traditional methods. The association Traditions of the White Carpathians (TWC) promotes a brand guaranteeing the use of traditional methods and products from the region of the White Carpathians. Furthermore, many NGOs have carried out projects focusing on the organisation of cultural events, especially in **Slovakia**, where a festival takes place including presentations of traditional customs, music, dance, etc. In most of the Carpathian countries, specific events have been organised by stakeholders directly involved in the safeguarding of cultural heritage, such as historical monuments, traditional crafts and trades, local customs and archi-

ture. For example, the **Ukrainian** Society for the Protection of Monuments of History and Culture (USPMHC) is present in all regions of the country, including the Carpathians, and the Kosiv State Institute of Applied and Decorative Arts promotes the renaissance of forgotten and disappearing handcrafts in Hutsul areas.

NGOs are actively involved in the process of environmental impact assessment (EIA) and strategic environmental assessment (SEA), especially in the **Czech Republic, Slovakia** and **Ukraine**. For example, in the **Czech Republic** the Ecological Institute Veronica has taken part in the EIA of several projects in the Carpathians, but has faced many difficulties due to the reluctance of the regional government to provide detailed information. In **Romania** the Regional Center for Major Industrial Accident Prevention is active in the field of mine restoration and ensuring the integrity of mining sites. In contrast, NGOs are only nominally involved in the fields of early warning and monitoring.

Awareness raising and education are among the main activities undertaken by environmental NGOs today. Their efforts in this regard touch all aspects of the Carpathian Convention (biodiversity, water, transport, etc). Most of the NGOs that operate in the Carpathian region contribute to raising awareness by, inter alia, ecologically oriented lessons in schools, work in extracurricular institutions, and through organising different actions and campaigns involving young people. Moreover, some NGOs publish and disseminate thematic ecological brochures and newspapers. In the **Czech Republic**, 11 centres of environmental education run by civil society organisations in the Carpathian region have been established. They implement a broad range of projects and activities connected with environmental education and public awareness.

NGOs also play an important part in strengthening public participation, especially at the local level. As such, they have developed initiatives and networks in the Carpathian region by disseminating environmental information through their websites and other publications.

Recommendations

- The delimitation of national territory lying within the Carpathians needs to be clarified in each country, since this is a fundamental issue for effective implementation of the convention.
- The administrative units involved in the application of the convention need to be defined in the **Czech Republic, Hungary, Poland** and **Slovakia**. The lack of designation, however, should not prevent the application of the ecosystem approach.

- Specific plans and programmes for implementing the Carpathian Convention should be developed, especially in **Czech Republic, Hungary** and **Serbia**. In **Poland, Romania** and **Slovakia**, the existing sustainable development plans should contain a specific section on the Carpathian Convention.
- With the exception of **Romania**, specific national policies for sustainable mountain development need to be developed in all countries.
- Environmental legislation and especially laws on mountains should cover all of the principles of sustainable development encompassed by Article 2 of the convention.
- The integration of environmental, social and economic considerations needs to be introduced as a priority responsibility for authorities that are involved in the implementation and application of the convention, especially in the **Czech Republic, Hungary** and **Serbia**. **Romania**'s National Agency for Mountain Areas serves as a good example and model with its structure and responsibilities.
- An interministerial coordination process should be established in the **Czech Republic** and **Hungary**, and specific competencies in the field of sustainable mountain management should be given to a general coordinating body in **Poland, Serbia** and **Slovakia**.

Analysis of the Implementation of the Operative Articles of the Carpathian Convention

Articles 3 and 5

Land Resources Management and Spatial Planning

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 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.

The climate and geographical conditions present in the Carpathian Mountains render the land vulnerable and sensitive to adverse impacts. The development of infrastructure and urbanisation may increase income in the area, but they also bring considerable environmental impacts.

The consequence of the transition from exclusive state ownership of land resources during the Soviet period, to a complex land-ownership structure with redistri-

bution of land resources between new owners and users, has resulted in chaotic spatial development in the region. However, important steps have been taken to improve land use and management, in particular with respect to spatial planning, where regional and urban plans cover almost the whole territory of the Carpathian countries. However, modernisation of land management is still a cumbersome issue, and not all of the countries have a land cadastre or up-to-date property registers.

Policy and legal assessment

Policies

In all of the Carpathian countries, national-level policies for integrated land resources management and spatial planning have been adopted.

The national policies adopted, such as the Spatial Plan of **Serbia**, the Concept of National Spatial Development of **Poland**, the Spatial Plan for Territorial Management of **Romania**, and the Spatial Development Perspective of **Slovakia**, define the strategy for long-term spatial development and form a foundation for the organisation and utilisation of the land. They also set out objectives for the modernisation of spatial development, the harmonised development of territories and the protection of the environment.

Most Carpathian countries have developed strategies establishing frameworks for regional development that identify priorities and goals that should be taken into account in the operational spatial plans at regional and local levels.

In this regard, the National Plan for the Regional Development of the **Slovak Republic** addresses disparities in the levels of development for individual regions, and supports their long-term sustainable agricultural and social growth. The **Czech** Strategy for Regional Development adopted in 2000 includes an analysis of weaknesses and strengths in regard to the development of the regions and districts, and recommendations to the competent authorities in the various regions.

Particularly in **Romania**, current and future policy developments concerning territorial planning take into account other plans and strategies that can affect diverse rural areas and urban settlements, such as the ones dealing with biodiversity, forests, and water.

Table 1 shows that all of the Carpathian countries are addressing environmental issues through land resources management and spatial planning policies and laws.

Table 2 contains an overview of the inclusion of the key concepts of integrated land resources management and spatial planning policies illustrated in articles 3 and 5 of the Carpathian Convention into the policies of the Carpathian countries.

According to EC regulation 1260/1999, European structural funds are allocated to EU member states on the basis of a National Development Plan that outlines the socioeconomic and spatial situation of the country and its regions. The **Czech Republic** has prepared such a development plan formulating objectives and containing a description of the strategy aimed at improving social, economic, and spatial cohesion.

Legislative acts

The legal framework developed in the Carpathian countries is often complex due to the interdisciplinary character of the issues covered by spatial planning and integrated land resources management. The general legislation on spatial planning and/or regional development adopted in all of the countries usually sets out the legal and organisational grounds for planning and land-use, and in some cases focuses on protecting natural areas and resources. In **Hungary**, the Act on Regional Development and Spatial Planning, adopted in 1996, sets out the objectives of regional development policies and physical planning, and is formulated in accordance with the principles of the European Regional and Spatial Planning Charter and the EU regional policy.

Additional laws are often adopted to regulate construction activities such as the **Romanian** Law on the Authorisation of the Construction of Buildings and Measures for Housing Construction, which defines the legal framework for construction and alterations to buildings and infrastructure, and for the urban and regional planning process.

In **Ukraine**, the Land Code, the Law on Land Protection, and the Law on Land Management are the main laws on land issues. They regulate land categories, set the institutional framework and define the competences of authorities for land use. Environmental protection, rational use of land, and increase of soil fertility are also defined as objectives for sustainable development of land management.

The above mentioned laws define the system of spatial and urban plans, their contents and the procedure for their elaboration as well as the system of control and public participation. Spatial plans usually need to include studies on agriculture, forestry, water management, traffic and transport, tourism and other economic activities. SEA/EIA and public consultations are also important elements of the planning process. In that regard, all of the countries have introduced a legal obligation on authorities to assess the environmental, social and economic impact, risks, costs and benefits of spatial planning, mainly through EIA and SEA processes¹⁷ (see the chapter covering Article 12 of the Carpathian Convention). Furthermore, the participation of the public is usually obligatory during the decision-making process prior to adoption of the plans (see the chapter on Article 13 of the Carpathian Convention).

In addition, there are other legal acts that have an impact on land management and spatial planning activities. In **Poland** and **Serbia** notably, the protection of various components of the environment (such as water, air, soil and forests) and the management of economic activities (tourism, agriculture, forestry, hunting, etc.) are mainly covered by sectoral legislation.

TABLE 1

Aspects to be taken into consideration in land resource management and spatial planning

ENVIRONMENTAL ASPECT	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Soils	P	Y	Y	Y	P	Y	Y
	Measures against soil erosion are addressed either in laws on agricultural lands or through general legislation protecting the environment. Moreover, soil is specifically protected in the Law on Protection of Lands of Ukraine and in the Hungarian Act on the National Land Fund.						
Forest cover	Y	N	Y	Y	Y	Y	Y
	In Poland , Slovakia and Ukraine , specific strategies and policies exist that relate to forest cover. For example, in Ukraine there are special restrictions on Carpathian forest use (moratorium on clear cuts in forests situated in mountainous areas higher than 1,100 metres, in basins at risk from avalanches and mudflows, and in bank-protection forests).						
Wildlife	Y	N	Y	Y	Y	Y	Y
	Wildlife is widely taken into consideration in the region, usually protected through relevant restrictions and obligations contained in special nature-conservation measures (policy on fauna and flora, protected areas, etc.).						
Climate	Y	N	Y	Y	Y	Y	N
	This aspect is mostly covered by international agreements such as the Kyoto Protocol. However, some national laws and policies include climate change prevention measures such as forestry measures to decrease the concentration of greenhouse gases in the atmosphere.						
Other aspects	In Poland , waters and geological elements are specifically protected. In addition, in Ukraine a special regime has been established for water protection zones and for the sanitary protection zones of water bodies.						

Y – yes, N – no, P – partly

TABLE 2

Key issues related to articles 4 and 5

ISSUES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Specific status of protected areas	Y	Y	Y	Y	Y	Y	Y
	In all of the Carpathian countries, protected areas have a specific status at all levels and all the national regulations prescribe that the localisation of protected areas must be taken into account in all spatial plans and strategies.						
Private property rights	Y	Y	Y	Y	Y	Y	Y
	In Hungary and Poland , the right to private property is a basic constitutional right. Moreover, in all the Carpathian countries the issue of private property is contained in spatial planning legislation.						
Rights of local communities	N	N	Y	Y	Y	N	Y
	In Poland , Romania , Ukraine and Serbia , local interests are taken into account in the planning process through public participation.						
Transboundary transport infrastructure and services	Y	Y	Y	Y	Y	Y	N
	In most of the Carpathian countries, the interconnectivity of transboundary infrastructure is taken into account at the national level. Although this issue is not directly prescribed in the land management and spatial planning policies of Ukraine , it is addressed in the state programme on the national network of international transport corridors.						
Transboundary energy and telecommunication infrastructure and services	Y	Y	Y	Y	Y	Y	N
	In all Carpathian countries at national and regional levels, this issue is mentioned in the spatial planning policies. In Ukraine , however, it is only explicitly referred to in the relevant legislation on energy and telecommunications.						
Conservation and sustainable use of natural resources	Y	Y	Y	Y	Y	Y	Y
	In all Carpathian countries, nature conservation and legislation on natural resources must be taken into account in spatial planning at all levels. This refers mainly to protected areas, but also to the habitats of rare species.						
Prevention of cross-border environmental impact	N	N	Y	Y	Y	Y	P
	This issue is not usually regulated in spatial development policies, but in Romania and Ukraine this issue is covered by the laws implementing the Espoo Convention.						

Y – yes, N – no, P – partly

TABLE 2

Key issues related to articles 4 and 5, continued

ISSUES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Integrated planning	N	P	Y	Y	Y	N	Y
Use of an integrated approach is a basic principle in spatial planning policies. At the regional level, regional development plans are integrated planning tools.							
Environmental impact assessment (EIA) and strategic environmental assessment (SEA)	Y	N	Y	Y	P	Y	Y
SEA and EIA of spatial planning and land-use management are prescribed in almost all the Carpathian countries. In Poland , they are covered by the environmental protection law in line with the spatial planning law.							
Specificity of mountain regions as compared to non-urban areas	N	Y	Y	N	N	N	Y
Mountain regions are rarely subject to particular treatment in policies and laws, although the specific characteristics of mountains are often taken into account in agri-environmental schemes. In Ukraine , the Law on Mountain Settlements differentiates between the status of plains and mountain settlements. In Poland , the Updated Concept of National Spatial Development states that “the specificity of mountain and sub-mountain areas requires the elaboration of an integrated interregional strategy of sustainable development together with the implementation plan. In particular, in the case of the Carpathians it is necessary to follow the statements of the Carpathian Convention.”							
Other issues	Monument preservation is included in spatial plans in the Czech Republic .						

Y – yes, N – no, P – partly

Institutional assessment

The Carpathian countries have established many institutions dealing with land resources management and spatial planning at national and regional levels, as shown in Table 3.

The institutions established by the Carpathian countries contribute to harmonious development in the countries with the overall objective of ensuring economic and rational use of land. At the central level, the tasks of ministries and national authorities include the management of spatial development, the development of national programmes on land-use

and land protection, the preparation of legal acts on territorial planning and the supervision of actions at the regional level.

Due to its interdisciplinary approach, spatial development is generally the concern of more than one authority. In many countries, environmental matters and spatial planning or regional development matters are covered by a single ministry. In other cases, the main ministry in charge of spatial development works in collaboration with the ministry of environment. Both formulations indicate that environmental aspects are being integrated into spatial planning and land-use management.

TABLE 3

Overview of institutional framework

Country	National	Regional
Czech Republic	Ministry of Regional Development Ministry of Defence	Regional government (kraj)
Hungary	Ministry of Agriculture and Rural Development Ministry of Environment and Water National Office for Regional Development	
Poland	Ministry of Transport and Construction (Department of Spatial Order) Ministry of Regional Development	Voivode
Romania	Ministry of Transport, Construction and Tourism Ministry of the Environment and Water Management	Territorial planning departments
Serbia	Ministry of Capital Investment Ministry of Science and Environmental Protection Republic Agency for Spatial Planning	Secretariat for Urban Planning and Construction Local governments
Slovakia	Ministry of Construction and Regional Development	Regional municipalities
Ukraine	Supreme Council Ministry of Environmental Protection	Oblast councils

In **Romania**, the Ministry of Transport, Construction and Tourism is the main central institution responsible for the preparation and enforcement of policies and laws in the fields of physical and urban planning, but the Ministry of the Environment and Water Management, the Directorate-General for Water Management, the Ministry of Agriculture, Forestry and Rural Development, the Ministry of Economy and Trade, and the Ministry for National Defense are also involved in territorial planning. Consequently, the Romanian Ministry of Transport, Construction and Tourism is a member of an inter-ministerial committee that coordinates intersectoral policies and actions at the national level.

Ukraine has developed a special inter-sectoral coordination body on spatial planning, the Coordinating Council on the Implementation of the General Scheme for Territorial Planning, which includes repre-

sentatives of different ministries and is responsible for the coordination of the activity of the various ministries, other central authorities and oblasts.

In most countries, responsibility for preparing and adopting spatial plans lies within the regions and municipalities, constituting an important tool for influencing their development. For example, they establish spatial plans covering their territory, organise consultations, control the implementation of the measures provided in the land management documentation, and monitor construction activities. Problems can nevertheless arise from the absence of clear delimitation and separation of state and municipal lands.

Finally, these institutions cooperate with scientific/technical and professional organisations and associations in order to improve the policies and laws on spatial planning.

Achievements, obstacles and recommendations

Main achievements

The Carpathian countries have adopted national legislation that sets out the precise framework for spatial planning at national, regional and local levels, and integrates the dimension of sustainable development. As a result of this, nature conservation and protected areas are taken into account in spatial planning in all of the Carpathian countries.

Several countries have established spatial and development plans covering protected areas in the Carpathian region, especially **Poland** and **Hungary**. For instance, in **Hungary**, the Bukk National Park and the Zemplén Landscape Protection Area benefit from specific development plans. **Romania** has elaborated model plans for spatial planning, notably concerning mountain areas — a positive example that could be followed by other Carpathian countries.

The Carpathian countries have established and implemented EIA and SEA systems.

Main obstacles

Despite progress in the field of land-use management and spatial planning, the general level of implementation and enforcement of policies and laws is insufficient. The complexity of policies, strategies and laws adopted renders it difficult to translate priorities and goals into concrete actions at local level. There is a clear absence of control over land-use, protection of lands, and management quality. Illegal construction activities impoverishing the state of the environment and inadequate penalties for environmental violations are issues of growing concern. Moreover, there are sometimes inconsistencies between the different spatial planning laws.

Information and monitoring systems for land-use changes, natural resources and planned investments having potential adverse environmental impact are insufficiently developed.

Weak institutional structures marked by overlapping competencies, weak communication between relevant authorities, a lack of human and financial resources, and other factors constitute a major problem in all of the Carpathian countries. For example, in **Hungary**, a major obstacle is centralised governance, which results in limited powers in decision making and scarce access to subsidies and other financial instruments at the regional level.

Spatial management plans are still lacking in some areas, especially in rural areas, and they are often outdated.

Recommendations

- Regions should have greater decision-making power in the spatial planning process, following the example of **Czech Republic**.
- The sustainable use of land resources should be mandated in policies and laws, and spatial plans should always take into account natural areas.
- Control over land use and compliance with the requirements of land and environmental legislation should be improved.
- Law enforcement should be improved, penalties for violations should be more stringent and dissuasive, and the permitting systems for land-use and constructions should be strengthened.
- Regional monitoring systems should be further developed.
- The procedure for drawing up spatial plans should be simplified, and the plans should be updated on a regular basis.
- Spatial management plans for less urbanised areas should be further developed.
- Public participation in the planning process should be improved.
- Human and financial resources for monitoring the implementation of spatial planning documents should be increased.
- Procedures for undertaking and executing EIAs should be simplified.
- Appropriate planning and surveying materials and information on territories should be more accessible through, for example, the creation of a central and modern cadastre.
- Common planning strategies in the region could be developed, taking into account the specific conditions of mountains and of the environment.

Article 4

Biological and Landscape Diversity

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 modified 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.

Biological and landscape diversity in the Carpathian Region is a rich resource to be protected and used sustainably. Many efforts have been put in place by the seven countries to this end, including adoption of complex legislation in the field; the establishment of joint or coordinated management plans¹⁸ for protected areas situated near or across borders; and the creation of the Carpathian Ecoregion Initiative (CERI), which is an international network of NGOs and research institutes from these countries dedicated to the protection of the Carpathian Mountains. In addition, a number of systematic scientific studies have been conducted, especially in **Ukraine**, where the National Academy of Science each year issues the report *Chronicles Nature*.

The recent economic and political transition in all of the Carpathian countries has had major impacts on bio-

logical and landscape diversity: increased rural unemployment, increased poverty, land abandonment, decline and destruction of the traditional ways of life of local populations and economic activities, the change in ownership and privatisation and overexploitation of some resources (forests, soil and fish stocks) and uncontrolled tourism development (this last effect is especially noticeable in the **Czech Republic, Poland and Ukraine**). Other factors that are affecting biodiversity in the Carpathians include: overexploitation of natural resources (intensive farming and forestry), introduction of non-native species of flora and fauna, penetration of invasive and expansive plant species, and contamination of both terrestrial and aquatic habitats. Climate change is also threatening the Carpathians, especially droughts in the pine forests as a result of increased temperatures and declining precipitation.

Policy and legal assessment

Policies

Most of the Carpathian countries have a comprehensive national biodiversity strategy or programme, apart from **Hungary** and **Serbia**. In fact, **Hungary** has a National Environmental Programme and a National Agro-Environmental Programme that address some specific issues of biodiversity, such as protection of ecosystem and monitoring activities. However, there is a high degree of inconsistency between these policies. Furthermore, in **Serbia**, policies addressing biodiversity and nature need to be revised and adapted to the EC directives, which is also one of the objectives of the National Environmental Strategy and the local environmental action plans.

In all of the countries these policies cover the whole territory and do not have any specific provisions for mountain regions. The only exception is the **Czech Republic**, which has a chapter on mountain areas in its National Biodiversity Strategy. It is in the form of a long-term programme adopted by the government developed in consultation with experts from research institutes, universities and non-governmental organisations. In addition, in the **Czech Republic** each of the regions in the Carpathian area has its own Strategy for Nature Conservation and Biodiversity Protection, in addition to a national strategy plan. It should be pointed out that **Romania**, as a recent EU member state, has already adopted specific implementation plans for the Habitats Directive¹⁹ and the Birds Directive.²⁰

Legislative acts

Most of the countries have a nature conservation act prescribing measures for the conservation of natural values and areas, and referring to the main international treaties on nature protection ratified by the countries. These legislative acts apply to the whole territory, but there is no specific legislative act dealing with mountain biodiversity or referring to the Carpathian area, apart from the Law on the Moratorium on Clear Cuts on the Mountain Slopes in the Beech-Fir Forests of the Carpathian Region of **Ukraine**. Besides prescribing a moratorium, this law aims at increasing forested territory.

National laws have a high degree of complexity and specificity since most of the countries (especially the **Czech Republic**, **Poland**, **Romania** and **Ukraine**) have introduced detailed legislation on single issues, such as protection of plants, animals and wild fungi, and stock protection. For example, Czech legislation includes an act that regulates the trade of wild species of plants and animals based on the Convention on International Trade in Endangered Species (CITES) and corresponding European legislation.

In **Serbia** there is no comprehensive legislative act dealing with the protection of nature. Instead the framework of biological and landscape diversity is set out by several laws dealing with forests, hunting, spatial plans, national parks and other matters. Therefore, intersectoral coordination and implementation of the individual regulations are required.

Although the policies and laws on biodiversity are more or less consistent,²¹ their implementation is insufficient, which is mainly due to a lack of funds, a lack of inter-sectoral cooperation, ineffective management systems for collecting data on flora and fauna, and the lack of a system of indicators²² for biodiversity monitoring.

According to Article 4 of the Carpathian Convention, parties are requested to “take appropriate measures to integrate the objective of conservation and sustainable use of biological and landscape diversity into sectorial policies,” such as the policies considered in Table 4.

In **Romania** the National Strategy for Biodiversity Conservation and Sustainable Use of its Components aims to integrate the consideration of biodiversity into the development of sectoral and local strategies, and plans and programmes for national and local sustainable development. Moreover, the Inter-Ministerial Committee and the county committees for the mountain region strive to integrate sustainable development and biodiversity conservation into all the activities developed in mountain regions.

In **Serbia** the Law on Environmental Protection contains the general objectives of the conservation and sustainable use of biological and landscape diversity, but so far no concrete measures have been adopted to integrate these objectives into sector-specific policies. However, an agriculture sector-specific policy was recently adopted, and a forestry policy is being developed. Serbian experts have underlined a conflict between socioeconomic development and sustainable development, resulting from years of economic hardship.

Hungary, **Poland** and **Serbia** have not addressed the promotion of conservation, sustainable use and restoration of biological and landscape diversity in the Carpathians due to the lack of specific mountain policies. Even though there is no specific policy for mountain areas, **Czech Republic**, **Slovakia** and **Ukraine** address virtually all of these issues in general biological and landscape diversity policies. In the **Czech Republic**, each of the three regions in the Carpathian area has its own strategy for nature conservation and biodiversity protection, which also covers mountainous areas. In **Ukraine**, biological and landscape diversity legislation does not base the criteria for conservation on whether the areas are mountainous or not, but on the fauna and

TABLE 4

Sectoral policies

ISSUES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Mountain agriculture	-	N	N	N/R	-	N/R/L	-
	In Hungary , for example, the National Rural Development Plan takes less favourable lands into account in some agri-environmental measures.						
Mountain forestry	-	N	N	N/R/L	-	N/R/L	N/R/L
	In Ukraine this is prescribed in the Forestry Code and in Romania by the Strategy for the Sustainable Development of Romanian Forestry.						
Water management	N/R	N	N/R	N/R	N	N/R/L	N/L
	For comprehensive information on this issue please see the section on water management.						
Tourism	R	-	-	N	N	N/R/L	N/R
	In Romania , a National Ecotourism Strategy was developed in 2004. In Ukraine two documents have been adopted that are directed towards the integration of tourism with the conservation of biological diversity: the Main Directions of Tourism Development to 2010 and the State Programme for Tourism Development for 2002-2010.						
Transport	N	-	N	N	-	-	N/R/L
	In Hungary there is a serious lack of integration regarding transport policies. The Czech National Transport Policy contains some measures related to the protection of biodiversity.						
Energy and industry	-	-	N	N	-	-	N/R/L
	In Hungary a national plan regarding energy and industry including mining activities was under preparation. In Romania the National Strategy for Economic Development in the Medium Term 2000-2004 and the Actual National Development Plan take into consideration biodiversity conservation and sustainable development for domains such as energy and industry, but in practice these are not always implemented.						
Mining activities	-	-	N/R	N	-	-	N/R/L
	In Ukraine , the Subsoil Code and the National Programme for Coal of Ukraine integrate biodiversity and landscape concerns.						

N – national level, R – regional level, L – local level

TABLE 5

Key issues related to Article 4

ISSUES TO BE ADDRESSED	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Natural and semi-natural habitats	Y	Y	Y	Y	N	Y	Y
	In Hungary , the national park directorates are very active in this field. In Poland , this issue is addressed through the Natura 2000 network						
Natural and semi-natural habitats' continuity and connectivity	Y	Y	Y	Y	N	Y	Y
	In Poland this is covered by the Natura Conservation Law. There are no specific laws or strategies for the protection of the Carpathian species, but all of the important ones are listed in the national law.						
Species of flora and fauna characteristic of the Carpathians	N	Y	Y	Y	N	Y	N
	In the Czech Republic and Ukraine , species of flora and fauna are protected in general, and there are no protections that pertain specifically to species characteristic of the Carpathians.						
Protection of endangered species	Y	Y	Y	Y	Y	Y	Y
	In Serbia the protection of endangered species is covered by the Regulation on the Protection of Natural Rarities. In most of the Carpathian countries, they are included in "red books" of endangered species.						
Protection of endemic species	N	Y	Y	Y	Y	Y	Y
	In Poland , endemic species are regulated by the Nature Conservation Law and specific ordinances.						
Protection of large carnivores	Y	Y	Y	Y	P	Y	Y
	In Poland , all large carnivores are protected species. However, there is no official strategy or action plan to protect them.						
Adequate maintenance of semi-natural habitats	Y	Y	Y	Y	N	Y	Y
	In Hungary , the national parks still do not manage all of the valuable areas. In Romania the National Strategy prescribes the elaboration of a model of administration consistent with the principle of the Convention on Biological Diversity.						

Y – yes, N – no, P – partly

TABLE 5

Key issues related to Article 4, continued

ISSUES TO BE ADDRESSED	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Restoration of degraded habitats	N	Y	Y	Y	N	Y	Y
	In Romania , for example, the Mining Law and the Petroleum Law prescribe obligations regarding ecological reconstruction and environmental permits, and they stipulate that these activities cannot be carried out in protected areas.						
Support of development and implementation of relevant management plans	Y	Y	Y	Y	N	Y	Y
	In Poland , the Nature Conservation Act obliges the managers of protected areas to prepare management acts. In Romania management plans for three pilot parks situated in the Carpathian Mountains were elaborated in the framework of the GEF Biodiversity Conservation Management Project. Moreover, the Romanian National Protected Areas Law obliged protected areas to have their own management plans, supervised by the Romanian Academy Natural Monuments Protection Commission.						
Prevention of introduction of alien species	N	Y	Y	Y	N	Y	N
	Although considered in policies and law in Hungary , implementation is inefficient. In Ukraine the intention to tackle this issue has been declared in the Law on Animal Kingdom but it is not supported by practical measures.						
Release prevention, control or eradication of GMOs threatening ecosystems, habitats or species	Y	Y	Y	Y	Y	Y	Y
	In Hungary , according to the Act on Gene Technology, GMOs are only used for research purposes. In Poland this issue is regulated by the GMO Act adopted in 2001. Romania ratified the Cartagena Protocol and transposed the relevant EC directives, but follow-up legislation is needed for the implementation of the existing law, which permits the release and cultivation of GMOs only at a safe distance from protected areas. In Ukraine no special legislation has yet been adopted for GMOs, even though there is a permitting and expertise system for the use, production, transport, storage, elimination and utilisation of biotechnology products.						

Y – yes, N – no, P – partly

flora species and other factors that are present in the areas. In **Romania** these issues have also been addressed by the National Strategy and Action Plan for Biological Diversity Conservation, even though no clear action plans have been adopted for pursuing these priorities.

Table 5 summarises how issues raised by Article 4 of the Carpathian Convention are addressed by the countries concerning species of fauna and flora, natural and semi natural habitats, degraded habitats, alien invasive species and genetically modified organisms.

In **Romania** all the considered issues (apart from alien invasive species and GMOs) are covered by the National Strategy for Biodiversity Conservation and

Sustainable Use of its Components, adopted in 2001 (revised version of the previous one adopted in 1996) and by the Natural Protected Areas Law.

In **Serbia** a new law that will cover the protection of natural and semi-natural habitats is being drafted. Here biodiversity measures have generally been delayed due to a longstanding conflict between management and implementing authorities in the area of nature protection on the one hand, and the competent authorities for hunting, forestry and water management on the other.

Table 6 demonstrates that the development and/or promotion of compatible monitoring systems, coordinated regional inventories of species and habitats,

TABLE 6

Development and use of instruments for biodiversity

INSTRUMENT	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Compatible monitoring systems	Y	N	Y	Y	P	Y	N
	To date, nearly all databases in Romania have been developed independently from each other. The Hungarian Monitoring System is a national system for species and habitats at the national level and is not specific to the Carpathian region. In Poland , there are no specific monitoring systems for the Carpathian region.						
Coordinated regional inventories of species and habitats	Y	N	N	Y	N	Y	P
	In Serbia there is no coordinating body for inventory activities. In Ukraine this is partly being introduced, although the legislation does not stipulate clear requirements.						
Coordinated scientific research	Y	Y	Y	Y	P	Y	P
	In Poland cooperation among research institutions is good, but it is mainly based on personal contacts among scientists, and there is no official coordination body.						
Networking among inventories and research	Y	P	N	Y	N	N	P
	In Romania there are two important initiatives to coordinate research, inventories and monitoring activities: the Bio Platform — a form of cooperation among universities, research centres and organisations — and the Biodiversity Information Management System developed under the GEF Biodiversity Conservation Management Project.						

Y – yes, N – no, P – partly

coordinated scientific research, and networking, as called for by the Carpathian Convention, is not comprehensive in all Carpathian countries.

Institutional assessment

The overview of the institutional framework in the Carpathian countries shows that most of the countries have clear and diversified national, regional and scientific institutions in charge of biological and landscape diversity under the supervision of the ministry for the environment.

Although, the ministry of the environment is the main ministry responsible for biodiversity issues, there are cases where the ministry of agriculture shares equal responsibility with other authorities, such as in **Romania, Serbia** and **Slovakia**.

In some countries specific institutions dealing with biodiversity issues (working within the ministry of environment) have been established. In **Romania**, the National Environmental Protection Agency is supplemented by the National Forest Administration, Romsilva, which administers the national and natural parks. In the **Czech Republic** the Environmental Inspectorate is the body monitoring and sanctioning non-compliance. In **Poland** the General Nature Conservator has been established by the Ministry of Environment. Finally, in **Ukraine** the Coordination Council on the National Ecological Network acts as an advisory body representative of different ministries.

At the regional level, there are several relevant authorities in charge of biodiversity and landscape protection, including the regional governments in the **Czech Republic**, national inspectorates for environ-

TABLE 7

Overview of institutional framework

Country	Competent ministry	National authority
Czech Republic	Ministry of Environment – Environmental Inspectorate	Agency for Conservation and Landscape Protection
Hungary	Ministry of Environment and Water	National Bureau for Nature Conservation
Poland	Ministry of Environment – General Nature Conservator	
Romania	Ministry of the Environment and Water Management – Directorate for Biodiversity Conservation and Biosecurity Ministry of Agriculture, Forestry and Rural Development	National Environmental Protection Agency National Forest Administration – Romsilva
Serbia	Ministry of Science and Environmental Protection – Directorate for Environmental Protection Ministry of Agriculture, Forestry and Water Management	Serbian Environmental Protection Agency
Slovakia	Ministry of the Environment – Head Office of the State Nature Protection Ministry of Agriculture Ministry of Construction and Regional Development	Slovak Agency for the Environment Sapard Agency
Ukraine	Ministry of Environmental Protection	Coordination Council on the National Ecological Network

ment, nature and water in **Hungary**, the Voivodeship Nature Conservator in **Poland**, the regional environmental protection agencies in **Romania**, environmental inspectors in **Serbia**, and the state environmental protection oblast administrations and their departments, and environmental inspectors in **Ukraine**. Only in **Slovakia** is there an overlap between the regional state administration offices, the district state administration offices, the country offices of the environment and the district offices for the environment.

Moreover, some countries have scientific authorities or institutions that deal with biodiversity conservation. For instance, the **Romanian** Academy has responsibilities for endorsing, certifying, monitoring and scientific control through the Commission for the Protection of Natural Monuments, while the **Serbian** Institute for Nature Protection is responsible for data collection, monitoring, proposing measures, and providing expert opinion. A National Commission on the Red Book also exists in **Ukraine**.

Achievements, obstacles and recommendations

The richness of the Carpathian region should be conserved and at the same time wisely used in a sustainable way. Many attempts and effective initiatives have been put in place to strike a balance between the use and protection of natural resources. However, improvements need to be made, especially in the field of effective implementation of complex legal provisions.

Main achievements

The main achievement in the Carpathian countries is the development and increase of the nature protection areas network including national parks, Natura 2000 sites, UNESCO Biosphere Reserves, Ramsar Sites and other protected landscape areas.

Most of the countries' laws are elaborate and advanced in terms of topics, objectives and protection measures. Moreover, all of the countries are parties to the main MEAs related to biodiversity conservation, and most of them, including the **Czech Republic**, **Poland**, **Romania**, and **Slovakia**, have already drafted at least one report on their implementation of the Convention on Biodiversity. Furthermore, all are rather active in regional, bilateral and international initiatives and EU projects dealing with biodiversity protection.

In **Poland** and **Romania**, NGOs and civil society actively participate in projects, and **Poland** also benefits from the rich experience of regional scientific institutions. In the **Czech Republic**, the main positive development concerns the implementation of a territorial system of ecological stability (TSES) and the creation of the first bio-corridor.

Main obstacles

The main obstacle in the region is the conflict between the economic development of local communities in the Carpathians, and the need for biodiversity and landscape conservation. Generally, new regulations and limitations to land use are only accepted if there is financial support in return. Insufficient education and low living standards of the local population might exacerbate the situation. Therefore, inadequate economic opportunity is recognised by all the countries as the main obstacle to the effective conservation of biological and landscape diversity and to the implementation of the law.

Moreover, there is a general sense that there is a lack of awareness of the importance of biodiversity conservation both within the relevant authorities and among the citizens. Plausible explanations for this insufficient awareness include insufficient capacity of state authorities, understaffing, inefficient allocation of responsibilities among staff and inadequate access to training. These shortcomings give rise to an inadequate capacity for the enforcement of laws regarding the illegal cutting of forests, poaching, unauthorised construction and investments in natural areas.

Moreover, all countries point to the lack of scientific data about biodiversity in the Carpathians and a low level of inter-sector cooperation among stakeholders as important barriers. For example, in **Ukraine** there are no national programmes for inventories of flora, fauna and landscape diversity, and the fulfillment of general obligations on spatial planning, interrelated with biodiversity protection, is regarded as a priority.

In the **Czech Republic** uncontrolled tourism and development of tourist facilities is one important obstacle and an example of economic development being given priority over conservation measures.

Recommendations

- Increased access to funds should be ensured in order to improve implementation and adoption of important biodiversity initiatives.
- Measures to improve implementation of biodiversity legislation should be introduced.
- Databases for fauna, flora and landscape diversity need to be created, and a unified global information system (GIS) needs to be developed as the basis for inventory and monitoring of the flora, fauna and landscape diversity for the Carpathian region.
- Monitoring systems need to be put in place on the experience of the **Hungarian** Biodiversity Monitoring Programme (funded from EU Phare programme).

- A unified set of indicators for the assessment of biodiversity needs to be created — or at a minimum the indicators developed by the EU or the OECD should be introduced (as in **Czech Republic**).
- In all of the countries the relevant authorities should raise their awareness and knowledge of the topic in order to create a higher level of sensitivity towards biodiversity and to fully understand the need for greater financial resources for this area.
- Initiatives to raise the awareness of the local population and to spread environmental education should be introduced. In this respect, education in nature protection and trainings should be further developed.
- Initiatives to train civil servants in the relevant authorities need to be put in place.
- Greater involvement of non-governmental organisations in identifying effective implementation measures should be promoted. In the **Czech Republic** there are 37 local organisations involved (one of which regularly monitors large carnivores). In **Romania** NGOs have the possibility to take custody of small protected areas as nature reserves. Another example is **Ukraine**, where several active NGOs deal with public awareness and education, regional inventories and journalism.
- Transboundary cooperation in the development of a national ecological network should be further enhanced.
- The introduction of effective mechanisms for ensuring the commitment of land owners and the local population to biodiversity conservation is recommended.
- The designation of Natura 2000 sites and the required protection measures, including EIA, should be effectively put in place.

Article 6

River Basin Management

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.

The Carpathian region is characterised by important water resources, with the Tisza and Morava being the main watercourses and many water management structures (reservoirs, dams, power stations, dikes, etc.) in place. The quality of water bodies in the region is mainly affected by water pollution,²³ insufficient treatment of wastewater, regulation of watercourses,²⁴ soil erosion, overexploitation of forests, and illegal fishing. Floods also pose a significant risk, since the Carpathian region has one of the highest frequencies of floods in Europe, and this is a driving element for the development of policies, laws and measures regarding water management.

The situation of **Romania** is special due to the mining industry, which generates untreated or insufficiently treated wastewaters containing toxic compounds. The adverse impacts of this industry on water quality and biodiversity also affect neighbouring countries such as **Hungary** and **Ukraine**. Moreover, accidental pollution caused by spills from point sources, and road accidents involving different hazardous substances are frequent. For example, the Baia Mare spill in January 2000 in northern **Romania**, which affected **Ukraine** and **Hungary**, might have been foreseen given poor

dam construction and the severe weather conditions. Further adverse impacts from mining are expected in the future, since many mines will be closed after 2007 (state subsidies for mines will be phased out in 2008) without allocating the necessary funds to take all appropriate environmental protection measures for safe closure and efficient post-closure monitoring.

Many studies on sustainable water management have been conducted in the Carpathian countries. The most detailed are the national reports on waters, carried out by **Czech Republic, Hungary** and **Slovakia** in the frame of implementing the EU Water Framework Directive (WFD).²⁵ Between August 2003 and May 2004, the Assessment of Legal, Policy and Institutional Frameworks Related to Sustainable Water Management Issues in the Tisza River Basin was carried out within the framework of the UNDP and REC Tisza River Sustainable Development Programme, in order to prepare national assessments in the five Tisza riparian countries (**Hungary, Romania, Serbia, Slovakia** and **Ukraine**), and to identify the main obstacles to transboundary cooperation.

Policy and legal assessment

The main sustainable water management issue in the Carpathian Mountains revolves primarily around the river basin management approach, which is a basis of the EC Water Framework Directive. This is the leading concept used for the development of almost all of the water-related policies and laws of the Carpathian countries.

It is important to underline that water bodies are state property according to the Constitution in **Romania** (“state property”) and **Slovakia** (“property of the nation”) and according to the Water Code (“exclusive property of the Ukrainian nation”) in **Ukraine**.

Policies

Most of the Carpathian countries have developed a national strategy or programme for water management, but only a few of them address sustainable management. In **Romania**, the Sustainable Development Strategy on Mountain Areas includes, as an objective, the “integrated sustainable management of the mountain river basins.” Moreover, the country has a tradition of water management at the hydrographical basin level dating back to the 1950s.

In the **Czech Republic** the Water Management Plan was adopted in 1975 but does not refer to sustainable water management specifically. Additionally the Concept of Water Management Policy for the transition

period after joining the EU, 2004–2010 and the Plan for Main River Basins, which fully integrate the EC Water Framework Directive, have been adopted.

In **Poland**, measures include the National Strategy for Water Management, adopted in 2005, and the draft Strategy of Wetlands Protection. **Poland** also drafted Good Practice Rules in the Maintenance of Mountain and Submountain Rivers and Streams, a regional study undertaken by the Regional Water Management Authority in Krakov, illustrating the measures that should be undertaken in order to minimise the negative effects of hydro-technical works. However, these recommendations have not been fully implemented in key strategic documents.

In **Slovakia** the Hydro-Ecological Plans for Watersheds, dealing mostly with the quality of surface waters, and the River Management Plans for Watersheds, dealing with the quantity of surface waters, partially fulfill the requirements of the Water Framework Directive. These plans were very successful in terms of involving the public in the planning process.

In **Ukraine** the Concept and the State Programme on Water Husbandry Development were adopted in 2000 and 2002, based on river basin management principles. **Hungary** does not have specific policies dealing with sustainable water management, but this issue is covered by the National Environmental Programme, even though there are many governmental acts for other specific water management topics. Finally, **Serbia** does not have any policy or strategy related to this issue.

TABLE 8

Elements of Integrated Water Resources Management

ELEMENTS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
River basin management approach	Y	Y	Y	Y	Y	P	Y

This principle is at the heart of the WFD. It is implemented in all EU countries and is found in the **Serbian** draft of the new water law. Moreover, this aspect is particularly important when establishing institutions and should be administered at river basin level for increased effectiveness (as it is in the **Czech Republic**). The Tisza River project in **Hungary**, funded by the 5th Framework Programme of the EC with the objectives of restoration of a number of wetlands and the creation of an international database is a good example of this approach.

Y – yes, N – no, P – partly

TABLE 8

Elements of Integrated Water Resources Management, continued

ELEMENTS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Dual approach towards water quality protection: emission limit and quality objective	Y	Y	Y	Y	N	Y	Y
<p>The emission limits and water quality standards are dealt with by EC directives, therefore this dual approach either is being implemented or is about to be implemented in the transitional period in EU member states. In Ukraine, no effective system of emission control and responsibility is provided.</p>							
Sectoral integration	Y	Y	P	Y	Y	Y	Y
<p>Sectoral integration with other fields (forestry, economic growth, human settlements) seems to be quite advanced in all the countries.</p>							
Water pricing	Y	Y	N	Y	Y	Y	Y
<p>Water pricing has been introduced in all Carpathian countries, except in Poland. In the other countries an integrated system covers payment for the products and the services of water management. In the Czech Republic it does not include activities such as nature protection, the protection of natural drainage systems or the costs for sewage collection. In Ukraine water pricing is set up only for "special water use": the use of water obtained from abstraction from water bodies.</p>							
Public participation	Y	Y	Y	Y	N	N	Y
<p>According to the WFD, public involvement requires three steps: information, consultation and involvement. In the Czech Republic, the functioning of public involvement is problematic due to the difficulty in accessing information and the unwillingness of some state officials to provide information. Romania is advanced in this respect, since in each river basin directorate there is a basin committee consisting of 15 members representing NGOs, water users and county councils. In Ukraine, public participation is often ignored in practice.</p>							
Monitoring for all waters	Y	Y	Y	Y	Y	Y	Y
<p>In the Czech Republic, monitoring systems are in place, but not all information is public. Romania initiated water quality monitoring in 1954 and has introduced a system based on five sub-systems for analysing surface water, groundwater, natural and artificial lakes, sea coast marine waters and monitoring pollution sources. In Ukraine, the system is complex but relatively inefficient.</p>							
Flood management and control	Y	Y	Y	Y	Y	Y	Y
<p>The Carpathian region is affected by severe floods. In the Czech Republic, the existing system presents three levels of flood hazard, and there are also flood committees with defined competencies and duties. In Poland, flood management and control is one of the priorities in all of the relevant strategies, policies and legal acts, at all levels.</p>							

Y – yes, N – no, P – partly

TABLE 9

Implementation of key principles of Article 6

PRINCIPLES IMPLEMENTED THROUGH CONCRETE MEASURES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Integrating sustainable use of water resources with land-use planning	L/R/N	L	R/N	N	N	L/R/N	L/R/N
A Declaration on the Initiative for Territorial Sustainable Development was signed in 2003 by the Tisza Basin countries. In Ukraine , implementation of this principle is generally ineffective.							
Taking into account pollution reduction, prevention and elimination in planning	L/R/N	L	L/R/N	N	N	L/R/N	-
This aspect in Poland is mainly realised through investments in sewerage treatment plants and new technology in the field. Romania has adopted two action plans for water protection against agricultural nitrate pollution and pollution derived from the discharge of dangerous substances. The EC Directive on Integrated Pollution Prevention, Reduction and Control (IPPC Directive) has been transposed into national law, and an implementation plan has been adopted but not implemented yet.							
Flood prevention and control	L/R/N	R	L/R/N	N	N	L	R/N
In Romania several projects are under implementation to mitigate the effects of floods, the most interesting being a NATO project aiming at developing a new satellite-based application and products for local and civil protection authorities and private users. In Ukraine , measures are directed at the elimination of consequences rather than prevention.							
Reducing water habitat fragmentation	R/N	R	L	-	N	-	L/R/N
This aspect is mainly addressed locally or regionally, as in Hungary , where reducing water habitat fragmentation is part of the Tisza River project.							
Promoting sustainable management of surface and groundwater resources	L/R/N	-	R/N	N	N	L/R/N	L/R/N
The WFD provides the framework for the protection of surface and underground waters. Romania negotiated a transition period for some of the EC water related directives (e.g. the Urban Waste Water Directive ³¹ and the WFD) until 2022. Hence, a substantial part of these activities will only be implemented in the medium term.							
Ensuring an adequate supply of good quality surface and groundwater for sustainable, balanced and equitable water use	L/R/N	N	L/R/N	L/R/N	N	L/R/N	L/R/N
In this domain no significant progress has been recorded in Romania , which is mainly due to a lack of funds. In Ukraine , most implemented measures concern the construction and reconstruction of a centralised water supply and sewage system in rural areas.							

L – Local, R – Regional, N – National level

TABLE 9

Implementation of key principles of Article 6, continued

PRINCIPLES IMPLEMENTED THROUGH CONCRETE MEASURES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Ensuring adequate sanitation treatment of wastewater	L/R/N	N	L/R/N	N	N	L/R/N	L/R/N
	In Ukraine , the centralised wastewater system is not well developed in mountain regions.						
Preserving natural watercourses, springs, lakes and groundwater resources	L/R/N	R/N	R/N	N	N	L/R/N	L/R/N
	In Poland , this aspect is more addressed in documents connected with nature conservation that are not fully integrated with water management policy.						
Preserving and protecting wetlands and wetland ecosystems, especially against natural and anthropogenic detrimental effects, such as flooding and accidental water pollution	L/R/N	R/N	R/N	-	N	L/R/N	L/R/N
	The Czech Republic boasts nine Ramsar sites, four of which are located in the Carpathians. In Ukraine this is fully integrated, especially in protected areas. Romania , as party to the Ramsar Convention, has started to be active in several projects on nature conservation.						
Developing a coordinated or joint system of measures, activities and early warning for transboundary impacts due to floods and accidental water pollution	R/N	R/N	N	N	N	N	L/R/N
	In Poland this aspect is dealt with by bilateral agreements on cooperation on transboundary waters, and in Ukraine close cooperation is undertaken in the Tisza River basin between local level authorities in the framework of intergovernmental agreements with neighbouring states.						
Cooperating to prevent and reduce damages and provide assistance in restoration works	-	L	R/N	L	N	L/R/N	-
	In Poland , this cooperation is included in its legislation in a declarative form. In Romania no important measures have been implemented concerning restoration.						

L – Local, R – Regional, N – National level

Legislative acts

Generally the Carpathian Countries that are EU member states²⁶ have policy and legislative frameworks compatible with the Water Framework Directive. For instance, the entire **Romanian** water legislation has been in line with the EU acquis since the end of 2003, prior to its EU entry. In addition, **Serbia** drafted a new water law in accordance with the main relevant EU laws and **Ukraine** has detailed legislation for water management that already encompasses the river basin management approach.

It should be noted that the **Czech Republic** and **Slovakia** requested transitional periods for the implementation of some EC directives (on urban wastewater treatment,²⁷ on water protection, on nitrates pollution protection,²⁸ integrated pollution prevention and control,²⁹ and pollution caused by certain dangerous substances in the aquatic environment³⁰). These transitional periods are necessary in the **Czech Republic** to supply all municipalities with between 2,000 and 10,000 inhabitants with proper sewage treatment, and in **Slovakia** for the considerable investments and complex changes required in different areas of the **Slovak** economy.

Table 8 summarises whether the policies and legislative acts of the Carpathian Countries reflect the main elements of integrated water resources management, as they are presented in article 6 of the Carpathian Convention.

For an overview of the implementation of the key principles listed under Article 6 of the convention by the Carpathian countries, see Table 9.

Institutional assessment

Water issues are concerns shared by several institutions in each Carpathian country as shown by Table 10.

In all the countries the ministry in charge of water management is the ministry of environment, except for **Serbia** where water management is mainly dealt with by the Ministry of Agriculture, Forestry and Water Management in collaboration with the Ministry of Science and Environmental Protection. In this framework, the

Directorate for Water deals with the development of water policies, flood protection, issuing permits, rational consumption of water resources, and provision of drinking water.

However, safety is mostly the responsibility of other ministries. For example, in the **Czech Republic** the Ministry of Agriculture is responsible for flood protection, in **Slovakia** the Ministry of Health is responsible for safety of drinking water and bathing waters, and in **Ukraine** the Ministry of Environment is the implementing authority with regulative competences and the Ministry of Emergency is responsible for flood control.

In the **Czech Republic**, since competences in this field are divided between two ministries, intersectoral communication has long been a weak point, and an official intersectoral coordinating mechanism is lacking. As well, an overlap of competencies between the Water Directorate and the Directorate for Environmental Protection in relation to water quality and water pollution has been noted in **Serbia**.

TABLE 10

Overview of institutional framework

Country	Ministry in charge of water	National authority
Czech Republic	Ministry of Environment – Environmental Inspectorate Ministry of Agriculture	Agency for Conservation and Landscape Protection
Hungary	Ministry of Environment and Water	National Directorate for the Environment, Nature Protection and Water
Poland	Ministry of Environment – Water Management Office	National Council of Water Management
Romania	Ministry of the Environment and Water Management Ministry of Health Ministry of Agriculture, Forestry and Rural Development	National Administration “Romanian Waters” Central Flood Commission
Serbia	Ministry of Transport, Construction and Tourism Ministry of Agriculture, Forestry and Water Management – Directorate for Water	The public water management enterprise “Serbia Waters”
Slovakia	Ministry of Science and Environmental Protection Ministry of the Environment (from 2003)	State Water Administration
Ukraine	Ministry of Health – State Health Department Ministry of Environmental Protection Ministry of Emergency	State Water Management Committee

In **Romania**, an inter-ministerial committee was established in 2001 with responsibility to adopt decisions required for coherence. The president of the committee is the Minister of the Environment and Water Management.

Each Carpathian country has river basin administrations. However, in the case of **Ukraine** there is only one river basin water management authority, the Dnystryansky basin water husbandry union for the Dniester river basin. This is mainly due to the fact that the basin principle is not formally applied in the Ukrainian Carpathians. Furthermore, in **Ukraine**, insufficiently defined institutional structures and fragmentation of responsibilities among the various authorities are also obstacles to efficient river basin management. For instance, water management involves many different agencies having their own rules with insufficient coordination between them. Clearly defined river basin administrations could solve many of these inefficiencies.

In the **Czech Republic**, several river basin authorities with different competencies have been established including the Morava and Odra River Basin Authorities. In **Poland** there are seven regional offices at river basin level, two of which are in the Carpathians (Regional Water Management Authority in Krakow and in Gliwice). **Romania** has 11 basin-level territorial branches of the national administration, Romanian Waters, and each water directorate has a basin committee. **Serbia** has water resource districts encompassing one or several basins or their parts that make a natural hydrographic unit. In **Slovakia** the Water Management Enterprise has branches relating to the main river basins. In contrast, **Hungary** has only a Head Department of River Basin Management.

Finally, most of the countries have established state-funded (or partly state-funded) scientific institutes, which are specifically dedicated to water management and research. These institutes are specialised in hydrology and meteorology, such as the Republic Hydrometeorological Institute of **Serbia**, which deals with quality analysis of surface and groundwater.

Achievements, obstacles and recommendations

Main achievements

A sign of progress is the introduction of comprehensive legal frameworks in most Carpathian countries. In this regard, real achievements have been made by those of the five Carpathian countries that are EU member states, which have implemented or are in the process of implementing the Water Framework Directive and other EU directives related to water management.

International cooperation among the Carpathian countries, in the framework of Tisza and Danube protection, led to a number of successful transboundary activities and joint projects. In general, bilateral and transboundary cooperation for flood management is rather developed within the Carpathian countries, including the establishment of commissions and the implementation of several important projects to address the threat of flooding.

Among the most important best practices to be followed are **Romania's** long tradition of the application of the river basin approach, and the functioning of environmental funds in the **Czech Republic** and **Romania**, aiming to provide sewage treatment systems in towns and villages with from 2,000 to 10,000 inhabitants.

Main obstacles

Overall, plans and projects are not effectively implemented in the water field; therefore the river basin approach encompassed by the official documents is not always systematically applied. In some countries there is a tendency to tackle water management issues mainly through technical flood prevention devices, such as construction of dams, rather than focusing on protecting sensitive areas by resorting to afforestation measures and adequate land planning.

Furthermore, the systems for emission control and other monitoring activities are insufficient. Some countries stress the lack of funding, and this can partly be explained by inconsistencies in applying the principle of water pricing uniformly. Finally, intersectoral cooperation is weak and needs to be strengthened, especially in the **Czech Republic**, where the competencies in this field are divided between two ministries, but also in **Ukraine**.

Recommendations

- Specific joint coordination bodies or mechanisms of cooperation for transboundary rivers should be established, intersectoral cooperation should be improved among ministries and national agencies, and river basin authorities should be set up in **Ukraine**.
- Improvements of the sewage system in mountainous areas are required.
- Monitoring activities should be improved.
- Adequate systems for emission control should be developed.
- Awareness of the political authorities should be raised through specific, tailored programmes.
- Higher regard for sustainable water management is needed in **Hungary, Poland, Serbia** and **Slovakia** to raise awareness and raise necessary funding.

- Biodiversity conservation concerns should be systematically integrated into water management policies.
- Public participation and access to information should be improved.
- Increased funds are needed in **Slovakia** and **Ukraine** and the State Fund of the **Czech Republic** and **Romania** are good examples to be used as a model.
- Common implementation of the water pricing principle is needed.
- Alternative flood protection measures to river bed regularisation should be defined.

Article 7

Sustainable Agriculture and Forestry

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 programmes 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 programmes, compatible with internationally 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.**

AGRICULTURE

Agriculture plays an important role in the economies of the Carpathian countries and in some areas (e.g. the Moravian Carpathians) it can be considered the main economic activity. The land is mainly in the hands of private ownership, and the size of fields is generally limited. In past decades, farms have suffered from weak markets for farm produce and from decreasing agricultural subsidies throughout the 1990s. Moreover, mountain areas have limited capacities for agriculture, largely due to geographical characteristics and unfavourable climate. Moreover, mountains are recog-

nised on the European level as less-favoured agricultural areas, and in this respect, most of the Carpathian countries have in place plans or programmes aiming at providing financial support and incentives to farmers in these areas.

Strengthening the competitiveness and productivity of the agriculture sector and improving the living conditions and economic opportunities in rural areas are today crucial concerns in satisfying the economic and social needs of the region.

On the other hand, environmental practices and the provision of services linked to the maintenance of habitats, biodiversity and landscape are also important

TABLE 11

Key issues related to sustainable agriculture

ASPECTS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Integration of environmental concerns into land management plans	Y	N	Y	Y	Y	Y	Y
The agricultural policies of all the Carpathian countries except for Hungary take into account the integration of environmental concerns into land management plans. In Romania article 20 of the Law on Mountain Region is dedicated to this issue.							
Protection of natural and semi-natural grasslands	Y	Y	Y	Y	N	Y	Y
Apart from Serbia , the protection of natural and semi-natural grasslands is a method promoted by all Carpathian countries. It is taken into account for example in the Land Code of Ukraine .							
Consideration of the impact of agricultural policies on ecological networks	N	Y	Y	Y	N	Y	Y
The impact of agricultural policies on ecological networks is not always adequately taken into consideration in the agricultural policies in the region. It is generally integrated into agri-environment programmes and under the European Ecological Network Natura 2000.							
Consideration of the impact of agricultural policies on mountain landscapes	N	P	Y	Y	N	Y	P
The agricultural policies of Poland, Romania, Slovakia and Ukraine take into account the impact of agricultural policies on mountain landscapes at the national level. Although this aspect is regulated by the European Landscape Convention, considerations of the impact of agriculture in sensitive areas are generally provisioned, although not specifically for mountain areas.							
Consideration of the impact of agricultural policies on traditional land-use	Y	Y	Y	Y	N	Y	Y
The impact of agricultural policies on traditional land-use is mainly considered through agri-environmental plans.							

Y – yes, N – no, P – partly

TABLE 11

Key issues related to sustainable agriculture, continued

ASPECTS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Need for the protection of mountain ecosystems and landscapes	Y	P	Y	Y	N	Y	N
<p>Except in Ukraine and in Serbia, where it is not considered in the agricultural policies, the protection of mountain ecosystems and landscapes is taken into account mostly in the agri-environmental programmes when dealing with less favored areas, and for Romania, in its mountain policy and legislation.</p>							
Importance of biological diversity	Y	Y	Y	Y	Y	Y	Y
<p>The agricultural policies of all the Carpathian countries take into account the importance of biological diversity at national level. For instance, the National Biodiversity Strategy and Action Plan of the the Czech Republic recognises that intensive agriculture has directly contributed to the decline of biodiversity in mountain grasslands.</p>							
Specific socio-economic conditions of mountains as less favored areas	Y	Y	Y	Y	Y	N	Y
<p>This issue is covered in all the countries except Slovakia, mainly by less favored plans under the EU scheme, even if not specifically dedicated to mountains. The Ukrainian State Agricultural Policy for the period until 2015 in particular provides for the increase of financial support to businesses in areas unfavourable for agriculture.</p>							
Environmental sensitivity of certain areas	Y	Y	Y	N	Y	Y	N
<p>The agricultural policies of all the Carpathian countries except Romania and Ukraine take into account the environmental sensitivity of certain areas. Generally, it is indirectly covered by nature protection acts.</p>							
Prevention of floods	Y	Y	Y	Y	Y	N	Y
<p>The prevention of floods is a great concern in the region and almost all the Carpathian Countries take this issue seriously into account.</p>							

Y – yes, N – no, P – partly

concerns to be considered. In this direction, all Carpathian countries participate in international initiatives relevant to sustainable agriculture, such as the FAO Sustainable Agriculture and Rural Development (SARD) initiative, and the Agricultural Diversity International Initiative under the Convention on Biological Diversity. These initiatives are designed to achieve the transition to sustainable agriculture by supporting pilot efforts and building the capacity of rural communities. Some elements of the SARD initiative specifically focus on mountain regions, identifying challenges and calling for coherent policies, instruments and programmes.

Policy and legal assessment

Policies

All Carpathian countries have adopted national agriculture policies aimed at developing sustainable agriculture, generally as a part of the elaboration of general plans promoting the integrated development of rural areas. The correlation between the productivity of farmers and the protection of the environment is often one basis of these strategic documents. For instance, in **Poland** the overall goal of the Strategy for Rural and Agricultural Development for 2007-2013 is the improvement of living and labour conditions in rural areas through economic growth, while also taking into account environmental protection requirements. It is planned that sustainable rural development, especially in agriculture areas, will provide alternative sources of income in compliance with environmental requirements and help to maintain landscape values.

Hungary, **Slovakia** and the **Czech Republic** have adopted agri-environmental programmes to develop sustainable agriculture, and in **Romania** a national agri-environmental programme is being prepared. Within this framework, environmentally sound farming methods, including the reduction of agricultural pressure on biodiversity, grazing of arable land, the maintenance of meadows, and other techniques are promoted, especially in protected areas.

In the same vein, the **Polish** Rural Development Plan 2004-2006 provides support for traditional mountain management. **Romania** has also adopted a policy on mountain agriculture with mechanisms for integration. The Sustainable Development Strategy of the Mountain Region mainly concerns the sustainable rural development of mountain areas and one of its aims is the development of sustainable agriculture.

At regional level a number of sustainable agricultural policies have been developed. In **Ukraine** regional (oblast) programmes for the development of rural areas

exist, including measures such as seeding of herbs, protection of soil fertility, anti-flood and anti-erosion measures, and increase of the harvest of agricultural crops.

Legislative acts

All of the Carpathian countries have developed laws in the field of sustainable agricultural development, but only **Romania** has adopted a specific act on mountain areas dealing with agriculture. The Romanian Law on the Mountain Region (2004) provides principles, objectives and measures regarding the sustainable development and biodiversity conservation of the mountain regions.

The national legislative acts adopted in the region on agriculture and land issues generally define the legal, economic and social principles of land protection to ensure their efficient use, the sustainable development of the agricultural sector and environmental protection. Table 11 summarises how the main aspects related to sustainable agriculture raised by Article 7 of the Carpathian Convention are addressed by the sustainable agriculture policies of the countries at local, regional and national levels.

Finally **Serbia** and the **Czech Republic** have passed laws aimed at developing organic agriculture: The Federal Law on Organic Agriculture in **Serbia** (2000) and Act on Organic Agriculture of the **Czech Republic** (2000).

Institutional assessment

Table 12 summarises the ministries and national authorities competent for the agriculture sector.

In all of the Carpathian countries the ministry of agriculture has primary responsibility for the development and adoption of agriculture policies. The **Czech Republic**, **Poland** and **Romania** have national authorities under the supervision of the ministries. These competencies are normally shared between authorities relevant to the agricultural sector. **Romania**, in accordance with the Law on the Mountain Region, has established the National Agency of the Mountain Area, which has to ensure the enforcement of government policies in the field of the development and protection of mountain communities, agriculture and environment.

Romania and **Ukraine** have interministerial and intersectoral coordination between bodies competent for agriculture policies and bodies responsible for other policies linked to the agriculture field, such as environmental policies. Furthermore, **Romania** has established an inter-ministerial committee for mountain regions. The main aim of the inter-ministerial committee is to coordinate and supervise the projects, policies and sectoral strategies regarding environmental protec-

TABLE 12

Overview of institutional framework

Country	Ministry in charge of agriculture	National agriculture authority
Czech Republic	Ministry of Agriculture Ministry of Environment	State Agricultural and Food Inspectorate Central Agricultural Control and Research Institute State Veterinary Office Czech Inspectorate for Animal Breeds
Hungary	Ministry of Agriculture and Rural Development Ministry of Environment and Water	
Poland	Ministry of Agriculture and Rural Development	Agency for Restructuring and Modernization in Agriculture Agency for Agricultural Marketing Agency for Agricultural Real Estate
Romania	Ministry of Agriculture, Forestry and Rural Development	National Agency on Agriculture Consultancy National Agency of the Mountain Area
Serbia	Ministry of Agriculture, Forestry and Water Management	
Slovakia	Ministry of Agriculture Ministry of Construction and Regional Development	
Ukraine	Ministry of Agricultural Policy Ministry of Environmental Protection	

tion and the sustainable development of mountain regions at the national level. At local level, the county committees for mountain regions coordinate and supervise local projects concerning environmental protection and the sustainable development of mountain areas at local level. They also implement the decisions of the Inter-ministerial Committee at the local level.

Achievements, obstacles and recommendations

Main achievements

All Carpathian countries have adopted national agriculture policies aiming at developing sustainable agriculture. The implementation of agri-environment pro-

grammes is a major achievement since it contributes to the conservation and protection of high value nature areas and to utilising funds for sustainable agriculture, as preserving traditional farming and livestock breeds, meadows and pastures, and grazing cattle.

The maintenance of the natural and rural cultural heritage, and the promotion of traditional agricultural methods, benefit from national financial support and the EU SAPARD scheme, mainly in the form of grants and subsidies. That traditional practices are gaining strength is positive progress, and investments in the field of sustainable agriculture and landscape management as well as initiatives to promote organic farming and agro-tourism are increasing overall in the region.

In **Romania**, the main achievements include the adoption of specific instruments for mountain regions (a policy and a law) and the establishment of specific

institutions, such as the National Agency for Mountain Areas, which are designed to protect the environment and promote sustainable agriculture.

Main obstacles

A major obstacle in the Carpathian countries is the trend towards intensive agriculture based on new technologies, since it has a larger environmental impact. This trend persists despite the promotion of sustainable agricultural practices. It appears that economic growth, improvement of infrastructure, competitiveness and productivity are the main drivers for agricultural practices. Furthermore, the unfavourable conditions of the mountains, the low level of restructuring and insufficient technologies (obsolete organisational forms and outdated machinery), shrinking area of agricultural land, and poor living conditions of farmers are important problems in the region.

Financial support for the development of alternative agriculture (organic and sustainable) and integrated rural development is still insufficient. It is reinforced by the weak promotion of good agricultural practices among farmers and their lack of awareness and understanding of EU programmes (often considered too bureaucratic).

Finally, the current sustainable agriculture policies and agri-environmental plans of the Carpathian countries do not always take into account some important aspects such as the conservation of the Carpathian heritage, and they are not fully funded and implemented.

Recommendations

- Carpathian countries should develop sustainable agriculture practices through policies and laws that take into account mountain conditions and ensure financial support for their implementation.
- The conservation of the Carpathian heritage should be included in rural development programmes and agri-environmental programmes.
- Further improvement of the system of environmental assessment of agriculture activities is required.
- Development and adoption of clear legislation on GMOs in all Carpathian countries is needed.
- Better promotion of agri-environmental practices and traditional products should be ensured.
- Strengthened cooperation and coordination between ministries of environment and agriculture is needed that takes into consideration best practices such as the Inter-ministerial Committee for the Mountain Region in **Romania**.

FORESTRY

Forestry is one of the most traditional occupational activities in the Carpathian region, shaping the landscape of the area and being one of the most significant elements of the cultural tradition in the region. Forests cover an important part of the Carpathian area and provide a living for people involved in forestry and forest-based industries.

At the beginning of the 1990s, most Carpathian countries underwent a change in ownership structure regarding forested land from state ownership and management to private ownership. This transition has given rise to problems in ensuring sustainable forest management for several reasons, such as economic interests prevailing over conservation interests and new owners lacking forestry skills.

In this respect, the Carpathian countries have adopted policies and legislation related to sustainable forestry for harmonised, broad-based, comprehensive and long-term monitoring of Carpathian forest ecosystems.

Policy and legal assessment

Policies

All Carpathian countries have adopted policies related to sustainable forestry management aimed at preserving biodiversity and combating climate change. Three main objectives regarding the economic, environmental and social functions of forests can be identified from the policies developed in the region.

The first objective is to strengthen the economic function of the forest. The forestry sector constitutes an important source of income (mainly through wood) for the Carpathian countries. The preservation of this resource is seen as fundamental and, as recommended by the **Czech** National Biodiversity Strategy, it can be achieved through forest management plans encouraging the adoption of environmentally sound management methods.

The second objective is to improve and protect the environment. The overall aim is to maintain and enhance the biodiversity, integrity, health and resilience of Carpathian forests. In this regard, a main objective of the national Biodiversity Strategy in the **Czech Republic** and of the Strategy and Plan of Forestry Development adopted in **Slovakia** is the maintenance and/or the increase of the current forested area in order to ensure the needs of forest biodiversity conservation.

Moreover, the **Czech** Strategy for the Protection of the Earth's Climatic System, adopted in 1999, implements the Kyoto Protocol and proposes economic tools to promote energy savings and reforestation.

The third objective is to contribute to a better quali-

TABLE 13

Principles related to forestry

PRINCIPLES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE	
Sustainable management of forest resources and forest lands	Y	P	Y	Y	Y	Y	Y	Sustainable management of forests is explicitly defined and covered in all the Carpathian countries by various policies and programmes. In Serbia , rehabilitation of forests' environmentally critical areas is one of the main priorities. In Romania , implementation needs to be made more efficient, and in Hungary , sustainability is more understood as a sustainable wood supply than as sustainable forestry management.
Protection of forests against pollution	Y	Y	Y	N	Y	Y	Y	Protection of forests against pollution is integrated in all of the Carpathian countries' policies and laws, with the exception of Romania , where there are no regulations on this aspect yet. In Hungary , legal requirements are improving the protection of forests against pollution.
Prevention and protection against fire, pests and diseases	Y	Y	Y	Y	Y	Y	Y	The Carpathian countries' policies on forest protection integrate these issues. In Hungary , the legislation is stricter for protected areas, while in Romania , foresters and biologists now discuss whether or not these measures must be strictly applied.
Public information on forest ecosystems	Y	P	Y	Y	Y	Y	N	Most Carpathian countries do not have specific provisions in forestry legislation and policy about public information, although such provisions are set out in general legislation on access to environmental information. However, in the Czech Republic the results of the Forests Inventory as well as the annually published national reports are available to the public.
Public participation in development, implementation and planning of national forest policies	N	P	Y	Y	Y	Y	Y	Most of the Carpathian countries' policies regarding forestry incorporate public participation and information in decision-making processes. The establishment of a Forest Forum as a platform for dialogue among stakeholders and people interested in forest use and conservation is an example of a public participation mechanism. However, in practice no efficient mechanisms for public information and participation are in place, only theoretical methods.
Recognition of the vital role of forests in maintaining ecological processes and balance	Y	P	Y	Y	Y	Y	Y	These roles are recognised by the Carpathian legislation; in practice they are often neglected because of the difficulties in translating such services into financial benefits.

Y – yes, N – no, P – partly

TABLE 13

Principles related to forestry, continued

PRINCIPLES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Afforestation and reforestation	Y	Y	Y	Y	Y	Y	Y
	All of the Carpathian countries' policies address these issues. For example, in Hungary the National Forest Programme recommends an increase in forest coverage from the current 19 percent to at least 25 percent. However, the new forest will be established on former agricultural lands and may not have a significant impact on the total forest coverage in the Carpathian region.						
Assessments of economic and non-economic values of forest goods and services	Y	N	Y	N	Y	Y	Y
	The Carpathian countries' policies normally fail to take into account assessments of economic and non-economic value of forest goods and eco-services. In Romania there is no forestry policy or law integrating the value of these eco-services, although indicators regarding the biodiversity of Romanian forests were developed in 2002 along with other requirements related to forest certification.						
Protection of natural forest areas	Y	Y	Y	Y	Y	Y	Y
	All of the Carpathian countries' policies include the protection of natural forest areas, although predominantly in national parks and nature reserves.						
Protection of ecologically representative or unique types of forests	Y	Y	Y	Y	Y	Y	Y
	Protection of unique types of forest is defined in all of the Carpathian countries' policies. The conservation of the described forests is fully implemented in national parks and nature reserves. For example, in Hungary the most important unique ecosystems are the steppe oak forest and the last remains of flood plain forests. However, the protection of these forests is not ensured in all cases, especially where falling under private ownership.						
Consideration of alternative uses of forests	Y	P	Y	Y	N	N	N
	Alternative uses of forest are only taken into account in half of the Carpathian countries. In the Czech Republic a specific law defines the alternative use of forests and describes the conditions for the management of these forests.						
Appropriate retention of precipitation in the mountains for flood prevention	N	P	Y	Y	N	Y	Y
	Retention of precipitation in the Carpathians for flood prevention is not prescribed in all Carpathian countries. However, the Romanian National Forestry Policy and Development Strategy (2001–2010) includes all of these aspects as strategic actions.						

Y – Yes, N – no, P – partly

ty of life. The Carpathian countries emphasise the importance of preserving and supporting the cultural and social dimension of forests. To this end, the policies emphasise the need to maintain and enhance the protective functions of forests because they constitute an important source of recreational and healthy activities for city dwellers.

Table 13 summarises the integration of several principles of Article 7 of the Convention into the forestry policies of the Carpathian countries.

Legislative acts

All the Carpathian countries have at least one act dedicated to forests, although they are not specific to mountainous areas. The main elements of the national legislation include forest management planning, taking into account the main principles of forest protection, and conservation of biodiversity and the ecological functions of the forests.

For instance, **Poland** has adopted a regulation on the improvement of forest management according to ecological rules, which prescribes:

- the maintenance of riparian forests and the protection of forest wetlands;
- the preparation of nature conservation programmes as annexes to forest management plans;
- the promotion of natural forest regeneration; and
- restrictions on clear-cutting.

In the same spirit, the **Czech** Act on Forests defines the preconditions for the preservation of forests, their management and regeneration, and for supporting sustainable forest management. In the case of **Serbia** and **Montenegro** the formerly united republics developed different policies and laws. The Law on Forests is in force in Serbia, but a new law is in preparation, and future legislation will be in accordance with the relevant EU legislation. **Romania** has developed many laws and regulations regarding forest, hunting and logging activities, including sanctions for illegal activities. However, these acts are not always consistent with each other. For instance, some aspects of the Law on Hunting are in contradiction with the Law on Nature Protection Areas, especially concerning permission for hunting protected species.

There are also legal inconsistencies between the Law on the Nature Reserve Fund of **Ukraine** and the Ukrainian land and forestry codes. For example, the Law on the Nature Reserve Fund prohibits sanitary cuts on the territory of natural reserves, core protection zones of biosphere reserves and national natural parks, while the Forestry Code mandates such measures.

Institutional assessment

Table 14 shows that the ministry in charge of forests in Carpathian countries is often the ministry of agriculture, sharing its responsibilities with the ministry of environment and supported by specialised national authorities.

In all of the Carpathian countries, the central public authority in charge of forestry is responsible for coordination, regulation, monitoring and control measures. It is usually responsible for the improvement and use of forests and hunting. For example, in **Poland** the Ministry of Environment carries out activities focusing on the protection and economic use of forests and the maintenance of biodiversity.

However, the main role in the field of forest management is played by the national forestry authority, where one exists. In **Poland**, the State Forests National Forest Holding supervises state-owned forests other than those that are in national parks while the Forest Council plays an advisory role for the ministry at the national level. It advises on the proposed activities for the protection of forests and the use of forest resources. It also evaluates the implementation of the State Forest Policy and the management of forests.

In **Romania, Slovakia, Ukraine** and the **Czech Republic**, forestry institutions have been established at regional and local levels. For instance, in **Romania** at the regional level, the territorial directorates on forestry and hunting, directly subordinated to the ministry in charge of forests, are the control and inspection authorities for forestry and hunting. The local councils play an important role at the local level.

However, there is a certain amount of overlapping duties. For example, in **Ukraine**, the competence for forestry is divided among many authorities (the State Forestry Committee, the Ministry of Agricultural Policy, the Ministry of Defence, the Ministry of Emergency, the Ministry of Environmental Protection, and other forest users). These actors have slightly different interests and their activities are insufficiently coordinated.

In **Romania**, the main overlaps of responsibility occur between the National Forest Administration, which administers the majority of national parks in the Carpathian region, and which is subordinate to the Ministry of Agriculture, Forestry and Rural Development, and the Ministry of the Environment and Water Management, which is the central public authority with respect to biodiversity conservation.

TABLE 14

Overview of institutional framework

Country	Ministry in charge of forests	National forestry authority
Czech Republic	Ministry of Agriculture	
	Ministry of Environment	
Hungary	Ministry of Agriculture and Rural Development	National Forest Authority
Poland	Ministry of Environment	State Forests National Forest Holding
		Forest Council
Romania	Ministry of Agriculture, Forestry and Rural Development	National Forest Administration – Romsilva
		National Forestry Authority
Serbia	Ministry of Agriculture, Forestry and Water Management	
	Ministry of Science and Environmental Protection	
Slovakia	Ministry of Agriculture	
	Ministry of Construction and Regional Development	
Ukraine	Cabinet of Ministers of Ukraine	State Forestry Committee
	Ministry of Agricultural Policy	
	Ministry of Environmental Protection	

Achievements, obstacles and recommendations

Main achievements

The present state of the Carpathian forests, often of natural character, constitutes a major opportunity and a basis for further forestry conservation. Other positive signs are increased reforestation and a relatively high percentage of protected areas. Furthermore, the Carpathian region has achieved some success in terms of increasing biodiversity. One notable example of this is the return of the wolf and brown bear to the region.

The three protected landscape areas, small natural reserves, and Natura 2000 sites, make up a solid network of well-preserved forests with appropriate management in the **Czech Republic**. The prevailing trend towards environmentally friendly management of forests is also promising, including policies and laws promoting changes in the use of forest resources with greater consideration of ecological aspects. In **Hungary**, this is achieved through the well established planning and authorisation mechanisms which are carried out by the National Forest Service.

There is also a growing focus on non-profitable functions (eco-services) of forests, as well as on cooperation and exchange of experience between foresters.

Main obstacles

Many practices, such as traditional methods of logging (extensive clear cutting), use of pest control, introduction of exotic species, and inadequate wildlife management, have an adverse impact on biodiversity and represent obstacles for the sustainable management of forests.

Despite all of the laws adopted in the region, illegal logging remains the main threat. A report on illegal logging in **Romania**³² identified:

- weak enforcement of the existing legislative framework for forestry;
- lack of human and financial resources and equipment in the control institution;
- gaps in the reporting system that prevent the tracking of wood coming from illegal activities; and
- lack of data on wood volumes processed by existing small companies.

The transfer of forests from public to private ownership radically changes the management of forests. Since wood production is profitable, the protection of biodiversity is not a priority for private owners. In this regard, there are insufficient financial tools to engage private owners and forest managers in sustainable forestry. In addition, there is inadequate support for forest protection, forest planting, subsidies, new management plans, and the introduction of ecologically safe technologies for logging. Moreover, low public awareness and the lack of understanding among state authority representatives and forest managers also undermine sustainable management of forests.

Recommendations

- Action plans regarding afforestation and timber cutting should be adopted, including the transfer to gradual planned selective harvesting.
- The fight against illegal logging should be stepped up and reinforced.
- Agri-environmental practices and traditional products should be systematically promoted, as well as forest-environmental schemes.
- The system of environmental assessment of forestry activities needs to be improved.
- The establishment of a forest resource database for the Carpathian region should be considered.

Article 8

Sustainable Transport and Infrastructure

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 minimising 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.**

Freight and passenger traffic is increasing in the Carpathian countries, and important investments have been channeled into upgrading and construction.

The major transport developments in the region are based on the EU's Trans-European Transport Network. The main objective of European Transport Policy is to maintain the right to mobility and to ensure a sustainable transport system while restoring the balance between modes of transport, developing intermodality, combating congestion and increasing safety and quality of services.

Besides the economic growth brought by the actual trend of upgrading in the transport sector, its negative impacts on environment and health need to be considered. In fact, pressures on landscapes and ecosystems are intensive and the amount of air pollution is increasing.

A sustainable transport system takes into consideration economic, social and environmental needs, contributing to economic and social welfare without jeopardising the environment or human health. This means that on one hand, transport policies should promote an efficient transport system, improving accessibility in the Carpathians and promoting freight and passenger traffic flow which meets the economic and social needs of the region. On the other hand,

transport policies should minimise the harmful effects of freight and passenger traffic on the Carpathian environment and natural resources, which are an important heritage for present and future generations.

Policy and legal assessment

Policies

All Carpathian countries have developed national action plans in the field of transport and infrastructure, some of them dealing with sustainable development. The approach to transport based on the principle of sustainable development is relatively new in the region, but the new strategic documents developed generally take into account the protection of environment.

Although actual policies on sustainable transport and infrastructure do not refer directly to mountain areas, they are normally implemented in the whole territory of the country, including mountain regions. In this regard, **Ukraine** has developed a Strategy for the Implementation of the Carpathian Convention ensuring the facilitation of the development of sustainable transport policies in the Carpathians.

Hungary, Slovakia, Ukraine and Serbia have adopted strategies aimed specifically at developing and modernising transport infrastructure. For instance, **Slovakia** has adopted the Concept of Road Infrastructure Development (1999), a strategic document dealing with the development and maintenance of road infrastructure, and in **Serbia** plans on inland water transport are in preparation aimed at identifying priorities for the development of infrastructure (water routes, harbours), investments and capacities.

Additionally specific programmes have been adopted aiming at improving transport safety in **Slovakia**, the **Czech Republic, Ukraine and Romania**. In **Slovakia** the National Plan for the Enhancement of Road Safety (2005) is aimed at implementing countermeasures to reduce fatalities related to speed, drink-driving, drugs, and other avoidable causes. In the **Czech Republic** the National Road Safety Strategy (2004) aims to halve the number of road deaths by 2010, which means reducing the number of fatalities to 650 people by 2010. **Ukraine** has adopted the State Programme for Ensuring Traffic Safety on Motorways, Streets and Rail Road Crossings for 2003-2007 (2003), and **Romania** has taken timely actions aimed at increasing transport safety, as very low speed limits (20-40 kilometres per hour) in many areas lower the risk of accidents.

Since the political changes in 2000, **Serbia** has been working to harmonise its national legislation to European Community legislation. Accordingly, strategies for reducing the risks deriving from traffic and from natural dangers are now being developed.

Focusing more on the environmental aspects of transport, **Poland, Slovakia, Ukraine, the Czech Republic and Romania** have developed policies on sustainable transport and infrastructure planning and development. In **Hungary**, as well as in **Serbia**, there is no specific policy related to sustainable transport, and no studies have been carried out on this issue.

The **Polish** National Transport Policy for the period of 2006-2025 (2005), the **Slovakian** Transport Policy up to 2015 (2005), the **Ukrainian** Concept for the Economic Reform of the Transport Sector (adopted by Regulation of Cabinet of Ministers in 2000) and the **Czech** National Transport Strategy (2005), aim both at developing transport efficiency and safety and at minimising the negative impacts of transport on the environment.

According to the prevailing integrative approach at international, European and national levels it is important to integrate environmental concerns throughout the decision-making processes. Hence, some of the Carpathian countries have developed environmental policies that take into consideration the negative environmental effects of transport. For example, in

Ukraine the Basic Principles of **Ukraine's** State Policy Directions Ensuring Environmental Protection, the Use of Natural Resources and Environmental Safety (1998) sets out the main principles and priorities for state policy on environmental protection and the rational use of natural resources including in connection with the transport sector. In the **Czech Republic**, the National Biodiversity Strategy (2005) includes a chapter on transport that foresees measures aimed at promoting environmentally sound means of transport, increasing the protection of the environment and natural habitats when building new transport infrastructure and limiting systematically the impact of transport on the environment and the disturbing effects of traffic.

Moreover, the **Czech Republic** has adopted strategies which aim to reduce the risks deriving from inter-Carpathian and trans-Carpathian traffic, such as, for example, the Strategy for the Protection of the Earth's Climatic System (1999), which was adopted in order to implement the Kyoto Protocol. It proposes the creation of economic tools to promote energy savings, afforestation, and some measures in the transport sector. Finally, in **Romania**, decision makers have adopted policies for reducing the pollution level related to transport activities in order to comply with EU legislation (e.g. Directive No. 98/70/EC³³ on the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions from the use of road transport fuels).

Moreover, some of these countries have developed sustainable transport strategies taking into account the sensitivity of natural and other specific areas. In **Slovakia** the Action Plan for Transport and the Environment includes some activities aimed at reducing the adverse impacts of transport in environmentally sensitive areas and tourist areas.

Some Carpathian countries have adopted specific policies aimed at developing road transport alternatives. The development of rail transport and multi-modal transport that focuses on connectivity between modes of transport is a good means to reduce dependence on the automobile and to promote eco-efficiency. In **Poland** the Transport Competitiveness Operational Programme aims to increase the competitiveness of rail transport. The **Czech Republic** has adopted the National Cycling Development Strategy, which defines priorities such as the development of bike paths.

The Concept on the Comprehensive Development of Road-Transport of **Ukraine** for the medium-term period and until 2020 provides that railway transport shall maintain the leading role in passenger and freight transport. **Romania** since 1998 has adopted several measures in order to encourage the transfer of transport to railway and the Government Ordinance 88/1999 represents the main act aiming at developing

TABLE 15

Aspects of sustainable transport and infrastructure

ASPECTS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Protection of areas rich in biodiversity	N	N	N	-	-	N	L/R/N
<p>The protection of areas rich in biodiversity is taken into consideration in the transport policies of all countries except Serbia and Romania. Ukraine takes it into account at all levels. In particular the State Programme on the Development of Main-Use Motorways for 2005-2010 (2005) aims at developing the main-use motorways in a manner ensuring environmental protection. The other countries are considering the protection of areas rich in biodiversity at the national level.</p> <p>For instance, in the Czech Republic, the protection of sensitive areas is mentioned in the National Transport Policy and is also guaranteed by other laws and policies such as the Act on Nature Protection. Nevertheless, in Hungary and Poland, national transport policies address aspects of environment and nature conservation in a very general way.</p>							
Protection of areas of international importance	N	-	N	-	-	N	L/R/N
<p>The protection of areas of international importance is taken into account in some of the transport policies of Ukraine, Slovakia, the Czech Republic and Poland. In Poland, although the general statements of the national transport policy and strategies mandates consideration of sustainable development and the conservation of biodiversity, there is no direct link to areas of international importance.</p>							
Protection of migration routes	L/N	-	N	-	-	N	L/R/N
<p>The protection of migration routes is not commonly considered in the Carpathians. Nevertheless, in Ukraine, the Programme on the Development of Tourist Infrastructure in the Directions of the National Network of International Transport Corridors and Main Transport Routes in 2004-2010 requires the arrangement of passes for animal migration (such as viaducts and trestle bridges above natural landscapes), and protective fences and noise protection walls on highways and, if needed, on other roads of state importance. Furthermore, in the Czech Republic the protection of migration routes is notably guaranteed in the National Transport Policy (2005). Temporary technical measures and projects are realised by NGOs in different parts of the country. Within the Carpathian region there are several localities where these programmes are realised. Permanent technical measures are also being implemented step by step.</p>							

L – local, R – regional, N – national level

TABLE 15

Aspects of sustainable transport and infrastructure continued

ASPECTS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Protection of landscapes	N	-	N	L/R/N	-	N	L/R/N
	<p>The Carpathian countries that ratified the European Landscape Convention (Ukraine, Poland, Romania, Slovakia and the Czech Republic) integrate the protection of landscapes in their transport policies. For instance, the sustainable transport policy of Romania is aimed at protecting nature and humans against the negative impacts of the sector's activities. In this respect, the major directions are oriented at increasing human health and stopping ecosystems degradation. In Ukraine and Poland transport policies partially take into account the landscape.</p>						
Protection of areas of particular importance for tourism	-	-	-	-	-	N	L/R/N
	<p>Only Ukraine and Slovakia take into account the linkages between tourism and transport infrastructure. In 2004 Ukraine adopted a Programme on the Development of Tourist Infrastructure in the Directions of the National Network of International Transport Corridors and Main Transport Routes in 2004-2010, and Slovakia adopted the Action Plan for Transport and the Environment (1999), which includes some tasks aimed at reducing the adverse impacts of transport in tourist areas.</p>						
Addressing the concerns revealed during the EIA/SEA processes	N	-	N	L/R/N	-	-	L/R/N
	<p>The main national strategy of the Czech Republic, the National Transport Strategy (NTP) was assessed by SEA in 2005 with positive results. Appropriate measures were specified, and it was stated that the NTP would not threaten the environment or any Natura 2000 sites. However, the use of EIA/SEA tools is generally low in transport policies. A few countries (e.g. Poland, Romania, Ukraine) have elaborated policies taking into account EIA or SEA mechanisms for transport and infrastructure development.</p>						
Other aspects	<p>Romania highlights in its Sustainable Transport Policy the need to protect human health against the negative impacts of transport.</p>						

L – local, R – regional, N – national level

multimodal transport. In the same spirit, **Slovakia** has, since 2001, adopted sectoral policies and strategic documents for the development of rail and water transport as well as combined transport.

Finally, at the regional level a number of sustainable transport and infrastructure strategies have been developed. For example, in **Poland** the draft Strategy of Voivodeship Development for 2007-2013 “Malopolska 2015” aims to develop the road network at regional and inter-regional levels and to increase complex investments in the zones of economic activity. This strategy is also aimed at complying with sustainable development rules, increasing the role of multimodal transport in regional services through increasing the number of passengers using public transport and increasing the number of modernised railway lines.

In the **Czech Republic** Integrated Regional Programmes on Emission Reduction have been adopted, primarily supporting the development of public transport, vehicle modernisation, the removal of heavy traffic from the centres of towns, and alternative fuels.

Legislative acts

All Carpathian countries have developed legislative acts in the field of transport and infrastructure except **Slovakia**, which still has to finalise the adoption of draft legislation. Most of the countries have developed sectoral legislative acts focusing on specific modes of transport. For instance, **Hungary** and the **Czech Republic** have sectoral laws on road traffic (Law on Traffic on Public Roads, 1988 and Act On Road Traffic, 2000), on railways (Law of Transport on Railways, 1993 and Act on the Railroads, 1994), on air traffic (Law on Air Traffic, 1995 and Act on Air Transport, 1997) and on water traffic (Law on Water Traffic, 2000 and Act on In-country Water Transportation, 1995). **Poland, Ukraine and Serbia** have adopted sectoral laws focusing particularly on road, rail and water transport, and providing the legal basis for the organisation and utilisation of the transport system, including the transport of hazardous goods. While road remains the dominant mode of transport, rail and water transport represent an important part of the legislative framework of the Carpathian countries.

In **Poland** and **Romania** legislative acts taking into account the impacts of transport on the environment have been adopted, such as the Environmental Protection Act (2006) in **Poland** and the Law on Environmental Protection (1995) in **Romania**.

Table 15 summarises how the main aspects of Article 8 of the Carpathian Convention are addressed by the sustainable transport and infrastructure planning and development policies of the Carpathian Countries at local, regional and national level.

Institutional assessment

All Carpathian countries have ministries specifically competent for the transport sector that elaborate transport policies. Several national authorities have been established, but these are generally specialised in one mode of transport. An overview of the institutional structure is given by Table 16.

In the majority of Carpathian Countries, issues related to transport and infrastructure fall within the exclusive competence of one ministry. In the **Czech Republic** the following four ministries share these responsibilities:

- The Ministry of Transport develops transport policy and carries out the duties of the highest state administrative authority in the area of transport.
- The Ministry of Regional Development implements plans for the development of transport policy through spatial planning.
- The Ministry of Environment is responsible for assessment processes and for coordination with respect to the goal of nature and landscape protection.
- The Ministry of Agriculture is responsible for maintaining waterways.

In general, the respective ministries of environment take part in the implementation of transport policies as the central environmental protection authority. They are usually competent for environmental supervision and monitoring of transport activities.

National authorities, with a wide range of responsibilities, have been established in most of the Carpathian countries, covering all the sectors of transport, i.e. roads, railways, water and air. For example, the **Romanian** national road and national railway authorities supervise, respectively, the construction and maintenance of roads/highways and railway infrastructure of national importance. The Road Administration in Slovakia carries out transport planning for motorways, expressways, and first, second and third class roads.

In the **Czech Republic**, numerous authorities deal with the management of roads, highways and railroads owned by the state and the issuing of permits for air and waterway transport.

At regional and local levels, transport measures are implemented in **Romania** and the **Czech Republic** primarily by the local and regional authorities, in **Hungary** and **Poland** by the regional offices of the national authorities and in **Ukraine** by the regional and local departments of the Ministry of Transport and Communications.

Romania and **Ukraine** are characterised by inter-ministerial and intersectoral coordination between

TABLE 16

Overview of institutional framework

Country	Ministry in charge of transport	National transport authority
Czech Republic	Ministry of Transport	The Centre for Traffic Research
	Ministry of Regional Development	The Head Office of Roads and Highways
	Ministry of Environment	Railway Infrastructure Administration
	Ministry of Agriculture	Office for Civil Air Transportation
		State Navigation Administration
		Directorate of Waterways
Hungary	Ministry of Economy and Transport	National Transport Authority
Poland	Ministry of Transport	General Inspectorate of Road Transport
		Office of Rail Transport
		General Directorate for National Roads and Motorways
		Civil Aviation Office
		Sailing Office
Romania	Ministry of Transport, Constructions and Tourism	National Road Authority
		National Railway Authority
Serbia	Ministry of Capital Investment	
Slovakia	Ministry of Transport, Post and Telecommunication	Road Administration
		Slovak Railways (ZSR)
Ukraine	Cabinet of Ministers	
	Ministry of Transport and Communications	

bodies competent for transport policies and bodies competent for other policies linked to the transport sector, such as environmental and economic policies.

Particularly in **Romania** there are inter-ministerial committees for road transport and for railway transport, with respective ad-hoc sub-groups dealing with legislative and regulatory projects, with the Ministry of the Environment and Water Management participating in these groups.

Achievements, obstacles and recommendations

In the Carpathian countries, there is an overall need to develop efficient and sustainable transport systems.

Main achievements

Sustainable transport planning in the region is in its initial stage, but several achievements in the transport sector have been identified. First of all, the principles of sustainable transport are reflected in most of the strategies developed by Carpathian countries. In **Ukraine**, there is a clear concept of transport development, reinforced by the preparation of a future Strategy for the Implementation of the Carpathian Convention that includes the development of sustainable transport policies.

Moreover, countries such as **Romania** and the **Czech Republic** have promoted the use of public transport, which leads to an efficient public transport system with a large number of users. The elaboration of multi-modal development strategies and combined transport

programmes in the region represent an important step in implementing the Carpathian Convention.

The most important achievement is efforts undertaken to enhance the sustainability and economic efficiency of rail transport. Here, measures for the promotion of the transport of goods by railways and measures taken to increase its competitiveness have been particularly efficient, especially in **Ukraine** where railway transport still is the dominant transport mode. But the different gauges in use in **Ukraine** and the other Carpathian countries continues to be an obstacle to regional development of rail links.

This situation is complemented by the governments' efforts to promote the transfer to more environmentally friendly technologies. For example, in **Slovakia** and **Ukraine**, the development of new technologies for motor vehicles combined with stricter controls had a positive impact on transport emissions.

Furthermore, there are examples of cooperation between neighbouring countries aimed at modernisation of transport infrastructure, which integrate environmental aspects. For instance in **Slovakia** and **Poland** a project aiming at developing a sustainable transport system in the region of the Tatra Mountains has been carried out. One of the main results of the project was the preparation by Polish and Slovakian experts of the study The Tatra Transport System and Nature Conservation. The development of international transport corridors continues.

In protected areas in the Carpathian Mountains, nature conservation is mostly taken into account in the planning process, and environmentally friendly modes of transport are promoted (e.g. bicycle).

Main obstacles

In the region, the most significant threat is the increasing car fleet and the dominant role of road transport. This problem is exacerbated by insufficient investments into public transport (for upgrading and modernisation of these services) and the falling number of public transport passengers. The potential for combined transport is far from being realised and the need to develop models of environmentally friendly transport for the Carpathian region should be emphasised.

There is a need for new transport infrastructure and modernisation of the existing infrastructure, especially because of the increase of traffic through the region. The intensive use of the road networks and the insufficient development and maintenance of transport infrastructure result in a low level of road transport safety. They also cause increased fuel consumption, noise and air pollution.

One important and long-term obstacle remains the poor financial capacity to invest in transport and infra-

structural modernisation. Furthermore, the fact that transport programmes and projects focus mainly on economic effectiveness is a significant barrier. For instance, the **Hungarian** and **Serbian** transport policies are not based on the concept of sustainable development.

The lack of environmental assessments early in decision making for road and infrastructure construction projects is recognised as an obstacle for the implementation of the convention.

Recommendations

- New transport infrastructure should be built and some of the existing infrastructure needs to be modernised on the basis of data and information about the existing Carpathian transport network using the available datasets/databases.
- Multimodal and intermodal transport should be improved (rail transport, water transport, combined transport) through more effective implementation of the existing policies and legislation and taking into consideration the best practices of the Alpine countries or countries from other mountain regions. Railway infrastructure in particular should be improved, primarily through the electrification of transborder railways, to achieve a modal split dominated by rail. In particular, the railway route Ivano-Frankivsk–Rakchiv (**Ukraine**)–Siget (**Romania**)–Debrecen (**Hungary**) should be opened.
- The sustainability and economic efficiency of rail transport should be further improved, and measures should be taken to promote the transport of goods by rail. Particular bottlenecks, such as the use of different gauges in **Ukraine** and the other Carpathian countries, should be addressed to enhance the regional development of rail links.
- Public transport systems should be improved to become a viable alternative to the use of private vehicles, taking into consideration the positive experiences of **Romania** and the **Czech Republic** that have efficient public transport systems.
- Specific transport policies and legislative measures should be taken for mountain areas, particularly for the Carpathians.
- Coordinated transboundary environmental assessment should be conducted for the development of plans and programmes of all types of transport in the Carpathians.
- A common approach to the development of transport infrastructure networks in the region should be developed to optimise mobility and transport efficiency.

- Public involvement in environmental impact assessment (EIA) of road and infrastructure construction projects and general transport development projects should be improved through stricter regulation and more effective implementation of the existing policies and legislation.
- Transport safety should be improved through more effective implementation of existing policies and legislation, taking into consideration the best practices of other mountain regions such as the Alpine countries.
- An interministerial and intersectoral coordination process should be established in most of the Carpathian countries taking into consideration best practices, such as the inter-ministerial committees for road transport and for railway transport in **Romania**.

Article 9

Sustainable Tourism

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.**

Tourism is considered a priority sector for economic development in the Carpathian region. Many tourism activities have been developed, ranging from commercial tourism to eco-tourism, and several resorts already exist in the Carpathian Mountains.

According to a study³⁴ on sustainable tourism in mountain regions conducted in **Poland** in 1999, the natural and cultural characteristics of the Carpathian region provide a good platform for further investments into sustainable tourism. This belief is shared by all of the Carpathian countries which have started to exploit the high recreational potential of the cultural features and natural environment of the region (through natural parks, tourist routes, skiing facilities, museums, educational tracks, festivals, etc).

Policy and legal assessment

Policies

Although no policies specifically concentrating on mountain tourism have been formulated in the Carpathian countries, mountains are generally identified in policies as areas of importance for the development of tourism.

All of the countries have elaborated a national strategy for tourism development. These documents provide the organisational, legal and economic framework for the tourism sector, and identify general objectives for its development. In **Poland**, the strategy for tourism development in 2001-2006 aimed to:

- reduce unemployment by using tourism development to create new job opportunities;

- increase the quality of life, especially in less-favoured areas;
- increase the role of cultural and natural heritage in education;
- promote the image of the country; and
- improve transboundary cooperation.

Poland's new strategy, planned for 2007-2013, takes sustainable development principles into consideration and emphasises the issue of tourism development within protected areas.

Although only a few countries have developed specific sustainable tourism policies, there is wide interest in developing eco-tourism, including activities such as hiking, horseback-riding, cycling tours, and ecological education. In this regard, **Romania** adopted the Romanian Ecotourism Strategy and **Slovakia** developed the Systematic Measures for the Solution of Limitations to the Development of Business Activities and Tourism from the Viewpoint of the Environment, which analyses the conflict between the interests of tourism development and the protection of nature and landscape, and the differences in approach.

The need for advanced infrastructure is reflected in the National Strategy for Sustainable Development of **Slovakia** and in the **Ukrainian** Programme for the Development of Tourist Infrastructure. The main objective here is to stimulate tourism by improving transport, facilitating access to tourist sites, and providing technical infrastructure for tourists.

Strengthening the position of tourism in the national economy is one of the main goals of the Carpathian countries. The priority is therefore to develop competi-

TABLE 17

Sectoral policies related to tourism

POLICIES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Agricultural policy	L/R/N	-	L/R/N	L/R/N	N	N	N
<p>With the exception of Hungary, all Carpathian countries include the development of agro-tourism in their policies. In Poland this is considered as an opportunity for rural development. In Ukraine, the basis of state policy in the tourism sphere consists of: the promotion of environmentally clean agricultural products to meet tourists' needs for high-quality food-stuffs and the involvement of the private sector, especially in rural areas, and in recreational and tourist enterprises.</p>							
Mountain policy	-	-	-	L/R/N	-	-	N
<p>Although mountain tourism is recognised as an important tourism area, very few Carpathian countries have adopted specific mountain tourism policy. In this regard, the Romanian Law on the Mountain Region, and the Sustainable Development Strategy for the Mountain Region, refer to measures for boosting sustainable tourism. The Law on the Status of Mountain Settlements in Ukraine provides guarantees financing measures for the improvement of soil fertility, as well as the development of the tourism, recreational and therapeutic potential of the mountain region.</p>							
Forest policy	L/R/N	L/R/N	L/R/N	L/R/N	N	N	N
<p>Linkages between forestry and tourism are highlighted in the seven countries. For instance, the National Forestry Policy and Development Strategy for Romania (2001–2010) contains measures promoting sustainable tourism/ecotourism. In Poland, the Forest Services are in charge of forest education. At the local level, educational centres and forest districts organise trips, events, and educational trails.</p>							
Spatial planning policy	-	L/R/N	L/R	-	N	L/R/N	N
<p>At all levels, spatial planning documents generally take into account the development of tourism. In many cases, tourism is a driving force for the development of infrastructure in the less developed regions with tourism potential, like the Carpathian region. The Law of Ukraine on the Planning and Development of Territories and the General Scheme for Territorial Planning in Ukraine include tourism in their strategies. In Romania, the Spatial Plan for Territorial Management includes references to tourism, although not explicitly defined as sustainable.</p>							

L – Local, R – Regional, N – National level

TABLE 17

Sectoral policies related to tourism, continued

POLICIES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Infrastructure policy	-	-	L/R	-	N	-	N
<p>Tourism infrastructure is insufficiently taken into account. Ukraine established a specific policy: the Programme for the Development of Tourist Infrastructure in the Directions of the National Network of International Transport Corridors and Main Transport Routes in 2004-2010.</p>							
Industrial policy	L/R/N	-	-	-	N	N	-
<p>The level of consideration of industrial aspects in tourism policy is insignificant. Only Slovakia and Serbia have an industrial policy at the national level.</p>							
Environmental protection policy	L/R/N	L/R/N	L/R	N	N	N	N
<p>All countries have tourism policies and legislation covering environmental protection since tourism can have adverse effects on nature conservation. In Romania, the concept of sustainable tourism is supported by the Strategy for Environmental Protection, and also by the National Sustainable Development Strategy. In Poland, environmental protection requirements and EIA procedures are used to control the development of mass tourism (e.g. skiing facilities).</p>							
Education and training policy	L	L/R/N	L/R/N	N	N	L/R/N	N
<p>Apart from Romania and Serbia, where educational policy is centralised, the importance of education is emphasised at all levels. In Poland, all educational programmes and strategies generally cover some aspects of tourism. In the Czech Republic, support is provided to local ecological and educational organisations with a focus on children's education. Ukraine developed the State Programme for the Development of Tourism for 2002–2010, which takes into account the need to increase the level of awareness.</p>							
Others	<p>In Slovakia, cultural policy is a priority at local, regional and national levels.</p>						

L – Local, R – Regional, N – National level

tive and profitable types of tourism. Furthermore, according to the results of the national assessments, all sectoral policies should be better coordinated to ensure their integration into sustainable tourism policies. These policies are listed in Table 17.

At the regional level, a number of strategies regarding the Carpathians have been adopted, such as the regional programmes of the oblasts of the Carpathian region in **Ukraine**. For example, the programme for tourism development in Ivano-Frankivsk oblast for 2002-2010 contains complex measures, particularly on the development of tourism infrastructure and the preservation of historical and cultural heritage. In the **Czech Republic**, several regional strategies for tourism development have been adopted since 2001. However, not all these strategies are in harmony with the principles of sustainable development. In particular, the Development Strategy for Tourism in the Beskydy region is oriented towards mass tourism and the development of sport centres in the Carpathian region.

Some policies highlight the importance of transboundary cooperation in the field of tourism. One good example is the regional development plans for the **Romanian** regions near the borders, which prioritise the strengthening of cooperation in a transboundary context, including tourism and environmental protection. Further initiatives include: Euroregions between the **Czech Republic** and **Slovakia** resulting in a Joint Programming Document that formulates priorities regarding the development of tourism, the Carpathian Euroregion, and the Greenways Programme project "Jantarova cesta" between **Hungary**, **Slovakia** and **Poland**.

Legislative acts

The existing tourism related legislation in the Carpathian countries calls for further development of tourism activities and services.

Increasing the quality of tourism services and facilities is important. For instance, **Romania** adopted a law aiming to develop facilities in the Romanian Carpathians in order to improve winter sports. However, like most of the legislation on tourism in the region, it does not adequately take into consideration the natural heritage and protected areas of the targeted locations.

Overall the necessary legal framework for sustainable tourism ensuring environmental conservation is insufficient. However, in **Serbia**, the new Law on Tourism, adopted in 2005, regulates the expansion of tourism according to the concept of sustainable development, while ensuring environmental protection. Moreover, **Romania** developed regulations regarding the delimitation and management of protected areas, including measures for ecotourism and tourism activities within core

areas. To the same end, the **Czech** Nature and Landscape Protection Act contains the basic definitions of protected areas and constraints on tourism in these areas.

Rural tourism, which includes farm tourism, agri-tourism and other recreational activities suitable for rural areas, is explicitly taken into account in **Romania** through the Emergency Ordinance approved by the Law 187/1998 regarding the establishment of facilities for the development of rural tourism, as well as in **Hungary** through the governmental decree on the condition of rural tourism.

The national assessments reflected the need for a clear individuation of quality standards regarding ecotourism and agri-tourism. Otherwise, transboundary cooperation to facilitate sustainable tourism development is sometimes included in the national legislation. According to the **Serbian** Law on Tourism, the Serbian National Tourist Organisation can establish cooperation with national, regional and international organisations in the area of tourism, and can propose measures to participate in multinational and regional programmes and projects aimed at the development and promotion of tourism.

Joint actions are usually carried out within the framework of multi- and bilateral agreements. For instance, in 1999, an agreement between the **Polish** and **Slovakian** governments was adopted on rules applying to the crossing of national borders on transboundary tourist trails. Since 1994, **Ukraine** also concluded agreements to cooperate in the field of tourism with **Hungary**, **Poland**, and **Slovakia**. Regarding cross-border protected areas, the development of joint management plans is not required although it would be an efficient means to coordinate activities. Thus, the management of these areas is generally ensured by bilateral or multilateral commissions such as the **Polish-Czech** Intergovernmental Commission for Transboundary Cooperation.

Institutional assessment

The overview of the institutional framework in the seven Carpathian countries in Table 18 shows that several national institutions in charge of tourism have been established. Ministries' competencies vary but generally include:

- developing tourism strategies;
- drafting laws and regulations;
- designing international opportunities for the tourism market;
- implementing the national tourism strategies and policies;
- drawing needed funds for the tourism sector; and
- carrying out quality control of tourism services.

TABLE 18

Overview of institutional framework

Country	Ministry in charge of tourism	National tourism authority
Czech Republic	Ministry of Regional Development	
Hungary	Ministry of Economy and Transport	Directorate-General for Tourism
Poland	Ministry of the Economy	Tourism Department
Romania	Ministry of Transport, Constructions and Tourism	National Tourism Authority
Serbia	Ministry of Trade, Tourism and Services	
Slovakia	Ministry of Economy	
Ukraine	Ministry of Culture and Tourism	State Tourist and Resorts Service

The ministry in charge of tourism occasionally shares this responsibility with other ministries. In **Romania**, the Ministry of Environment and Water Management issues environmental permits and organises EIA procedure related to tourism, and the Ministry of Agriculture, Forests and Rural Development is in charge of the development of rural tourism. In **Ukraine**, there are examples of effective interaction between the central bodies for tourism and the Ministry of Transport concerning the tourist arrangement of the main transport corridors, and also with the Ministry of Environmental Protection concerning the development of ecotourism on the territories of national parks. In the **Czech Republic**, the Ministry of the Environment cooperates with the Ministry of Regional Development on sustainable tourism projects, such as the establishment of a National Centre for Sustainable Tourism and regional centres for sustainable tourism, as well as the development of a national system for the certification of ecologically friendly tourist services.

In some cases, committees and councils have been established, generally as consultative and/or inter-sectoral coordination bodies. In **Hungary**, an independent standing committee at the national level, the Parliament's Tourism Committee, has been created to make plans and recommendations to the government, but also to oversee the enforcement of relevant legislation and to monitor the tourism sector. Furthermore, a National Tourist Committee was set up as a consultative body for the regional tourist committees appointed by the Minister for Economy and Transport to manage the nine tourism regions of the country. In **Ukraine**, the Council on Tourism Issues within the Cabinet of Ministers was established as an inter-branch coordination council including deputy ministers of the relevant ministries. A Tourism Council for the

Carpathian Region has even been founded by the Transcarpathian, Ivano-Frankivsk, and Chernivtsi Oblast administrations, which organises educational seminars and informational tours, promotes the region and produces information relevant to tourism. However, cooperation and coordination mechanisms between the different sectors related to tourism and the network of institutions require further development.

At the national level, information is provided by the public tourist offices or organisations such as the **Hungarian** National Tourist Office, the National Tourist Organisation in **Ukraine**, the **Czech** Tourism Agency and the **Polish** Tourist Organisation. These bodies play an important role in the promotion of tourist services and destinations, as well as the development of tourist information systems at national and international levels. They can initiate the modernisation of tourist infrastructure. Such offices are also present at local and regional levels in **Ukraine** and **Poland**.

At regional and local levels, tourism administrations and authorities have complementary competences. For example, in **Slovakia**, regional self-government authorities ensure the coordination of activities in the field of tourism while the main responsibilities of municipalities are preparation of development plans, decisions on construction or renewal of tourist infrastructure and facilities, and levying of local taxes. In the **Czech Republic**, regional authorities develop their own strategies for sustainable tourism in cooperation with the **Czech** Tourism Agency, and local authorities often create unions of towns and villages to adopt a collective strategy and provide financing.

The above-mentioned public bodies try to pay more and more attention to issues of sustainable tourism.

Achievements, obstacles and recommendations

Main achievements

In general, the Carpathians have rich touristic potential, partly due to the relatively well preserved natural and cultural heritage, as well as the development and promotion of networks of mountain shelters and hiking trails. All kinds of tourism have a good potential for expansion, not only rural and traditional tourism but also new forms of tourism such as eco-tourism and agri-tourism.

For instance, cooperation between tourists and forest authorities has contributed to promote forests as an important area for eco-tourism and recreation. Tourism is also increasing in protected areas. Furthermore, institutional infrastructure is improving and the implementation of projects in the field of sustainable tourism is increasingly supported. The recently launched CADSEES project on the sustainable development of the Carpathians has significant potential for success within the region.

In **Slovakia**, the document *The Regionalization of Tourism in Slovakia* proposes the main forms of tourism in 21 specific regions of the country, taking into consideration the protection of nature and countryside. It will therefore serve as a tool for the development of tourism-related strategies at local and regional levels.

Main obstacles

When considering sustainable tourism options, the general tendency is to favour short-term economic benefits and to focus on large and often devastating investments, including ski resorts in the sensitive areas of high mountains. There are several reasons for this tendency.

Firstly, there is insufficient funding and other incentives for investing into sustainable tourism activities. Another obstacle is the absence of mandatory procedures controlling the transferring of natural and countryside areas into recreational lands. Secondly, policies and laws in the field of tourism do not sufficiently integrate principles of sustainable development and sustainable tourism. The movement of tourists is not sufficiently controlled and studies have not been undertaken to assess the impacts of increasing tourism in the region, especially in sensitive areas. In addition, there are not enough inventories and monitoring of tourist facilities in the region.

Thirdly, the sustainable development of tourism in the region is hampered by insufficient coordination at national and local levels, as well as insufficient cooperation between the private and public sector. The lack of transboundary cooperation is also stressed. Fourthly, the general poor state of transport infrastructure and insufficient public transport connections limit the mobility of tourists and access to tourist areas. Moreover, the weak development of tourist infrastructure, combined with inadequate accommodation capacities and services, also hampers the development of the tourist sector. In this regard, the lack of qualified personnel is also highlighted, along with the weak control over the use of land resources and the planning of new investments in the tourism branch.

For these reasons, the development of operative plans and the promotion of tourist activities as well as the level of awareness of local people on sustainable tourism are limited.

Recommendations

- Transboundary cooperation should be developed, and a uniform strategy on sustainable tourism for all Carpathian countries should be elaborated.
- National policies and laws should include clear definitions of sustainable tourism and of the status of green and rural tourism.
- Eco-tourism, agri-tourism and rural tourism should be promoted, and a procedure for transforming agricultural or forest lands into recreational lands should be elaborated.
- The development of educational and information infrastructure, the development of transport devices and technical infrastructure supporting the development of sustainable tourism are needed.

Article 10

Industry and Energy

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 minimise 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.**

The transformation in the energy and industrial sectors following the socialist period has led to rapid economic development. Although the political changes contributed to the collapse of heavily polluting industries that have been present in the region for decades, hot spots still exist, and their environmental legacy constitutes a serious problem for the Carpathian countries. In particular, several mining extraction and processing enterprises operate in the Carpathian region and represent an important environmental threat.

Several projects have been undertaken in the region to address industrial pollution, including programmes for rehabilitation and development of polluted industrial sites. Research, inventories and classifications have also been carried out to help governments to develop strategies and prevent accidents.

Policy and legal assessment

Policies

Mainly in order to comply with EC industrial legislation, Carpathian countries have developed comprehensive national policies on industry and energy. However, countries prefer to focus on the rational use of limited natural resources and production efficiency rather than on environmentally friendly practices such as cleaner production technologies, renewable energy sources, etc.

Only **Ukraine** has developed a general long-term strategic document: the Concept Bases of the Strategy for the Economic and Social Development of **Ukraine** for 2002-2011. It is aimed at improving the legislation in accordance with EC legislation for the rational use of natural resources and to ensure safety in industrial installations. The priorities include the establishment of a balanced system for the use of natural resources and the development of environmental technologies in industry, energy and construction.

Most of the Carpathian countries have elaborated nationwide policies targeting either industry or energy, but none of them contain measures specifically addressing mountain areas.

Industry

The main strategic documents regarding industry in **Romania** are the Industrial Policy of **Romania** and the implementing Action Plan. The Industrial Policy is in line with Council Directive 96/413/EC on the Implementation of a Community Action Programme to Strengthen the Competitiveness of European Industry and includes provisions encompassing sustainable development.

Although, the Strategy for the Mining Industry for 2004-2010 has been adopted there is still an important potential threat from mine sites in **Romania** that are expected to close after 2007 without having adopted all the necessary environmental rehabilitation measures.

In **Ukraine**, the main principles of the state industrial policy include the social and environmental aspects of industrial reform. The State Programme for Industrial Development for 2003-2011 is based on the Concept of State Industrial Policy Development, and the Concept Bases of the Strategy for the Economic and Social Development of **Ukraine** for 2002–2011. The programme aims to accelerate industrial development towards high technology and modernisation. The main directions of the industrial environmental policy as set out in the programme include the gradual phase out of environmentally harmful production, the economic stimulation of resources and energy saving, the introduction of environmentally clean and nature-renewing equipment and technologies, and more extensive use of technologies using renewable resources.

Apart from the examples of **Romania** and **Ukraine**, environmentally friendly practices in industrial policies are very limited in the region. In **Slovakia**, the new industrial policy, Principles of Industrial Policy of the European Union in the Slovak Republic, is primarily oriented towards enhancing the competitiveness of industry in globalised markets and focuses more on supporting business initiatives than on sustainable development. An integrated approach to land management planning is, however, included in individual reform phases and processes.

Finally, **Serbia** and the **Czech Republic** do not have any policy document on industry that promotes sustainable and environmentally friendly practices.

Energy

The main focus of energy policies in the region is on promoting energy efficiency. The goal is to control energy consumption and production and to decrease energy intensity. Regarding the use of renewable energy, the two main driving forces are the EC energy-related acquis and the Kyoto Protocol. All Carpathian countries have developed strategies on sustainable energy and renewable energy resources.

In **Poland**, the Energy Policy until 2025 was recently adopted, underlining the necessity to improve sustainable energy processes. It defines objectives such as:

- the increased use of biomass in electricity and heat generation;
- the increased use of wind power and small-scale water power; and
- the development of industry for renewable energy generation.

Romania, the first Carpathian country to ratify the Kyoto Protocol, has developed many policies in the field of energy, including the National Strategy for

Energy Sector Development and the Strategy for Renewable Energy Sources Capitalisation. The government has elaborated a road map for the energy sector, and the extended use of renewable energy sources and the promotion of combined heat and power are two of the main objectives to be met by 2008.

The Energy Policy of **Slovakia**, adopted by the government in 2000, includes the principles of sustainable development and is in conformity with all of the country's relevant international commitments. One of its main objectives is the effective use of energy and the implementation of measures aimed at saving energy and fuels. In particular, it concentrates on:

- increasing energy efficiency in production, transport and consumption;
- increasing the proportion of alternative, renewable sources of energy to cover consumption;
- increasing the use of resources that do not produce CO₂; and
- developing alternative energy and environmentally sound technologies.

In 2004 the **Czech Republic** adopted two policy documents on energy: the National Energy Policy, and the National Programme on Energy Savings and the Use of Renewable Resources 2006–2009. Both contain measures to support renewable sources of electricity and energy saving. In **Serbia** the Energy Sector Development Strategy will be completed by a Strategy for the Long-Term Development of the Energy Sector of the Republic of **Serbia** until 2015. In **Ukraine**, a wide range of programmes on energy (coal, energy saving, wind power plant) up to 2010 have been adopted.

The energy policies usually define targets to be reached regarding renewable energy. For instance, according to the **Czech** National Energy Policy, energy from renewable resources should cover 8 percent of total energy production by 2010. **Hungary** sets a 3.6 percent target as its share of renewable energy in 2010.

Table 19 summarises the different measures that Article 10 requires the parties to undertake through the relevant policies and legislative acts of the Carpathian countries.

Legislative acts

The legal framework of the Carpathian countries regarding industry and energy demonstrates progress in the field of environmental protection. Because most of the countries comply with EC legislation (Directive 2001/77/EC on the Promotion of Electricity Produced from Renewable Energy Sources, Directive 96/61/EC on Integrated Pollution Prevention and Control, Directive 2003/87/EC of the European Parlia-

TABLE 19

Measures to implement Article 10

MEASURES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Regulate potential adverse effects of mining activities	Y	Y	Y	Y	Y	Y	Y
<p>In all Carpathian countries mining activities are regulated by legal and declarative tools. Romania, the Czech Republic and Ukraine have laws specifically on mining (see legal assessment below).</p>							
Prevention and management of industrial accidents	Y	Y	Y	Y	Y	Y	Y
<p>Prevention and management of industrial accidents are regulated in all the countries. For instance, they are secured in Ukraine by the Regulation of Emergency Situations and Development Plan for Accident Localisation and Elimination. The Czech Republic, Romania, Slovakia, and Poland are parties to the Convention on the Transboundary Effects of Industrial Accidents.</p>							
Promote environmentally sound methods for the production, distribution and use of energy	Y	P	Y	Y	Y	N	Y
<p>This issue is dealt with in different ways by the countries. In Poland, Romania and the Czech Republic the methods are promoted in the form of laws and strategies. For example, in Romania, the Strategy for Renewable Energy Sources Capitalization promotes the use of “clean” energy sources for heat and electricity production. Furthermore, the Law on Integrated Pollution Prevention, Reduction and Control creates a favourable framework for new clean technology transfer – best available techniques (BAT) – in the most important sectors of industry. In Serbia and Ukraine, it is mostly included in declarative documents such as the Ukrainian Concept for State Industrial Policy Development. Slovakia is lacking a comprehensive policy in this respect.</p>							
Incentives for clean technologies, renewable energy and energy efficiency	Y	Y	Y	Y	Y	Y	Y
<p>All the countries encourage clean technologies, renewable energy and energy efficiency through law and policies. In Poland, a system for the certification of energy origin has been implemented since 2005. In Hungary, energy from power plants is bought at a higher price by the distribution companies. In Serbia, incentives and measures exist for the industrial and energy sectors to strengthen pollution control, but enforcement of these measures is weak (e.g. low fines and pollution charges).</p>							

Y – yes, N – no, P – partly

TABLE 19

Measures to implement Article 10, continued

MEASURES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Promote research on clean technologies, renewable energy and energy efficiency	N	Y	Y	Y	Y	N	Y
<p>With the exception of Slovakia and the Czech Republic, research on clean technologies, renewable energy and energy efficiency is promoted in the region. For example in Poland, it is taken into account in the Guidelines for the Policy of Science, Technology and Innovation.</p> <p>Research funding is available in Hungary through the National Office for Research and Technology.</p>							
Identify alternative environmentally friendly solutions to heavy industrial development	-	Y	Y	Y	Y	Y	Y
<p>Alternative environmentally friendly solutions to heavy industrial development have been identified in most of the countries.</p> <p>Hungary favours less heavy industrial development through spatial development plans whereas Poland uses economic incentives to prevent such a form of development.</p>							

Y – yes, N – no, P – partly

ment and of the Council of 13 October 2003 Establishing a Scheme for Greenhouse Gas Emission Allowance Trading within the Community and Amending Council Directive 96/61/EC, and the EC Resolution on the Creation of a European Pollutant Emission Register), the level of environmental requirements in the two sectors has increased.

Energy

The **Czech Republic**, **Hungary**, **Poland**, and **Romania** have harmonised their national legislation to EC Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources on the internal electricity market. In **Poland**, the basic act on the power system — the Energy Law (adopted in 1997) — was amended in 2005 to meet the requirements of Directive 2001/77/EC. It includes for example, the issue of the certification of the origin of renewable energy. This is complemented with a Regulation of the Ministry of Economy on the obligation of buying electricity and heat from renewable energy sources and electricity produced in cogeneration with heat production.

Hungary modified in 2005 its Law on Electricity in order to facilitate the development of renewable energy sources. **Hungary** also developed several laws and regulations regarding the production, transport and supply of energy (electricity, nuclear energy, heating and hot water). Renewable energy sources are also taken into account and their prices and supply conditions have been regulated since 2001.

In the **Czech Republic** Act No. 180/2005 on the Promotion of the Use of Renewable Energy Resources regulates, in conformity with EC legislation, the method for promoting the production of electricity from renewable energy sources. One of its main strengths is that it guarantees a fixed price for energy produced from renewable resources for 15 years. The Czech Act on Energy Conservation is designed to increase energy efficiency during production, transport, distribution and consumption. It also defines duties in relation to energy use, energy audits, and rules for the state and regional energy concepts.

Romania transposed Directive 2001/77/EC³⁶ in 2003 and created a comprehensive legal framework for

the efficient use of energy, the reduction of pollutant emissions (especially greenhouse gases) and renewable energy sources. Law 199/2000 establishes the principles for a national policy and for research support in the field of energy efficiency. The objective is to raise consumer awareness concerning energy saving and the consequences of pollutant emissions. Decree 1892/2004 establishes a sophisticated system to promote electricity production from renewable energy sources, including a mandatory quota system and a green certificates trading system.

In **Ukraine**, the legal, economic, social and ecological frameworks for energy activities are defined by the Law of Ukraine on Energy Saving and the Law of Ukraine on Electric Energy.

Serbia adopted the Energy Law in 2004, which implements the objectives of its energy policy. It notably establishes conditions for energy efficiency and energy supply, ensuring environmental protection and sustainable development of energy activities. It also regulates the functioning of the energy market.

Industry

In the region, some legal tools exist in the field of industry that contain environmental requirements and promote sustainable practices. Most of the laws adopted concern major hazard installations, notably the metallurgical industries, the oil and gas industries, and mining.

For instance, in **Ukraine**, the Law on Major Hazard Installations defines the legal, economic, social and organisational bases of activities connected with major hazard installations, and it is aimed at the prevention and the elimination of the consequences of major industrial accidents.

In **Serbia**, the sole law in the industrial sector that contains environmental requirements is the Law on Business Companies. According to this law, a business may engage in the production, trade, distribution, preparation or warehousing of material that is hazardous or harmful to persons or to the environment, only if the appropriate state body certifies that the requirements for technical equipment, work safety and environmental protection and improvement have been met.

In **Slovakia**, a number of draft acts have been prepared, such as the draft act on support for industrial parks, which will take an integrated approach to management and planning of land resources.

Mining plays an important role in the sector of industry and many specific acts are devoted to this activity. **Romania** has identified mining as one of the principal areas in the industrial sector requiring urgent action. In fact, the priorities of the National Environmental Action Plan (NEAP) aim at reduction of emis-

sions of lead and other heavy metals from the mineral industry and the minimisation of water contamination by toxic substances. However, the planned closure of mines without the necessary rehabilitation measures represents an environmental threat. New rules for the management of mineral resources are established by the Mining Act (85/2003) and its implementing legislation. Obligations are prescribed regarding ecological reconstruction and the obtaining of environmental permits, and it is prohibited to carry out such activities in protected areas. Legislation for implementing the EC Mine Waste Directive is also under preparation.

In the **Czech Republic**, the main legislation on the use of natural resources comprises notably the Mining Act, which lays down the basic conditions for mining and establishes the framework for the protection of resources and their utilisation, and the Act on Geological Works, setting out rules requiring geological research and screening. In **Ukraine**, mining is regulated by the Mining Law of **Ukraine** whose principles include the increase of the environmental safety of mining enterprises and the rational use of minerals.

In most of the countries (the **Czech Republic**, **Poland**, **Romania**, **Slovakia** and **Serbia**), the permitting process of industrial activities is regulated by both EIA and integrated pollution prevention and control (IPPC) procedures. The EIA procedure requires an evaluation of the likely impacts of a proposed activity on the environment as an integral part of the documentation necessary to obtain a permit or approval before the realisation of a project. The procedure is led by competent authorities for environmental protection and is accomplished with the participation of the central or local public authorities as appropriate, including public consultation (see article 12 below).

The IPPC permitting procedure aims at better control of installations and activities that potentially have a negative impact on human health and the environment, through a single permitting process for emissions in all media (air, land and water). In order to gain an IPPC integrated permit, operators of industrial sites must show that they systematically ensure satisfactory environmental management of the installation and that they fulfill other requirements such as accident prevention or minimisation.

The transposition of EC Directive 96/61/EC on IPPC into the legislative framework of all the Carpathian countries but **Ukraine** represents progress, since it guarantees a high standard of environmental protection through taking an integrated approach to control the environmental impact on air, land and water of emissions arising from industrial activities. IPPC involves a single permitting process for the protection of the environment in a holistic manner.

For instance, Law 645/2002 on Integrated Pollution Prevention, Reduction and Control Transposing into **Romanian** Legislation the IPPC Directive, creates a favorable framework for new clean technology transfer (BAT) in the most important sectors of industry and agriculture.

In the **Czech Republic**, the Act on Integrated Prevention and Control defines the duties of facility operators to set out the procedure for the integrated permitting process, and creates an integrated register of polluting activities. In **Slovakia**, the new Act No. 245/2003 on Integrated Pollution Prevention and Control has transposed the IPPC Directive and the EC resolution on the creation of a European pollutant emission register. The purpose of the law is to ensure sustainable development and to reach a high level of environmental protection by securing the balanced integrated assessment of all environmental components. It mandates licensing of facilities causing pollution above a specific threshold and the establishment of an information system of integrated pollution prevention and control.

In **Serbia**, the Law on Integrated Prevention and Pollution Control transposes the IPPC Directive.³⁷ In **Ukraine**, the permitting process of industrial activities is not regulated by these two procedures. However, the Law on Environmental Protection (1995) sets out the general framework for the permitting system.

The EU has set up the European Pollutant Emissions Register (EPER) and from 2008, the EU member states will also implement the Aarhus Convention Protocol on Pollutant Release and Transfer Registers (PRTR), which the EU has signed and is binding for all its member states. In addition, **Serbia** is in the process of ratifying it. This implementation will mean monitoring of diffuse pollution and waste quantities which are currently not included in EPER.

Most of the Carpathian countries have developed and maintained national pollutant emissions registers. For instance, **Hungary** implemented the EPER before its EU accession containing information on water, air and soil pollution. **Poland**, as one element of the implementation of EPER, has established the National Emission Centre, a result of the common initiative of the Ministry of the Environment, the National Fund for Environmental Protection and Water Management, and the Institute for Environmental Protection. This centre compiles a national inventory of emissions data, including greenhouse gases and other pollutants (acidifying pollutants, photo-oxidants, persistent organic pollutants and heavy metals). In the **Czech Republic** and **Romania** pollutant emissions registers were introduced in 2002 as an implementation of EPER.

In **Serbia**, the Pollutant Emissions Register was established by the Law on Environmental Protection (2004). Furthermore, there are a number of local regis-

ters but not in the Carpathian region. In **Ukraine** there is a general legal framework that provides a system for the registration of the emission and movement of polluting substances, which also requires public information in this field. The information collected by the state authorities includes information on pollution sources, polluting substances and their quantities, and also the geographic coordinates of pollution sources.

Institutional assessment

In the industry and energy sectors, the institutional structure in the Carpathian countries is often complex. Table 20 shows that questions related to industry and energy do not fall within the exclusive competence of one ministry.

Generally, the ministry of economy and trade is responsible for the industry and energy sectors. It elaborates policies, strategies, plans and legislation in the areas of industry and energy. The ministry of environment as well as other ministries such as the ministry of health also play a part in the enforcement of policies, regulations and mechanisms.

For instance, in **Poland** the national authority for matters of energy and industry is the Ministry of the Economy, but the issues of integrated permits, and the promotion of cleaner technologies and renewable energy sources are coordinated by the Ministry of the Environment.

Similarly, in **Slovakia**, the Ministry of the Economy is the lead central state administration body in the areas of energy production and industry, responsible for defining the national policy in these sectors, whereas the Ministry of the Environment deals with hydro-ecological plans and renewable energy resources in cooperation with other ministries.

Following the same structure, the Ministry of the Economy and Trade of **Romania** is the central authority that coordinates and supervises the application of legislation and the implementation of policies, strategies and plans for industry and energy, while the Ministry of the Environment and Waters Management is responsible for issuing environmental permits for mining and processing activities, and for enforcing related environmental regulations.

In **Ukraine**, policy and legislation on industry and energy are adopted by the Supreme Council. It defines the responsible authorities and their competences, and the main special authorities in this sphere are the Ministry of Fuel and Energy, the Ministry of Industrial Policy and the Ministry of the Coal Industry. The Ministry of Environmental Protection also holds some responsibilities, including control over compliance with the legislation, norms and standards on environmental protection and the use and protec-

TABLE 20

Overview of institutional framework

Country	Ministry in charge of industry	Ministry in charge of energy
Czech Republic	Ministry of Industry and Trade	Ministry of Industry and Trade
Hungary	Ministry of the Economy and Trade	Ministry of the Economy and Trade
Poland	Ministry of the Economy	Ministry of the Economy
Romania	Ministry of the Economy and Trade	Ministry of the Economy and Trade
Serbia	Ministry of the Economy	Ministry of Energy and Mining
Slovakia	Ministry of the Economy	Ministry of the Economy
Ukraine	Ministry of Industrial Policy Ministry of the Coal Industry	Ministry of Fuel and Energy

TABLE 21

Overview of national authorities for industry and energy

Country	National authority
Czech Republic	Energy Agency Environmental Inspectorate Environmental Information Agency
Hungary	Energy Agency
Poland	Energy Regulatory Office National Energy Conservation Agency Energy Market Agency
Romania	National Agency for Mineral Resources National Agency for the Implementation and Development of Reconstruction Programmes in Mining Areas Agency for Energy Conservation National Authority for Regulation in the Energy Field National Authority for Regulation in the Natural Gases Field
Serbia	Energy Agency
Slovakia	-
Ukraine	State Inspectorate for Energy Saving State Ecological Inspectorate National Agency of Ukraine

tion of natural resources during the activities of the industry and energy sectors, the approval of the norms developed by other authorities, the conducting of state environmental expertise, and the issuing of corresponding permits and conclusions. In contrast, ministries in **Poland**, **Romania** and **Slovakia** have representatives and departments at regional and local levels, and they participate in the implementation of policies and legislation at their level.

The Carpathian countries have established many national agencies and other entities dealing mainly with energy (see Table 21).

In the **Czech Republic**, the Energy Agency is responsible for administering the national programme on the utilisation of renewable energy resources and energy savings and the Czech Environmental Inspectorate (CIZP) is responsible for supervising the compliance of environmental legislation. In **Serbia**, the Energy Efficiency Agency was established as a special organisation for carrying out professional activities for improving conditions and measures for the rational use and saving of energy and energy resources, as well as for increasing overall energy efficiency across all industrial sectors. Usually, these authorities are competent at the national level, but their responsibilities do not overlap with those of the ministries.

In **Ukraine**, the Regulation on the Co-operation of the State Ecological Inspectorate and the State Energy Saving Inspectorate was adopted by Order of the Ministry of Environmental Protection and State Energy Saving Committee in 2002. It establishes the procedures for cooperation of these authorities and their local departments in the execution of state control over environmental protection, and the rational use of natural and fuel-energy resources.

Romania also developed an inter-ministerial committee, which includes both the Ministry of the Environment and Water Management, and the Ministry of Economy and Trade, to ensure integration of environmental protection into industry and energy sectoral policies. An Inter-ministerial Committee for the Mountain Region also exists in **Romania**.

Achievements, obstacles and recommendations

The situation in the Carpathian region regarding industry and energy is insufficient. Although progress has been made in the promotion of renewable energy systems and cleaner industrial technologies, the implementation of these policies is weak. Moreover, the Carpathian and other sensitive mountain areas are not taken into account in any policy or strategy.

Main achievements

The Carpathian countries have developed legislation and strategic documents that aim at rational use of resources and energy saving in production, the decrease of industrial pollution, and the transfer of more environmentally friendly technologies. In member states of the European Union, this process is mainly driven by the legal obligation to implement and apply EC legislation on industrial pollution control. Civil society has also been an important factor in this progress, denouncing violations of environmental legislation, promoting the introduction of non-polluting technologies, and proposing investments and monitoring activities.

This new framework is completed with substantial financial support, and the availability of funding for environmentally friendly activities is considered a major achievement. For example, the **Czech Republic** Environmental Fund gives subsidies to individual projects promoting solar energy and biomass heating in the country.

Regarding energy, although the consumption of “conventional” energy is very high, the use of renewable or alternative energy is increasing. The new demand is therefore partly covered by renewable energy resources. For example, in **Hungary**, the share of renewable energy increased from less than 1 percent to 2.7 percent in just a few years. This development is due to investments in new technology using forest biomass as fuel for electricity production and governmental support. Apart from direct financial support from the government, other incentive mechanisms exist or are in development. In the **Czech Republic**, the price of energy produced from renewable resources is guaranteed by law.

A positive change in the industrial approach on environmental performance can be witnessed in the region. Businesses increasingly accept environmental performance as one aspect of their competitiveness. For instance, in **Slovakia** and **Romania**, the trend is towards the standardisation of environmental management systems (e.g. EMAS) and the use of eco-labels. Overall, EIA, IPPC and Integrated Registers of Pollutants contribute effectively to environmental protection in the field of industry and mining. For instance, EIA does not allow developers to submit projects with clearly adverse environmental impacts without mitigation and compensation measures.

Main obstacles

Despite the development of laws, policies, strategies and efforts made in the promotion of renewable energy systems and cleaner industrial technologies, current practices reveal a low level of implementation.

The state of energy and industrial infrastructure is, in many cases, insufficient to meet requirements. The technologies employed are often outdated, there is a lack of subsidies and financial resources in some sectors, etc. This is particularly true for mining, which represents a great threat to the environment in the Carpathian region. Moreover, the fact that the socio-economic and ecological problems of mine closure are still not addressed adequately constitutes a major concern, especially in **Romania**.

One of the main barriers is the low level of understanding regarding sustainable development of industry and energy sectors at the national level, and the fact that the need to introduce new technologies and environmental practices is neglected by high-level decision makers. The general public awareness about these issues is also low, partly because of the lack of relevant information. This situation leads to inadequate public participation, and a limited involvement of stakeholders.

In addition, a certain resistance from industrial entities and some authorities towards changes such as more environmentally friendly technologies is sometimes observed due to financial concerns. For example, in the **Czech Republic** a tax reform that would support environmentally friendly industry through the introduction of higher taxes on non-renewable energy sources has been proposed several times but is still not adopted.

Furthermore, an effective liability regime for environmental damage, including the liability of the state for historic (past) pollution, is lacking. Finally, there are also problems connected with industrial waste treatment due to the scarcity of lands in mountain areas suitable for landfilling.

Recommendations

- Sustainable development should be reflected in the development of new policies on industry and energy.
- The development of alternative energy and environmentally safe technologies in the region should be a priority. Carpathian countries should therefore promote cleaner production and encourage the shift to renewable energy sources.
- Continuous monitoring of industrial activities as well as the establishment of early warning systems should be ensured in order to prevent and control industrial accidents.
- Stricter controls of compliance with environmental protection legislation are needed.
- The legislation on environmental assessments should be improved and effective management systems developed.
- The awareness of local communities and professionals in the industry and energy sectors should be increased, through, for example, training and educational activities.
- Guidelines for the public and public authorities could be developed identifying good and bad practices in implementing legislation.
- Enhanced cooperation between the different industry sectors, authorities and other stakeholders in the form of constant dialogue and communication is recommended.

Article 11

Cultural Heritage and Traditional Knowledge

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.

The Carpathian region is very rich in natural values and cultural heritage that should be considered in strategies to develop the economy in the region. The long history of human settlement in the Carpathian region and contacts between different cultures have resulted in an exceptional wealth of diverse customs and traditions, as well as important archaeological sites.

Many elements of the Carpathian cultural and natural heritage are internationally recognised and protected. Among others, the Old Village of Holloko in **Hungary**, the wooden Roman Catholic churches in **Poland**, the gardens and castle of Kromeriz in the **Czech Republic**, the Monastery of Horezu in **Romania**, all in the Carpathians, are UNESCO World Heritage sites. In **Ukraine**, although no site has international status yet, work is underway for the inclusion of Carpathian sacred wooden architecture in the UNESCO list of World Cultural Heritage sites. Moreover, the traditional dance *verbunk*, which originates from the Carpathian region, is recognised by UNESCO as a masterpiece of intangible heritage.

Policy and legal assessment

Policies

Cultural heritage is mostly considered and protected in national policy documents in the Carpathian countries, covering the whole territory without specific consideration for mountainous areas. For instance, **Poland**, the **Czech Republic**, **Ukraine** and **Slovakia** have devel-

oped general cultural strategies at the national level, sometimes accompanied with additional policies or programmes dealing with specific elements of cultural heritage such as traditional folk culture or architecture. The main priority is to address the organisational, financial and technical gaps in the existing system of management to promote and preserve cultural heritage.

In **Serbia** there are virtually no strategic documents that clearly define the concept of national cultural policy and action plans regarding national cultural development.

Local strategies and programmes exist in **Ukraine** and **Poland**. The best example in **Ukraine** is the oblast programme for the Carpathian region elaborated on the basis of the State Programme for the Conservation and Use of Objects of Cultural Heritage for 2004-2010. The Programme of Certification of Objects of Cultural Heritage for 2004-2010 and the Programme for the Preservation of Cult Constructions and Monuments of Wooden Architecture for 2004-2010 should also be mentioned. These regional policies have been developed to minimise overlaps and inconsistencies with national policies and legislation. In **Poland**, the most comprehensive strategic document is the Voivodeship Programme for the Conservation of Cultural Heritage and Landscape in Malopolska region, which describes the cultural resources of the region and lists as priorities the renewal of regional architecture, the active marketing of cultural heritage, the establishment of a regional foundation for cultural heritage, and the development of open-air museums.

Legislative acts

All of the Carpathian countries have ratified the World Heritage Convention. **Hungary** and **Ukraine** have developed general acts on the protection and conservation of cultural heritage, setting up the institutional and legal frameworks for cultural heritage conservation as well as the basic conditions for these objectives. **Hungary** has also established the National Cultural Heritage Authority, which is in charge of implementing the relevant national legislation and policies.

In the Carpathian countries, usually two main topics can be distinguished. On the one hand, the main legislative acts focus on historical heritage by providing a framework for the conservation of monuments and the protection of historic or archeological sites. The various acts on the conservation of monuments and buildings considered to be part of the national cultural heritage (large framework) create legal and financial conditions for their preservation and renewal, and regulate new construction in the vicinity of cultural heritage sites. **Ukrainian** legislation includes a classification system for cultural heritage sites. In the **Czech Republic**, the Act on the Management of State Monuments, adopted during the socialist period, defines the categories of cultural monuments and the levels of their protection.

On the other hand, laws and regulations on art, traditions, and folklore play an important part in the region. **Hungary**, **Poland**, **Romania**, and **Serbia** list in their legislation acts on museums, libraries and other institutions relevant for the protection of cultural heritage. In **Ukraine**, the protection, renewal, conservation and development of folk crafts are regulated by the Law of **Ukraine** on Traditional Crafts, considered as important elements of the intellectual culture of the nation. **Poland** emphasises ethnic minorities' rights to use and learn in their own languages in the Act on National and Ethnic Minorities and Regional Language of 2005.

Table 22 summarises the different measures set out by the relevant national policies and legislative acts under Article 11 of the convention.

Institutional assessment

At the central level, ministries in charge of cultural heritage in the Carpathian countries are designated, and their responsibilities are usually executed on their behalf by specific national authorities (see the list of national bodies in Table 23).

The competencies and tasks are not always clearly divided between ministries and their national authorities. For instance in **Romania**, the Ministry of Culture and Religious Affairs is responsible for the implemen-

tation of strategies and policies in the field of culture and art, whereas the main competence of the Directorate-General on the Natural Cultural Heritage is the formulation of the National Strategy and legislative documents and regulations in the domain of national cultural heritage.

In **Ukraine**, there is no uniform state body for the management of cultural heritage at national, regional and local levels. State management of cultural heritage is the responsibility of the Cabinet of Ministers and of special authorities on cultural heritage protection, including the Ministry of Culture and Tourism of **Ukraine** and the State Service for Cultural Heritage Protection. The Cabinet of Ministers of **Ukraine** ensures the implementation of policies by adopting the corresponding regulations and resolutions. Its competence includes the inclusion of cultural heritage objects of national importance on the State Register of Immovable Memorials of **Ukraine** and submitting proposals to the relevant international institutions for the inclusion of memorials on the World Heritage List. The Ministry of Culture and Tourism is responsible for bodies of the oblast and regional state administration in the field of cultural heritage, and the ministry approves the establishment of the bodies of self-governmental authorities of the cities listed in the List of Historical Settlements. Historical and Cultural Reserves of National and Local Importance are subordinated to the Ministry of Culture and to the State Committee on Construction and Architecture.

Moreover, cooperation with institutions for the protection of nature and with planning institutions is frequent in the Carpathians countries. In **Romania**, three ministries share the responsibility for preserving cultural heritage. The Ministry of Culture and Religious Affairs is the central public authority on the implementation of strategies and policies in the field of culture and art. Aspects of cultural heritage and traditional knowledge are also included within the competencies of the Ministry of Environment and Water Management and the Ministry of Agriculture, Forests and Rural Development through the National Agency for the Mountain Area.

In **Slovakia**, the Ministry for Culture is mainly responsible for cultural heritage and it has duties regarding the registration and protection of cultural monuments, control through the Inspectorate of Monuments, and provision of support for owners of cultural monuments. In addition, the Ministry of Education is responsible for the promotion of cultural awareness, and the Ministry of the Interior provides additional support for the owners of cultural monuments. However, few coordinating bodies exist.

In **Romania**, cooperation among all the ministries takes place in the framework of the Inter-ministerial Committee of the Mountain Region. In **Ukraine**, the

TABLE 22

Measures to implement Article 11

MEASURES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Safeguard and improve linguistic specificities (minority languages)	Y	N	Y	Y	Y	Y	Y
All countries except Hungary foresee the safeguarding and improvement of languages in their legislation. For example, in the Czech Republic the cultural strategy supports the development of the culture and language of Roma.							
Safeguard and improve cultural heritage	Y	Y	Y	Y	N	Y	Y
Apart from Serbia , the protection of cultural heritage is fully supported in national policies and legislation. Among other examples in the region, the Ukrainian Law on the Protection of Cultural Heritage, and the State Programme for the Conservation and Use of Objects of Cultural Heritage for 2004-2010 are the basis of cultural heritage preservation.							
Involve the population in decision making	Y	P	N	Y	Y	N	Y
This is addressed in Romania through the Aarhus Convention, ratified by Law 86/2000 and in Ukraine through the Bases of the Legislation on Culture, and the Law on the Protection of Cultural Heritage, which includes public expertise on issues related to the protection of cultural heritage.							
Promote the knowledge, innovations and practices of local communities embodying traditional lifestyles	P	N	P	N	N	N	P
This aspect is not really taken into consideration in the region. Only the Czech Republic, Poland and Ukraine partially promote traditional lifestyles.							
Preserve traditional architecture	Y	Y	Y	Y	Y	Y	Y
All countries have a law or a policy regulating this measure. The Polish national strategy and its programmes refer specifically to larger architectural monuments, such as castles, churches and old cities. There is no general strategy to maintain and conserve smaller pieces of architectural art, such as separate rural buildings, the remains of the old Lemko and Boiko villages, wayside crosses, and chapels (i.e. small monuments of past rural life in general). At the regional level, the policy documents also fully support the conservation of small elements of rural architecture.							
Promote sustainable use of wild plants	Y	N	P	Y	Y	N	Y
This is addressed in nature and biodiversity regulations and policies in all countries except for Hungary, Poland and Slovakia .							

Y – yes, N – no, P – partly

TABLE 22

Measures to implement Article 11, continued

MEASURES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Preserve local breeds of domestic animals and cultivated plant varieties	Y	P	P	Y	Y	Y	Y
	<p>In Poland, such activities are taken into account in agricultural policy and agri-environmental schemes. The case is the same in Ukraine through national legislation and programmes on agriculture. In Romania, the Law on the Mountain Region and the Sustainable Development Strategy of the Mountain Region are the basis of the preservation of local animals and plants.</p>						
Specific protection regime for cultural monuments	Y	Y	Y	Y	Y	Y	Y
	<p>All Carpathian countries have established specific regimes for the protection of monuments. For instance, this aspect is discussed in detail in the Polish Act on the Protection of Monuments and the Guardianship of Monuments and in the Romanian Law for the Protection of Historic Monuments.</p>						

Y – yes, N – no, P – partly

TABLE 23

Overview of institutional framework

Country	Ministry in charge of cultural heritage	National authority
Czech Republic	Ministry of Culture	
Hungary	Ministry for National Cultural Heritage	National Agency for Cultural Heritage
Poland	Ministry of Culture and National Heritage	General Inspector of Monuments
Romania	Ministry of Culture and Religious Affairs	General Direction on the Natural Cultural Heritage
Serbia	Ministry of Culture	
Slovakia	Ministry for Culture	Monuments Board of the Slovak Republic
Ukraine	Cabinet of Ministers Ministry of Culture and Tourism	State Service for Cultural Heritage Protection State Committee on Construction and Architecture

Cabinet of Ministers executes general coordination of the activity of central and regional-level authorities on the implementation of state policy on cultural heritage protection. Furthermore, the Interdepartmental Commission on Cultural Heritage Protection Issues has been established as an advisory body for the Cabinet of Ministers of **Ukraine**. It aims to analyse the activity of the cultural heritage protection authorities, and to facilitate their cooperation with other institutions, enterprises and NGOs in this field.

Several state and regional institutions have also been created with specific responsibilities. For example, in the **Czech Republic**, the National Heritage Institute is responsible for the management of monuments of national and international importance and also has regional branches. Furthermore, the Czech Ministry of Culture established the Institute of Folk Culture with the mission to carry out research into both the intangible and tangible cultural heritage of traditional folk culture and folklore and to organise folklore and educational events.

At the regional level, conservation of cultural heritage is often administered by offices representing a ministry, such as the Voivodeship Office for the Conservation of Monuments in **Poland**, or the County Directorates for Culture in **Romania**.

Achievements, obstacles and recommendations

Main achievements

The main indicators of the quality of the preservation of the cultural heritage in the region is the fact that numerous sites are placed on the list of UN World Heritage sites and that the most important architectural and historical sites are well conserved and managed. Moreover, the elaboration of legislative and regulatory frameworks and policies regarding cultural heritage leads to developed systems of protection and institutions relevant in the different domains of cultural heritage.

The involvement of NGOs, an enhanced involvement by municipalities in the protection of monuments and traditional knowledge, as well as an increasing trend in the development of the projects based on cultural heritage are also observed in the national assessments. For instance, in the **Czech Republic**, NGOs are very active in the promotion of folk heritage (dances, songs, traditions, etc.) and traditional crafts.

In **Poland**, increasing knowledge of fundraising and successful private investments have led to better conservation of monuments and sites. The country is distinguished by a well developed regional scientific

society connected with cultural heritage conservation, including a large number of conservation experts.

In **Hungary**, the main developments in the cultural sphere are the results of increasing support for cultural projects. The elaboration in 2004 of the national inventory on cultural heritage in **Romania** is a major step towards the protection of cultural heritage in that country. In **Ukraine**, there is active participation in international initiatives on cultural heritage and local cooperation.

Main obstacles

In the Carpathian region, the actual protection and use of cultural heritage is not always adequately taken into consideration. The main concerns include the relatively poor state of sites, old traditions which are increasingly neglected, weak infrastructure, inefficient management of cultural heritage and the lack of a strategic approach. In many cases, these are related to the low awareness of the value of cultural heritage and its preservation among the population, and insufficient recognition of the importance of cultural heritage in regional and local development.

The lack of efficient tools for implementing strategic documents is a significant problem, and the low enforcement of legislation and implementation of state policy has severe consequences for cultural heritage conservation. For example, in **Ukraine** central authorities do not fulfill their obligations, prosecutors do not react to violations, illegal privatisation is common, and there is frequent construction on cultural heritage sites and their adjacent protection zones. Further problems include unauthorised archaeological digs, theft, unauthorised sales of and damage to cultural heritage objects, poor coordination between institutions for the conservation of cultural heritage and insufficient transparency in the decision-making process.

Furthermore, the lack of a coherent system of financial support is a major problem and may constitute a risk for the effective protection of cultural heritage sites. Indeed, the main reason for the decline and destruction of cultural and historical monuments is the lack of appropriate funding for their conservation and restoration. At the same time, scientific research into cultural heritage and traditional activities such as handicrafts are not properly financed and supported.

The lack of local spatial development plans is also a barrier to the protection of cultural heritage. In most Carpathian countries, uncontrolled urbanisation is at the root of degradation of cultural and traditional rural landscapes. Finally, inventory and research structures and programmes combined with monitoring and control mechanisms are needed.

Recommendations

- National inventories of the cultural-ethnographic heritage should be developed.
- Appropriate financing should be ensured for the preservation of cultural heritage, in particular for the proper security and protection of sites, for scientific research of new historical and archaeological sites, for the conservation and restoration of architectural monuments and the proper operation and development of museums, as well as support for traditional activities and handicrafts.
- The national legislation should also be amended to be in line with international standards.
- Incentives should be established in the legislation to encourage the local population to preserve its cultural heritage and retain traditional knowledge.
- Controls over the enforcement of legislation and the implementation of state policy on cultural heritage protection, particularly regarding archaeological and historical objects and historical-cultural reserves, should be strengthened.
- Good cooperation mechanisms should be established with institutional organs of other conventions dealing with cultural heritage.
- A uniform state body is needed in each Carpathian country to manage its cultural heritage at national, regional and local levels.
- Cooperation with environmental authorities is recommended to provide integrated management of the Carpathian heritage.

Article 12

Assessment, Information, Monitoring and Early Warning

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) harmonisation of existing and development 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) an information system, accessible to all Parties.

Environmental impact assessment (EIA), strategic environmental assessment (SEA) and risk assessment are tools that seek to ensure adequate and timely information on the likely environmental consequences of planned actions, such as the undertaking of development projects or the adoption of legal acts, and to support integrated decision making.

In the Carpathian countries, EIA and SEA systems have been in place for some time. The region has built up a good basis of knowledge, but the implementation of EIA tools is ineffective on the whole, mainly due to the capacity gap in understanding and enforcing these complex procedures.

The same situation applies to information, early warning and monitoring systems. Such systems have

been established in each country, albeit with shortcomings in implementation. Some of the countries have entered into bilateral agreements for transboundary information and monitoring systems and early warning procedures, especially in the field of EIA and for flood preparedness. Furthermore, under the framework of the Convention for the Protection and Sustainable Use of the Danube River, an important initiative aimed at harmonising the monitoring and assessment methods and at elaborating joint projects is the TransNational Monitoring Network. In this framework, an efficient early warning system has been created to be applied in the event of accidental pollution involving dangerous substances.

Policy and legal assessment

Policies

Environmental assessment

There are very few policies and strategic documents dealing with EIA and SEA in the region since these issues are mostly regulated by legislation and administrative procedures. Examples include the **Hungarian** National Environmental Protection Programme; the Basic Principles of the Directions of the State Policy of **Ukraine** on Environmental Protection, Use of Natural Resources and Ensuring of Environmental Safety; and the National Environmental Protection Strategy and the National Environmental Action Plan (NEAP) of **Romania**. These documents are very general and only include references to SEA and EIA procedures. In some cases, they define priorities such as the development of a methodological base while conducting environmental assessments and the improvement of the legislative framework.

Information, early warning and monitoring

Some of the countries have specific policies dealing with early warning and monitoring. For example, **Slovakia** adopted in 2000 the Concept of the Comprehensive Monitoring and Information System for the Environment, instituting the Information System of Monitoring, which is made up of a number of partial monitoring systems dealing with individual components of the environment.

The **Czech Republic** put in place several data information systems (on air quality, emissions and sources of pollution, waste management, nature protection, integrated pollution register, and approval of GMOs), but even though they also cover areas outside of the Carpathians, they include specific information, especially related to the general biodiversity of the Carpathian region.

In **Poland**, the most developed information systems are managed by the national parks, including comprehensive inventories extending to GIS data. However, insufficient standardisation in the collection of data poses a problem for the exchange of this information. Moreover, **Poland** is developing an integrated monitoring system which will implement some international obligations (under the Biodiversity Convention in particular), and include monitoring sites in the Carpathians, as well.

Romania has been operating a rather advanced integrated monitoring system for air quality, water quality, and waste management since 1992, including noise monitoring, biodiversity, radioactive monitoring and soil quality. This system falls under the competence of the Ministry of the Environment and Water Management and is applied by the local environmental authorities, and the National Agency for the Mountain Region, which is the

competent institution for integrated information on the environment in the Carpathians.

Slovakia, Serbia and **Ukraine** are carrying out monitoring activities, especially dealing with water management and flood prevention. **Serbia** carries out the activities in spite of a shortage in funding for laboratories. **Slovakia**, however, is the only country that has developed a comprehensive monitoring system at the national level, where data collection systems, indicators and methodology correspond to monitoring systems of the EU and of the OECD. In **Serbia** an environmental information system was planned in 2002 by the Ministry for the Protection of Natural Resources and the Environment, but it has yet to become operational.

Early warning systems in the Carpathian Region are in place in each state, but funding shortfalls are a significant problem. In the **Czech Republic** the responsibility for early warning lies with the local authorities, known as “emergency committees,” which work closely with citizens. In **Romania** the system for emergency situations is under reorganisation and the responsible authority will be the National Committee for Emergency Situations, whose main priorities are floods, earthquakes, dangerous meteorological phenomena and human-made disasters.

Legislative acts

Environmental assessment

Most of the Carpathian countries are parties to the main international treaties dealing with environmental assessment, including the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention), the Kiev Protocol on Strategic Environmental Assessment under the Espoo Convention, and the Convention on Access to Information, Public Participation in Decision Making, and Access to Justice in Environmental Matters (Aarhus Convention).

Serbia is the only Carpathian country that had not ratified the Espoo Convention. Nevertheless, specific provisions on EIA for transboundary situations are included in EIA and SEA laws, but they are mostly limited to the exchange of information with other countries and the provision of information to the public. Moreover, although the country did not ratify the Aarhus Convention, the new Law on Environmental Protection contains an article proposing public participation in EIA and in SEA, ensuring the implementation of basic Aarhus Convention requirements.

All countries have included provisions of the Aarhus Convention regarding public participation in the national EIA procedures. The legislative framework exists but all countries are facing implementation problems, and the rights of the public are not always respected. For instance, in the **Czech Republic** there is no clear proce-

ture for addressing and taking into account public comments, nor are there clear obligations for parties submitting project proposals to initiate an early dialogue with the general public.

Considering the EC *acquis* on these subjects, all the Carpathian countries of the EU have transposed the relevant directives, even though implementation needs to be improved. In the case of **Serbia**, the new Law on Environmental Protection, the Law on SEA, the Law on EIA and the Law on Integrated Pollution Prevention and Control transpose the relevant EC directives, and **Ukraine** is also working towards the harmonisation of its legislation with EU standards in these fields.

Based on the legislative set-up of environmental impact assessment and strategic environmental assessment developed in the region, the Carpathian countries can be divided into two groups:

- **Hungary, Poland, Romania and Ukraine** make references to EIA and SEA in their general environmental laws (e.g. in the Environmental Protection Act and the Nature Conservation Act adopted in **Poland**, in the 1995 **Romanian** Law on Environmental Protection, and in the **Ukrainian** Law on Environmental Protection) and then develop specific regulations describing the procedures and the kinds of activities that are subject to EIA and SEA (e.g. Governmental Decree on EIA and SEA of 2001 and 2005 in **Hungary**, governmental decisions and ministerial orders adopted in 1995 and 2002 in **Romania**, and the Law of **Ukraine** on Environmental Expertise of 1995).
- The **Czech Republic, Serbia and Slovakia** prescribe EIA and SEA directly in specific laws (Act on EIA adopted in 2001 in the **Czech Republic**, the Law on EIA and Law on SEA adopted in 2004 in **Serbia** and the **Slovak** EIA Act adopted in 1994 and amended in 2000 to cover SEA and to align with EC legislation).

Only **Romania, Serbia and Slovakia** take into account specific features of the Carpathian mountain ecosystems in risk assessment, EIA and SEA. All of the above laws and regulations include specific provisions on EIA in a transboundary context, as prescribed for projects listed in Appendix I to the Espoo Convention. Therefore, EIA procedures are to be applied even when the impacts of the planned activities are also located outside the jurisdiction of the state of origin (these specific provisions prescribe rules on notification, timing and the procedure to submit comments and motions). SEA in a transboundary context is taken into account in the **Czech Republic, Poland, Romania and Ukraine**, but it has so far never been applied. **Slovakia** has drafted a law which includes provisions on transboundary SEAs.

Hazardous activities

Apart from **Serbia**, all the Carpathian countries have established specific legal frameworks on the siting of hazardous activities and on significant modifications to existing ones, which implement the TEIA Convention and the EC SEVESO Directive, regarding special permits and approvals in order to reduce the probability of accidents and limiting the possible negative impacts on the health of humans and animals, and on the environment. **Poland** has adopted rules on international cooperation in cases of industrial accidents with transboundary effects. The **Romanian** legislation is detailed: it comprises notification procedures for activities involving dangerous substances and posing a significant risk for major accidents, and a notification obligation for all existing installations in terms of submitting safety reports. Furthermore, a risk secretariat has been set up in the Ministry of the Environment to keep track of all companies falling within the scope of the directive and to evaluate the safety reports they have to submit in line with the EC SEVESO Directive.

Information, early warning, and monitoring

In this field, the legislative framework concerns mainly the response to accidents and other emergency situations, and early warning systems. In the **Czech Republic** the Act on Crisis Management adopted in 2000 describes crisis management, including the system for warning citizens in cases of emergency. In **Ukraine** the Regulation on the State System of Environmental Monitoring, adopted in 1998, defines the monitoring system, but it is ineffective and not adequately funded. **Romania** has a government ordinance regarding protection against disasters, and the Civil Protection Law institutes a National System for Emergency Situations Management, but no efficient early warning system has been established at the national level.

Institutional assessment

The main institution responsible for EIA, SEA and monitoring is the ministry of environment, which is occasionally assisted by other ministries or regional and local authorities. For example, in the **Czech Republic**, the Ministry of Environment is responsible for assessing major projects and activities while the regional authorities are responsible for other projects. In **Romania**, the Ministry of Environment and Water Management is assisted by the regional environmental protection authorities and the local environmental protection authorities; and here too the level of competence depends on the nature and size of the project. Moreover, in both **Serbia and Ukraine** the Ministry of

TABLE 24

Overview of institutional framework for EIA and SEA

Country	Ministry in charge of EIA and SEA	National authority
Czech Republic	Ministry of Environment	
Hungary	Ministry of Environment and Water	National Inspectorate for Environment Water and Nature
Poland	Ministry of Environment	National and Voivodeship Environmental Impact Assessment Commission
Romania	Ministry of Environment and Water Management	Technical Review Committee
Serbia	Ministry of Science and Environmental Protection – Directorate for Environmental Protection	Agency for Environmental Protection
Slovakia	Ministry of Environment	Assessment Authority Public Administration Body
Ukraine	Ministry of Environmental Protection	

Environment is assisted by local authorities and councils. Furthermore, in the field of early warning, everything is usually managed at the local level through emergency committees (e.g. in the **Czech Republic** and **Romania**).

In general terms, there is good cooperation among central and local institutions in the permitting process, even though in some countries the proliferation of the involved institutions can be a source of inefficiency. For example, in **Ukraine**, environmental monitoring is actually carried out by eight different authorities, whereas in **Poland** environmental monitoring is centralised in the Inspectorate for Environmental Protection in Warsaw, which coordinates 16 provincial inspectorates for environmental protection. Furthermore, the **Romanian** Technical Review Committee ensures an integrated approach to environmental permitting procedures, and it represents seven different ministries. In contrast, there are no intersectoral coordination bodies in the **Czech Republic** or in **Ukraine**.

Environmental assessment

Table 24 presents the institutional structure for EIA and SEA of each Carpathian country at the national level.

Information, early warning, and monitoring

As shown by Table 25, every state has a national authority or an institute for monitoring activities.

Achievements, obstacles and recommendations

Main achievements

The main achievement in the field of environmental assessment is the development of comprehensive legislation on EIA and SEA and permitting processes, mainly in line with the relevant EC directives, as well as the ratification of the Espoo and the Aarhus conventions by most of the Carpathian countries. Important steps in improving cross-border cooperation for environmental assessment have been taken, especially on water and biodiversity issues. The Rosia Montana Gold Mining investment in **Romania** is one example of transboundary EIA applied in the Carpathian Region.

Overall, the Carpathian countries have well developed monitoring systems. More and more information sources are exploited and up-to-date information has been made more accessible through websites, publications, meetings and NGO-derived data. Functioning early warning systems exist, which are mainly linked to flood risks.

Main obstacles

Regarding environmental assessments, SEA procedures are generally less developed than EIA procedures. The main obstacle is insufficient implementa-

TABLE 25

Overview of institutional framework for monitoring activities

Country	Ministry in charge of monitoring	National authority/ institutes for monitoring activities
Czech Republic	Ministry of Environment Ministry of Agriculture	Czech Hydrometeorological Institute The Central Control and Examination Institute
Hungary	Ministry of Environment and Water	Regional inspectorates National Public Health Authority
Poland	Ministry of Environment	Inspectorate for Environmental Protection
Romania	Ministry of Environment and Water Management Local environmental authorities	Environmental protection agencies
Serbia	Ministry of Science and Environmental Protection – Directorate for Environmental Protection Ministry of Agriculture, Forestry and Water Management – Directorate for Forests and Directorate for Water	Republic Hydro-Meteorological Institute Public health institutes Institute for Soil Science Recycling Agency Municipalities
Slovakia	Ministry of Environment	Hydro-Meteorological Institute Division of Forecast Service
Ukraine	Ministry of Environmental Protection Ministry of Emergency Ministry of Health Protection Ministry of Agricultural Policy	State Committee for Land Resources State Forestry Committee State Water Husbandry Committee State Housing Committee

tion of existing instruments, and the consequent lack of mechanisms and procedures that these documents prescribe, due mainly to political reluctance and lack of funds. There is also a shortage of competent and sufficiently trained experts and civil servants to carry out EIAs and SEAs. The region is also characterised by its low number of transboundary EIAs and the complete absence of transboundary SEAs.

Furthermore, many potential developers and investors perceive the EIA process as an obstacle to their plans (especially in **Slovakia**). In some cases, there is a risk regarding the reliability of the reports due to the fact that environmental impact reports are subcontracted by the applicants directly to relevant companies. Concerning public participation in these procedures, it is generally difficult to access informa-

tion, and there have been political efforts to limit public participation in decision making. Quite often, public authorities do not take into account the position expressed by civil society concerning nature conservation needs.

Concerning the existing environmental information systems, they are not always practical, available at national, regional or local levels, unified or comparable. In addition, there is a limited flow of information, partly due to a relatively low use of the Internet for dissemination of environmental data and to limited information sharing between the different actors. Furthermore, responsibilities of the different institutions are not always clear, and facilities are often not properly equipped. Moreover, there is no information system focusing directly on the Carpathian region.

Recommendations

- Effective implementation of the EIA/SEA legislation should be guaranteed, and laws should be more detailed and clearer in order to improve all related procedures.
- Control over the enforcement of environmental legislation in the field of environmental assessment should be increased.
- The awareness and understanding of state authorities of the importance of environmental protection issues during environmental assessment procedures should be significantly raised. Training programmes should be developed especially for authorities involved in the undertaking of EIAs and SEAs.
- Improvement of public participation in the environmental assessment process in the early stages, and the establishment of continuous and effective cooperation between the stakeholders in these processes should be guaranteed.
- Environmental, economic and social indicators should be developed based on, or compatible with, the model of the EU or the OECD.
- Improvement of the environmental monitoring system and the system of data collection is needed: unified information systems should be developed, information systems and data collecting systems focusing specifically on the Carpathians should be established, and a transboundary monitoring system with similar priorities, monitored fields and issues could be created.

Article 13

Awareness Raising, Education and Public Participation

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.**

Environmental awareness, public participation in decision making on environmental matters and access to information have improved substantially over the past 10 years in the Carpathian countries. Most of them have ratified the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

Furthermore, environmental NGOs have significantly raised the level of public awareness and have contributed to the development of ecological education. In recent years, environmental NGOs have developed a number of initiatives and networks in the region, disseminating environmental information through their websites and publishing activities.

PUBLIC PARTICIPATION AND ACCESS TO INFORMATION

Policy and legal assessment

Policies

In the Carpathian countries, there are few policies and strategic documents at the national level guaranteeing the right of public participation in decision making on environmental matters and access to environmental information. These rights are ensured to a greater extent by laws (see the section on legal assessment for more information).

Most of the Carpathian countries participate in rel-

evant international initiatives in order to improve the rights to environmental information and public participation in decision making. Another example is the Eco-Counselling Europe network of which the **Czech** Eco-Counselling Centres are members. They have been cooperating on a joint project on mutual communication and common education in communication disciplines.

Some mechanisms and tools for informing the population about environment-related issues have also been developed, as in **Romania**, where an environmental information system and a state-of-the-environment reporting system are planned in the Strategy for Environmental Protection and the National Environmental Action Plan.

Table 26 shows the measures taken by the countries to improve and facilitate public access to environmental information.

In **Romania**, some general provisions regarding the setting up of a database on mountain issues are contained in the Sustainable Development Strategy of the Mountain Region. This strategy also stipulates that “access to information, promotion programmes and training and experience exchange programmes” are to be supported.

The initial step of **Ukraine’s** draft Strategy for the Implementation of the Carpathian Convention is to ensure that the population is provided with wide-ranging information on the Carpathian Convention and the state and perspectives of its implementation through an Internet portal. The strategy also ensures active cooperation among state authorities, scientific and public

TABLE 26

Measures to improve public participation and access to environmental information

MEASURES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Establishment of special structures for public access to environmental information	Y	P	Y	Y	N	Y	Y
<p>All countries, except for Serbia, have established special structures for providing information to the public and for dealing with public requests. In Poland, Ukraine and the Czech Republic each public institution is responsible for making information available. In Romania and Hungary, these structures are being developed.</p>							
Improvement of electronic and information technologies	Y	P	Y	Y	Y	Y	P
<p>In each country, there is a continuous process of improving electronic and information technologies. In the Czech Republic, Slovakia and Poland strategic documents, special draft laws and announcements are published on the Internet. In Romania, Hungary, Ukraine and Serbia, improvements have been made at the national level. For example, the Hungarian Ministry of Environment and Water is making available a wide range of information in electronic format.</p>							
Establishment of information centres	Y	P	Y	N	N	Y	Y
<p>All countries have established information centres. In Ukraine, the Aarhus Information Centre was established by the Ministry of Environmental Protection. Information centres also function at the oblast level. For example, an Aarhus Centre was established in the Zakarpatska oblast ecology department in 2003. In Hungary, despite the establishment of information centres by institutions such as the Ministry of Environment and Water, there are still environmental sectors where access to information is cumbersome (e.g. forestry).</p>							
Regular publications on the state of environment	Y	P	Y	Y	Y	Y	P
<p>In all the countries except Hungary and Serbia environmental reports are published on the state of environment at local, regional and national levels. In Romania the Ministry of Environment and Waters Management has published an annual report on the state of the environment since 1996.</p>							
Others – environmental information offices	-	Y	-	-	Y	Y	-
<p>Environmental information offices have been established in Hungary, Serbia and the Czech Republic. For example, in Hungary the Ministry of Environment and Water announced that the number of environmental information offices would be doubled before 2005.</p>							

Y – yes, N – no, P – partly

organisations, businesses and local communities. Apart from **Romania** and **Ukraine**, there are no national policies related directly to mountains or to the Carpathian Convention.

Legislative acts

Since the 1990s, several laws have been adopted that improve public participation in decision making in environmental matters and access to information. Normally, access to environmental information constitutes a basic constitutional right, as in **Poland**, **Ukraine**, **Romania**, **Serbia** and **Slovakia**. Moreover, in **Serbia**, the constitution protects environmental information access and public participation rights. Similarly, the **Ukrainian** Constitution stipulates that everyone has a guaranteed right to free access to information on the state of the environment and the right to disseminate it.

Furthermore, in all of the Carpathian countries there are many laws ensuring public access to a wide range of environmental information and prescribing that the central and local government authorities shall regularly inform the public on the state of the environment. The right of the public and NGOs to be consulted during decision making concerning the development of environmental policies, legislation and regulations is also ensured by the legislative and regulatory frameworks in the Carpathian countries. The main driving force behind these efforts is the ratification of the UNECE Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters adopted on June 25, 1998 in Aarhus. All of the Carpathian countries except **Serbia** have ratified the Aarhus Convention.

However, ratification and adoption of the necessary laws does not, by itself, guarantee good practice. In 2005, NGOs prepared the first report on the implementation of the Aarhus Convention in the **Czech Republic** highlighting the frequent difficulties encountered by NGOs and individual citizens in exercising their rights to access to information, participation in decision-making processes and access to legal review. Slow and ineffective judicial review, increasing refusals to provide copies of non-classified documents, inadequate enforceability of environmental law for access to justice and slow decision making by the courts were reported and even confirmed by an official ministerial report on the implementation of the Aarhus Convention.

Institutional assessment

Public participation and access to information have to be institutionalised and complied with by all public authorities pursuant to the Aarhus Convention and related EC legislation. Therefore there is no specific

ministry dedicated to these processes. On the other hand, a major tool in making public participation effective is capacity building of stakeholders (NGOs, local communities, etc.) to be involved in the elaboration of various strategies, action plans and programmes, and to participate in decision making.

In the **Czech Republic**, the Ministry of the Environment financially supports NGOs actively involved in public participation in decision-making processes. In **Slovakia**, the Public Relation Office, together with the Public Relation Department of the Ministry of Environment, provides information on decision making in environmental affairs, the state of the environment and other environmental activities. In **Ukraine**, in order to ensure wide access to environmental information, the Resolution on Public Informing on Environmental Matters requires the public to be informed about 100 environmental polluters and on environmentally hazardous accidents through the mass media.

Achievements, obstacles and recommendations

Public participation and access to information are gradually improving, mostly due to the activities of NGOs. The influence of the European Union and the implementation of EC environmental legislation, as well as international treaties such as the Aarhus Convention, also play a significant role in increasing public participation and access to information.

Main achievements

The main achievement is the adoption of the legislative and regulatory framework for public participation and access to information. The situation has improved and, for example, environmental information is now increasingly accessible to the public. People can get information quickly and conveniently on the websites of the Carpathian countries' ministries.

The ratification by the countries of the relevant international agreements promoting access to environmental information and public participation is also a sign of tangible progress. Moreover, environmental NGOs have significantly raised the level of public awareness about the environment and have contributed to the development of local environmental action plans. The countries are developing national networks of information offices, which can provide environmental information, and the number of information sources is increasing.

There are several initiatives on the promotion of access to environmental information and public participation in the Carpathian region. The establishment and development of the Carpathian Ecoregion Initiative in

1998, for example, led to further awareness on the Carpathians, as did the **Polish** Carpathian Memorial project 1998-2000. This awareness project involved several representatives from regional and local government, local communities, NGOs and scientific bodies, and led to the development of strategies and projects for environmental protection and sustainable development in the region.

Main obstacles

Authorities in all of the Carpathians countries lack adequate tools to inform and involve the general public. There is also an evident lack of strategies to improve the current situation.

In general, the development of civil society and public participation structures and programmes is in its infancy. The systems, procedures and resources for the provision of information are not available at all levels, nor are they sufficiently inclusive of economically and socially vulnerable groups. The infrastructure necessary for efficient access to, and dissemination of, environmental information and the cooperation between information holders must be improved significantly.

There is also a lack of good practice on effective public participation in environmental decision making. At present, most authorities and institutions involved do not have adequate capacities needed for meeting international and national requirements. Finally, there is insufficient funding specifically dedicated to public-participation projects and public-participation training.

Recommendations

- **Serbia** should strive to ratify the Aarhus Convention.
- The national legislative framework regarding the Aarhus Convention should be developed and implemented, especially regarding detailed administrative regulations, structures, procedures and competencies.
- Public participation in different decision-making procedures should be facilitated. More efficient methods of public participation should be developed, such as transparency, timely notification, dialogue, access to data, etc.
- Access to environmental information needs to be further improved, both through electronic and other means. Given the efficient storage and dissemination of electronic information, measures could be taken to promote increased use of the Internet.

- Institutionalisation of access to information and public participation is highly recommended. In addition, there is a need for further capacity building of the state and local authorities for implementing the provisions of the Aarhus Convention.
- A targeted programme to increase public awareness about the convention should be developed.

AWARENESS RAISING AND EDUCATION

Policy and legal assessment

Policies

Environmental policies developed in the region usually contain general recommendations regarding environmental education and awareness raising. Specific policies and recommendations have been introduced in the **Czech** State Programme for Environmental Education and Public Awareness, which creates a complex system of environmental training and education at all levels and aims to:

- positively influence the responsible attitudes to the environment and the increase of public involvement in solving environmental problems;
- create effective ecological education systems at the regional level;
- support local-level administrations and their ecological educational activities; and
- provide access to information on the environment for the general public and the possibility to participate in decision-making processes.

In **Hungary**, the National Environmental Programme for 2003-2008, based on the National Environmental Education Strategy, sets the main framework for the implementation of the Carpathian Convention through the Raising Environmental Awareness thematic action programme.

Beyond these general policies, there are few targeted, public awareness-raising activities or campaigns highlighting the importance of the protection and sustainable development of the Carpathians at national, regional or local levels. For instance, **Serbia, Hungary, Poland, Romania, the Czech Republic and Slovakia** have not yet implemented any concrete measures in this direction.

Only **Ukraine** has elaborated a specific programme to implement the provisions of the Carpathian Convention on these issues. The regional programme of environmental education measures on the implementation of the Carpathian Convention, Our Home –

TABLE 27

Measures for awareness raising							
MEASURES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Dissemination of books and publications referring to environmental issues in the Carpathians	Y	P	Y	Y	N	Y	Y
The dissemination varies from country to country. In Hungary, Romania, Serbia and Slovakia few activities target a broad audience. In Poland and Ukraine , state-of-the-environment reports cover environmental issues in the Carpathians, and in the Czech Republic the Environmental Authority produces similar publications.							
Communication through the media	Y	P	Y	Y	Y	Y	P
In Poland and Ukraine there is relatively broad communication through the media on environmental issues, whereas this communication is more limited in Romania, Serbia, Slovakia and Hungary . Generally, the communication is through regional governments' websites.							
Conferences and public meetings	Y	P	Y	N	N	Y	Y
In Hungary and Serbia there have been a few conferences and public meetings and in the other countries conferences are mainly organised for specialists and NGO representatives.							
Education and training	Y	P	Y	Y	Y	Y	P
In Serbia, Slovakia and Ukraine there has been some education and training organised, mainly by central-level authorities and within the framework of specific projects. In Romania these training activities have mainly been targeting farmers in mountain areas and in the Czech Republic , trainings are mainly carried out at the regional level.							

Y – yes, N – no, P – partly

the Carpathians, is targeted at pupils in the different oblasts of the area.

In addition, specific public awareness activities have been developed by NGOs or park administrations in all Carpathian countries, such as producing and disseminating leaflets and brochures, organising campaigns, and convening public meetings and training sessions for children, students and teachers, etc.

The Carpathian countries have also engaged in initiatives relevant to the promotion of education systems focused on ecological education. The majority of these programmes are designed for secondary-school stu-

dents, although there are a lot of programmes for primary-school pupils, university students and science teachers. Examples of initiatives promoting ecological education can be found in **Serbia**, where the Petnica Science Centre, an independent non-profit organisation, has organised nearly 2,000 programmes (e.g. seminars, workshops and research camps) since 1982 in 15 disciplines of science, technology and the humanities. In **Poland** and the **Czech Republic** the Eco-School Project helps schools create their own environmental education programmes and projects and operate in an environmentally friendly manner.

TABLE 28

Measures in the field of education and training

MEASURES	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Basic supply of schooling and education	Y	Y	Y	Y	Y	Y	Y
	In the region, all school programmes include environmental and mountain issues through an interdisciplinary approach. For example, in Ukraine special educational programmes are developed by the Ministry of Education together with the Ministry of Environmental Protection and their local departments.						
Availability of decentralised training opportunities	N	Y	Y	P	Y	Y	Y
	In all the countries, apart from the Czech Republic , there are decentralised training opportunities. For example, in Ukraine the work is carried out within the ecological-naturalistic centres on different levels through extra-curricular education.						
Introduction of specific matters related to the Carpathians in school and education	Y	P	Y	P	N	N	Y
	In all of the countries except Serbia and Slovakia , specific matters related to the Carpathians have been included in educational programmes, often at the university level.						
Education and training programmes for the mountain professions	N	N	Y	Y	N	N	Y
	Poland, Romania and Ukraine are the countries which mostly organise education and training programmes for mountain professions (such as farming and forestry). In Ukraine the technical training college in Mizhgirya also prepares tourist agents.						

Y – yes, N – no, P – partly

Moreover, national parks in the Carpathian region can play an important role regarding education, through the distribution, for example, of environmental brochures to visitors and the public.

The active work and cooperation of young people, NGOs and authorities is having results. There is increasing cooperation at the local level among communities, schools and civil society to raise public awareness and facilitate public involvement. In **Ukraine** for example, educational units cooperate with international institutions and organisations within joint programmes of the Council of Europe, UNESCO, the

European Union, and UNICEF. There are also cooperation agreements in the form of staff and student exchanges in order to promote mutual cooperation and understanding, and to increase individuals' cultural values and share experiences.

Legislative acts

In the Carpathian countries, only a few laws introduce concrete obligations on education and the raising of public awareness on environmental issues. For instance, in **Ukraine** the Law on Environmental Protec-

tion provides for the right of citizens to receive environmental education. Furthermore, some acts dealing explicitly with mountain areas have education provisions, such as the **Romanian** Law on the Mountain Region and the Governmental Decision for the Approval of the Sustainable Development Strategy for the Mountain Region, which establishes an “agro-mountain learning system.”

However, the Carpathian countries have introduced measures at the national, regional and local levels to promote widespread knowledge of certain issues concerning the Carpathian region as illustrated in Table 27.

Moreover, the Carpathian countries have taken measures in the field of education and training in the mountain region, as outlined in Table 28.

Institutional assessment

The competencies of national authorities regarding public awareness and education are blurred. In **Ukraine**, under the Law on Environmental Protection, the Cabinet of Ministers is responsible for the organisation of environmental awareness raising and the environmental education of citizens. Few of the Carpathian countries have educational institutions and research centres where the specific aspects of protection and sustainable development of the Carpathians are addressed, contributing to the general low level of environmental awareness.

There are no specific institutions or research centres that deal specifically with the protection and sustainable development of the Carpathian Mountains. However, there are some educational centres addressing general awareness raising and environmental education, and there are ecology courses at the universities that partly deal with the Carpathian region. The main topics are land resources management and spatial planning, conservation and sustainable use of biological and landscape diversity, water management, industry and energy, agriculture, transport, forestry and tourism.

Achievements, obstacles and recommendations

Main achievements

A main achievement is the development of strategies aiming at further development of environmental education and public awareness. The environment is part of the educational programmes at school and is increasingly studied at the university level. The involvement of authorities, schools and environmental NGOs is also improving the understanding of children about nature conservation and other environmental

issues. There is still untapped potential at NGO and institutional levels to develop more complex public awareness and ecological education activities.

Furthermore, environmental education centres are flourishing and cover most of the Carpathian region, and there are some special educational programmes specifically targeting mountain regions. Finally, research on environmental issues is increasing, with a solid base of scientists and a network of science and research institutions and universities.

Main obstacles

One of the main obstacles in the Carpathian countries is a lack of coherent programmes to integrate ecological issues further in the existing educational curricula. Restricted funds from the state budget for public awareness and ecological education activities is another major problem. The implementation of the Carpathian Convention is also compromised by the scarcity of qualified personnel, technical resources and the absence of an organisational and material foundation for providing public environmental education.

The existing educational system in some cases focuses more on science than on practical skills and knowledge, and the issues of local sustainable development, nature conservation, participation in decision making and local planning, to name just some, are very rarely discussed. Finally, there is a lack of specific educational programmes related to the Carpathian area in schools and a lack of communication/public awareness planning focused on Carpathian environmental issues.

Recommendations

- More attention should be paid by governments to environmental education and awareness raising in the development of programmes and their implementation.
- Increased access to funds from the state budget is needed for the development of an efficient information mechanism.
- A targeted programme to increase public awareness about the Carpathian Convention involving local authorities and NGOs should be prepared.
- Information on biodiversity, sustainable development, and cultural heritage should be widely disseminated.
- Environmental information systems, as described in Article 12 of the Carpathian Convention, should be developed within policies and laws.
- The number of qualified and trained teachers should be increased.

Conclusions and Recommendations

Conclusions

The key findings from the assessments, as well as the critical obstacles which stand in the way of implementing the Carpathian Convention and developing the region in a sustainable manner, are summarised here.

Main achievements contributing to the implementation of the convention

The Carpathian Convention was ratified by all of the Carpathian countries within three years of signing, which is evidence of strong commitment to its implementation.

The Carpathian countries are parties to most of the relevant major multilateral environmental agreements (MEAs). There are some agreements to which all Carpathian countries are already parties, namely the Convention on Biological Diversity and its Cartagena Protocol on Biosafety, the Ramsar Convention, the Convention on International Trade in Endangered Species of Wild Flora and Fauna (the CITES Convention) and the UNESCO World Heritage Convention.

All of the countries apart from **Serbia** are party to the five UNECE environmental agreements, including the Aarhus and Espoo conventions. These commitments represent a strong basis for the implementation of the Carpathian Convention, as these MEAs address many of the requirements of the convention, and hence the countries already have valuable experience in dealing with these issues.

There is a generally high level of development of national environmental strategies and policy planning documents reflecting the principles of sustainable development. In some cases the process of developing these planning documents has been based on a participatory approach, involving the public and civil society.

The five countries that are EU member states have harmonised their environmental legislation with the EC environmental acquis. **Serbia** is party to the Stabilisation and Association process, and **Ukraine** has a Partnership and Co-operation Agreement with the European Community and, hence, these countries are

also increasingly approximating EC environmental policies and legislation in line with EU standards. Thus the Carpathian countries either have already had to transpose the EC environmental acquis — in the case of EU member states — or increasingly base their national legislation and policies on the EU environmental legal framework, as in the case of **Serbia** and **Ukraine**.

Ukraine has a specific strategy for implementing the Carpathian Convention. It has also prepared an action plan for the enforcement of the law for its ratification and considers the preparation of a draft protocol on biodiversity to the Carpathian Convention a priority. **Romania** adopted a Law on Mountain Regions and a Sustainable Development Strategy of Mountain Regions. The strategy aims at strengthening local economies and communities while ensuring compliance with sustainable development and biodiversity conservation principles. Another good example of reflecting mountain issues in strategic documents is provided by the **Czech** National Biodiversity Strategy, which includes specific provisions regarding mountain regions.

Most of the Carpathian countries have established advanced legislative and policy frameworks in areas such as biodiversity, nature protection, agriculture and public participation, although more efforts are needed to integrate environmental concerns into the planning and implementation processes in sectors such as transport, industry and energy.

The **Slovak** Governmental Committee for Sustainable Development and the inter-ministerial committees in **Romania** on environmental protection and on mountain regions are good examples of efficient coordination mechanisms to ensure effective implementation.

On specific issues the following main achievements were identified:

- A relatively advanced system of protected sites exists in most of the Carpathian countries. The designation of NATURA 2000 sites and the implementation of the protection requirements contribute to the protection of the natural heritage of the Carpathian Mountains. Some of the Carpathian countries have a great proportion of their Carpathi-

an region under a strict protection regime. Two examples are **Serbia**, where most of the relevant area has national park status, and **Hungary**, where the Carpathian region includes three national parks. Nevertheless, in other countries the Carpathian region is quite diverse, ranging from protected sites to industrial hot spots.

- The EU member states have begun the development of agri-environmental schemes and programmes fostering sustainable agriculture. Such progress is also notable in **Serbia**.
- The principle of river basin management is increasingly being reflected in the national policies and legislation of the EU Carpathian countries and the Tisza riparian countries already have strong cooperation in the framework of the Convention on Cooperation for the Protection and Sustainable Use of the Danube River and the implementation of the EU Water Framework Directive.³⁹
- Individual countries have positive examples to share with their Carpathian neighbours, such as **Poland's** tradition of scientific research in the Carpathians and **Hungary's** strong funding support for cultural heritage.
- All of the countries of the Carpathian region have a huge potential for tourism development due to the extremely rich natural and cultural heritage sites. Several sites are listed on the UNESCO World Heritage list either as natural or cultural monuments.
- Legislation on EIA has been adopted in all of the Carpathian countries implementing the prevention principle. Also SEA has been introduced in the Carpathian EU member states.
- Civil society in the Carpathian countries is very active and there is a large number of NGOs at both the grassroots and national policy levels. These NGOs represent one of the driving forces for a higher level of environmental protection.
- Regarding education and public awareness, the educational activities undertaken by protected areas management authorities are seen as a good example.

Main obstacles to the implementation of the Carpathian Convention

Most of the Carpathian countries do not have a system that specifically protects mountain regions as such. In some cases mountain issues are not addressed at all in environmental or nature protection policies, but they

are addressed in planning policies providing aid to disadvantaged regions, such as mountain areas. Nevertheless, all countries have national policies in place promoting sustainable development and the integration of environmental concerns into all sectors of national policies.

Insufficient state funding for sustainable development goals and the lack of specific financing mechanisms targeting the Carpathian region are major obstacles to efficient implementation of the convention. Moreover, there are cases of funding mechanisms supporting contradictory goals. A good example in this respect are the various EU funding mechanisms that on the one hand aim at nature protection and conservation and on the other hand promote large infrastructure development projects. Most countries' assessments also report inadequate funding for scientific research and monitoring.

One of the main obstacles to sustainable development in the Carpathian region is the conflict between short-term economic objectives and long-term sustainable development goals. While in some countries the assessments show that local communities want to protect their environment from harmful investment, other communities support projects that bring them short-term economic benefits despite longer-term adverse environmental impacts.

All Carpathian countries have adopted strategies and policy planning documents reflecting the principles of sustainable development. Nevertheless, these are often inefficient due to missing implementing legislation, insufficient funding, weak enforcement mechanisms or conflicting policies. Strategies are not always backed up by concrete action plans with clear timeframes, specific measures, and financial resources. In some countries sectoral strategies for forestry, biodiversity conservation or climate change still need to be developed.

Enforcement is a major problem in all of the Carpathian countries. There is a gap between the policies and legislation and their implementation. Weak enforcement is due to several factors, including non-dissuasive fines, ineffective enforcement of fines, social problems associated with big enterprises which do not sufficiently comply with environmental standards, and insufficient staff at public supervisory authorities. As enforcement is weak, some countries are severely affected by illegal forestry, poaching and unauthorised construction in protected areas.

With the exception of **Ukraine** and **Romania**, significant obstacles to sustainable development in the region are the lack of an intergovernmental coordination body for the Carpathian Convention and the failure to designate competent authorities at local levels. The institutional system is too complex and does not sufficiently address the need for effective cooperation. Several country assessments emphasise the difficult rela-

tionships between environmental authorities and agriculture and forestry authorities.

Poor environmental information systems and insufficient information flow are other major obstacles to effective enforcement but also to developing sound policies and legislation based on the real state of the environment.

There are several problems in the application of EIA requirements due to the limited capacity of the local and regional authorities in reviewing the impact assessment documentation and in organising open and effective public consultations. In addition, there are cases where ambiguous legislation results in different interpretations of EIA requirements.

The level of environmental awareness of local communities, businesses and public authorities is generally low and constitutes a common problem. Also, in most of the countries it was reported that national level authorities from relevant ministries were not aware of the existence of the Carpathian Convention.

From a socio-economic perspective, the main obstacles are the migration of the local population to cities and decreasing development opportunities, especially outside well-developed tourist centres. Local communities face social and economic difficulties, and as a result they are more focused on developing infrastructure in their region, even if this may have significant negative impact on the natural and cultural heritage.

Main technical and financial assistance needs

Funding is needed for the promotion of the convention. The main actors in need of financial assistance are environmental authorities, local authorities, national parks management authorities and NGOs.

More financial resources have to be allocated to environmental and sociological research activities in all areas covered by the convention. Funding is needed to purchase adequate equipment for environmental monitoring (especially automatic monitoring stations) and to improve existing capacities (both in terms of equipment and human resources) for monitoring and reporting the conditions and changes in the quality of environmental components in the region. Training for public administration, self-governments, local communities, NGOs etc., focused on specific topics, should be provided. Training topics identified by the **Polish** assessment but which are relevant for all Carpathian countries include:

- good practices in the regulation of rivers;
- the integration of spatial plans;
- maintaining traditional land-use practices such as pastoralism and hay-making;

- education on traditional rural skills;
- solving problems connected with the afforestation of valuable non-forest habitats;
- scientific exchanges;
- the promotion of renewable energy systems and cleaner industrial technologies;
- good practices in architecture;
- developing transboundary sustainable tourism focused on the cultural and natural values of the region; and
- the active conservation of particular endangered species and their habitats.

Increased support is needed for projects that target public participation and awareness raising, including development of forums for stakeholder participation and decision making in the Carpathian region, and support to ethnic minorities (e.g. the promotion of Lemko culture; research on the role of Jews and Roma in the Carpathians, etc.).

Local initiatives aimed at the development of local communities in the rural areas of the Carpathian region should be promoted. Significant efforts need to be made to develop statistical data on the Carpathian region. Funding is needed for the establishment of a common web portal of information on the Carpathian region that would contain information on all aspects of the convention and its processes.

The waste water treatment system in mountain areas is underdeveloped, and huge financial resources are needed to develop a modern water infrastructure in rural Carpathian areas.

Recommendations for Implementing the Carpathian Convention

Based on the findings of the national assessments a number of recommendations have been formulated, with a view to improving the implementation and the overall development of the Carpathian region. The following recommendations are generic, whereas more article-specific recommendations have been set out under each chapter of the article by article analysis.

- The preparation of a strategy/action plan for the Carpathian region in each country is strongly recommended. It should take into consideration the provisions of the Carpathian Convention, have an inter-sectoral approach, and clearly identify priorities.
- The existing sectoral strategies need to be updated, integrating sustainable development principles and taking greater account of the characteristics of the mountain regions.
- Transboundary cooperation during the process of elaboration of national and regional policies should be increased.
- The implementation of policies and strategies should be ensured. Control mechanisms should be defined and appropriate funding allocated for the implementation of policies and Carpathian-oriented projects.
- The existing sectoral legislation needs to be updated, integrating the provisions of the Carpathian Convention and taking more account of issues specific to the mountain region.
- Common aspects between the provisions of the Carpathian Convention and other conventions should be identified in order to ensure coordination. Regarding this, cooperation among the authorities responsible for the different conventions is strongly recommended.
- Establishment or strengthening of coordination committees, both at national and regional levels, should be undertaken to strengthen the institutional framework. These bodies, aimed at facilitating coordination between ministries (ensuring stakeholder involvement), would help to coordinate the implementation of the Carpathian Convention and promote sustainable development in the region.
- The establishment of a clearing house mechanism specific to the Carpathian region and similar to the Convention on Biological Diversity model could provide a useful tool since ministries, NGOs, and research institutions could share information and work together in a more structured and horizontal manner.
- Local authorities and local NGOs should increasingly be involved in promoting the Carpathian Convention to the public. Public awareness campaigns should be organised at all levels to popularise the convention and enhance commitment to its implementation by all stakeholders.

Endnotes

1. See Article 2 of the Carpathian Convention.
2. This data derives from the Central Statistical Office.
3. "Implementing an International Mountain Convention – Approach for the Delimitation of the Carpathian Convention Area," EURAC Research, 2006.
4. See Hungarian national assessment, figure 3, p.7.
5. On June 13, 2005.
6. On May 21, 2004.
7. On March 3, 2004.
8. On April 7, 2004.
9. On February 27, 2006.
10. On October 13, 2006.
11. This programme was adopted in November 2002 by the Council of Ministers.
12. The Inter-Ministerial Committee for the Mountain Region is formed by the representatives of the Ministry of Agriculture, Forests and Rural Development; the Ministry of Administration and Internal Affairs; the Ministry of Environment and Waters Management; the Ministry of Transport, Construction and Tourism; the Ministry of Culture and Religious Affairs; the Ministry of Education and Research; the Ministry of Public Finance; the Ministry of Economy and Trade; the Ministry of Health; and the Ministry of Labour, Social Solidarity and the Family.
13. "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."
14. Principles endorsed are: the prevention principle, public participation and stakeholder involvement, integrated planning and management of land and water resources, the programmatic approach, the ecosystem approach and the river basin management approach.
15. See Annex 2.
16. For more information visit: www.icpdr.org/icpdr-pages/drpc.htm.
17. All of the Carpathian EU members and Serbia have EIA/SEA legislation in line with the EC acquis. In Ukraine, the assessment of environmental, economic and social impacts of spatial plans is carried out through the Law on State Expertise for Land Surveying Documentation, and the Law on Protection of Land.
18. For example, the NATURA 2000 system, which provides coordinated management for sites of European interest, and the GEF regional project Biodiversity in the Carpathians through the Enhanced Protected Areas System and Connectivity of an Ecological Network, which is in a preparatory phase.
19. Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora.
20. Council Directive 79/409/EEC of 2 April 1979 on the Conservation of Wild Birds.
21. Apart from Hungary, where a more effective balance between nature protection and development policies is needed.
22. Apart from the Czech Republic where the State Environmental Policy proposes the use of indicators monitored in the framework of the European Union and the OECD.
23. Due to uncontrolled economic development and especially due to the use of chemicals by industry, as well as fertilisers, pesticides and herbicides by agriculture.
24. The construction of dams and other water flow regulation, especially in the Czech Republic, Hungary, Romania and Serbia, leads to irreversible damage to river ecosystems: they act as barriers to migrating fish and alter the vegetation, which affects the birds' habitats and wetland areas. In Hungary over the past 150 years, most of the wetlands have been drained to make room for agricultural crops, with the subsequent destruction of valuable ecosystems.
25. Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy.
26. At the moment of the writing of the present study all the Carpathian countries, apart from Serbia and Ukraine, are EU members, even though it should be pointed out that Romania only acceded in January 2007 therefore all the information treated here in the regional assessment relates to the period before the accession, up to June 2005.
27. Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment.

28. Council Directive 91/676/EEC of 12 December 1991 Concerning the Protection of Waters against Pollution Caused by Nitrates From Agricultural Sources.
29. Council Directive 96/61/EC of 24 September 1996 Concerning Integrated Pollution Prevention and Control.
30. Directive 2006/11/EC of the European Parliament and of the Council of 15 February 2006 on Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment of the Community.
31. Council Directive 91/271/EEC of 21 May 1991 Concerning Urban Waste-Water Treatment.
32. WWF Danube Carpathian Programme report, Illegal Logging in Romania, March 2005.
33. Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 Relating to the Quality of Petrol and Diesel Fuels and Amending Council Directive 93/12/EEC.
34. Klimkiewicz M., 1999. Sustainable Tourism Development in Mountain Regions. A Case of the International East Carpathian Biosphere Reserve. Ph.D. dissertation. Institute of Geography, Jagiellonian University.
35. Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the Promotion of Electricity Produced from Renewable Energy Sources in the Internal Electricity Market.
36. Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the Promotion of Electricity Produced from Renewable Energy Sources in the Internal Electricity Market.
37. Council Directive 96/61/EC of 24 September 1996 Concerning Integrated Pollution Prevention and Control.
38. Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards Involving Dangerous Substances.
39. Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy.

Annex I

Financial Instruments and Sources of Funding

TABLE 29

Financial instruments and sources of funding

AT COUNTRY LEVEL	CZECH REPUBLIC
Articles 3 and 5	<p>State budget</p> <p>State Fund for the Environment (supports the strategy of sustainable development at regional level)</p> <p>Regional budgets</p> <p>Regional operation plans</p> <p>Municipal budgets</p> <p>Rural Renewal Programme (small communities can receive grants from this programme for their spatial plans)</p>
Article 4	<p>State budget (Ministry of Environment)</p> <p>State Environmental Fund (financing projects on biological and landscape diversity)</p> <p>The River Systems Revitalisation Programme (financial support for preservation and for increasing biodiversity favourable to waters and landscape)</p> <p>Regional budgets</p> <p>Regional governments (financial support for the implementation of the regional Strategy for Nature Conservation and Biodiversity Protection)</p> <p>Landscape Management Programme (supports measures to preserve and renew the basic functions of the landscape)</p> <p>Operational Programme Infrastructure (financial support for the transport sector and the sector of the environment)</p> <p>Recovery of the Environmental Functions of the Landscape (flood prevention)</p>
Article 6	<p>State budget (Ministry of the Environment supports monitoring and inventorying and projects related to the protection of biodiversity in water ecosystems; Ministry of Agriculture, supports a range of activities connected with water management)</p> <p>State Environmental Fund (sources of financing for projects related to biological and landscape diversity)</p> <p>River Systems Revitalisation Programme (financial support for preservation and for increasing biodiversity favourable to waters and landscape)</p> <p>Regional budgets</p>

TABLE 29

Financial instruments and sources of funding, continued

AT COUNTRY LEVEL	CZECH REPUBLIC
	<p>Regional governments (financing the Strategy for Nature Conservation and Biodiversity Protection and the measures taken under it)</p> <p>Non-governmental sources (represent a small part of the possible funding sources connected with one of the first projects on sustainable water management – the sewage water treatment station based on the reed bed in Hostetin)</p>
Article 7	<p>State Environmental Fund (source for financing projects on biological and landscape diversity)</p> <p>River Systems Revitalisation Programme (financial support for preservation and for increasing biodiversity favourable to waters and landscape)</p> <p>Landscape Management Programme (supports measures to preserve and renew the basic functions of the landscape)</p> <p>Ministry of Agriculture (manages several sources of funding for agriculture and forest management)</p> <p>Regional sources (for afforestation and reforestation measures, although not specifically for the Carpathians)</p> <p>Agro-environmental programmes (covers agricultural activities)</p> <p>Less favoured areas (system of grants given to owners of meadows and pastures in mountain areas)</p>
Article 8	<p>The State Environmental Fund (small source of support for sustainable transportation)</p> <p>State Fund for Transport Infrastructure (financial source for repairing and building new roads, highways, and railroads)</p>
Article 9	<p>State Programme to Support Tourism (development of a health resort, support for infrastructure for tourism, sport and recreation activities)</p> <p>Regional budgets (develop their own programmes to support tourism)</p>
Article 10	<p>State Environmental Fund (gives subsidies to individual projects promoting solar energy and biomass heating)</p> <p>National Programme on the Utilisation of Renewable Energy Resources and Energy Saving</p>
Article 11	<p>State budget (Ministry of Culture finances the restoration of important historical and cultural monuments; grant programmes oriented to cultural heritage)</p> <p>Programme for the Care of Village Monument Reservations, Village Monument Zones and Landscape Monument Zones (supports the renovation and preservation of cultural monuments)</p> <p>Programme for the Support of Local Cultural Traditions (supports local cultural events connected with local history)</p> <p>Programme to Support Traditional Folk Culture (supports the protection and development of different forms of traditional folk culture)</p>

TABLE 29

Financial instruments and sources of funding, continued

AT COUNTRY LEVEL	CZECH REPUBLIC
Article 13	<p>State budget (Ministry of the Environment, within the grant programme for NGOs, and the programme for Environmental Training, Education and Enlightenment)</p> <p>Czech Environmental Partnership Foundation (biggest non-state financial source oriented towards the environment: informing the public on important topics connected with the environment; legislation in the area of the environment; the development of the non-profit sector and the development of cooperation; public participation in decision making in the area of the environment)</p> <p>Regional budget</p> <p>Local sources (grants given by municipalities)</p>
AT COUNTRY LEVEL	HUNGARY
Articles 3 and 5	State budget (provides funds for planning)
Article 4	State budget (provides funds for national parks)
Article 6	State budget (Ministry of Environment and Water)
Article 7	State budget (funding available for rural development and NGOs, Agri-environment Programme)
Article 8	State budget and regional budgets
Article 9	National Tourist Office (offers a wide range of grants for projects in the field of tourism)
Article 10	<p>Industry: National Development Plan (provides grants for investments in environmental protection)</p> <p>Energy: Hungarian Development Bank (provides loans with lower interest rates, can be obtained for investments in renewable energy and energy efficiency)</p>
Article 11	ROP and AVOP programmes
Article 13	State budget
AT COUNTRY LEVEL	POLAND
Articles 3 and 5	National, regional and local budget (contribution to the funds for environmental protection and water management)
Article 4	<p>Central budget</p> <p>Funds for environmental protection and water management</p>
Article 6	<p>National, regional and local budget (funds available for environmental protection and water management)</p> <p>Public fund Ekofundusz</p>
Article 7	Sectoral Operational Programme (provides funds for Restructuring and Modernisation of the Food Production Sector and Rural Development, 2007-2013)

TABLE 29

Financial instruments and sources of funding, continued

AT COUNTRY LEVEL	POLAND
	Integrated Operational Programme for Regional Development (provides funds for rural areas and environmental protection infrastructure)
Article 8	National Agri-Environmental Programme (basic financial mechanism for supporting activities connected with sustainable agriculture)
Article 9	Operation Programme Transport and Environment (adopted for the period 2007-2013)
	Ministry of the Economy (supports 54 projects in the field of tourism development)
Article 10	Governmental programme Civil Initiatives Fund (supports tourism activities, focusing in particular on children's recreation, social tourism and sustainable development)
Article 11	No specific fund
	Ministry of Culture
	National Fund for the Revalorization of Krakow Monuments (management of the particular site)
Article 13	Self-governmental units (create foundations focused on particular aspects of cultural heritage)
	National budget (resources from environmental taxes and various funds and donors directed to the third sector)
AT COUNTRY LEVEL	ROMANIA
	State budget (through the MTCT)
Article 4	NFA/Romsilva
	State budget
	NFA/Romsilva (funds available for national and natural parks administration).
Article 6	Environmental Fund (implements projects identified in the National Plan for Environmental Protection, which includes biodiversity)
Article 7	Environmental Fund (provides funds for water pollution control and reduction; natural resources protection)
	State budget (through the Ministry of Agriculture, Forests and Rural Development)
	Local public authorities (important source of funding for agriculture)
Article 8	NFA/Romsilva (state company that generates revenues and makes profits that are invested in different works, including reforestation, forest protection, and protected areas management)
	State budget
Article 9	Local budgets (very small funds unable to sustain a large project)
	State budget (through the MTCT/NTA)

TABLE 29

Financial instruments and sources of funding, continued

AT COUNTRY LEVEL	ROMANIA
	<p>Ministry of Education and Research (provides funds for research institutes for some projects regarding tourism development in mountain areas)</p> <p>Ministry of Agriculture, Forestry and Rural Development (provides funds for tourism development)</p>
Article 10	<p>State budget (through the MET, big investments in energy and industry)</p> <p>Environmental Fund (economic and financial tool established to sustain and prioritise the achievement of objectives of major public interest that are contained within the National Action Plan for Environmental Protection)</p> <p>Special Fund for Energy System Development (used for carrying out energy conservation projects)</p>
Article 11	<p>State budget (through the Ministry of Culture and Religious Affairs)</p> <p>National Cultural Fund (offers grants for cultural projects)</p>
Article 13	<p>The Environmental Fund (has a component dedicated to public awareness)</p>
AT COUNTRY LEVEL	SERBIA
Articles 3 and 5	<p>State budget</p>
Article 4	<p>Special funds for natural parks</p>
Article 6	<p>Water funds (funds for water management)</p> <p>Djerdap Natural Park, public enterprise (provides funds through the management of natural resources)</p>
Article 7	<p>Ministry of Agriculture, Forestry and Water Management (provides incentive budget funds for the development of agriculture)</p> <p>Djerdap Natural Park, public enterprise (responsible for forest management within the territory of the park. All activities related to sustainable forest management are funded from resources managed by this public enterprise)</p>
Article 8	<p>State Budget (provides fund for the development of transport and infrastructure)</p>
Article 9	<p>State-controlled Tourism Development Fund (provides material conditions for the development and promotion of tourism)</p>
Article 10	<p>No specific domestic sources of funding for the implementation of environmentally friendly industry and energy solutions in the Carpathian region</p>
Article 11	<p>No specific funds for the implementation of activities related to the safeguarding of cultural heritage and traditional knowledge in the Carpathian region. However, limited financial support is provided by the authorities of the Djerdap NP and local municipalities.</p>
Article 13	<p>The majority of the domestic funding is used for raising environmental awareness, while there is no funding specifically dedicated to public participation projects and public participation training.</p>

TABLE 29

Financial instruments and sources of funding, continued

AT COUNTRY LEVEL	SLOVAKIA
Articles 3 and 5	<p>State budget</p> <p>Budgets of municipalities</p> <p>Budget of regional self-government authorities</p> <p>Sectoral funds</p> <p>Foundations</p> <p>Sponsors</p> <p>State Environmental Fund</p>
Article 4	State budget
Article 6	<p>State budget</p> <p>Finances of cities and towns</p> <p>Internal resources of water management enterprises</p> <p>Finances of industry</p> <p>The main problem is that only about 1 percent of expenses from the national (governmental) budget is reserved for environmental issues.</p> <p>Money is used mostly for technical solutions and there is still a lack of support for alternative solutions, such as river and wetlands restoration and the building of biological wastewater treatment plants.</p>
Article 7	State budget
Article 8	State budget Community Cohesion Fund (co-finances infrastructure in the environment and transport sectors)
Article 9	State budget (In 2002, the Slovak government allocated the sum of SKK 37.9 million for the promotion of tourism in Slovakia)
Article 10	<p>State budget</p> <p>State Fund for the Environment</p> <p>Domestic and foreign loans</p>
Article 11	<p>Financial resources for cultural heritage management can be divided according to their origin into three main groups:</p> <p>Basic resources – primary and main resources of funding by owners, through the state budget, municipal budgets, private savings, operational profits</p> <p>Supplementary (support) resources – direct support resources (subsidies, grants) and indirect support resources (tax exemptions, providing state guarantees on loans or the reimbursement of interest by the state)</p> <p>Supplementary (other) resources – income from lotteries, collections, foundations, civic associations, material support in kind provided by the state, voluntary aid, etc.</p> <p>State Cultural Fund Pro-Slovakia</p> <p>State Environmental Fund (provides funds for the sustainable development of settlements and the protection of historic structures of the landscape)</p>

TABLE 29

Financial instruments and sources of funding, continued

AT COUNTRY LEVEL	SLOVAKIA
Article 13	<p>State budget</p> <p>Slovak Environmental Fund</p> <p>Environment Ministry (serves as a financing source by way of the SAZP centres for environmental education)</p>
AT COUNTRY LEVEL	UKRAINE
Articles 3 and 5	<p>State budget (covers costs connected with the development and implementation of state and regional land-use and protection programmes, policy and legislation development, the development of the land management documentation of lands in state ownership and territories of national importance)</p> <p>Local budgets (local budgets of oblast, region, city, town and village councils finance works on land management, and the use and protection of lands on the respective territories)</p> <p>Funding from enterprises, organisations, institutions and citizens, and donations</p>
Article 4	<p>State budget</p> <p>Environmental protection funds of local authorities</p> <p>Environmental funds of protected areas (funds are used to finance their activities. These funds are formed via fines for damages caused, the sale of confiscated goods, part of the payment by enterprises, institutions and organisations for the pollution of the territory and nature reserve fund objects, which are mandatory payments calculated according to the ecological-economic assessment of their environmental impact, donations, grants)</p>
Article 6	<p>State budget (finances the development and implementation of legal and policy acts, programmes, central-level authorities and other measures executed on the national level)</p> <p>Environmental protection funds at all levels (finance measures taken within the implementation of the Water Husbandry Development Programme and other above-mentioned programmes)</p> <p>Budgets of local authorities (finance the development and implementation of local programmes, the implementation of measures related to water management on the local level)</p> <p>Funding from the water husbandry complex units (funding of water protection measures on units)</p> <p>Environmental insurance funds (insurance for risks of emergencies)</p>
Article 7	<p>State budget (covers costs connected with the development and implementation of state and regional agriculture programmes, policy and legislation development)</p> <p>Local-level budgets (finance the corresponding activities on the respective territories)</p> <p>Funding from enterprises, organisations, institutions and citizens, and donations</p>

TABLE 29

Financial instruments and sources of funding, continued

AT COUNTRY LEVEL	UKRAINE
Article 8	<p>State budget</p> <p>Local-level budgets</p>
Article 9	<p>State budget (financing goes through the Ministry of Culture and Tourism to develop routes, release tourist guidebooks, and manage tourist attractions)</p> <p>Ecological funds from regional councils (funds for the management and protection of natural attractions – rocks, waterfalls, mountain lakes)</p>
Article 10	<p>State budget (provides funds for the development and implementation of programmes on industrial development and corresponding measures at national level)</p> <p>Local budgets (funding programmes and measures at local level)</p> <p>Funds for environmental protection</p> <p>Enterprises' own funds</p>
Article 11	<p>State budget</p> <p>Local-level budgets</p> <p>Donations from legal and natural persons</p> <p>Law on Cultural Heritage Protection provides for the creation of special funds at state and regional levels for the safety of monuments of cultural heritage. These funds should operate on the basis of collecting, penalties, advertising and so on.</p>
Article 13	<p>State budget (provides funds for policy and legislation development, development and implementation of programmes and national-level measures)</p> <p>State funds and regional funds for environmental protection (formed from taxes for the pollution of the environment)</p> <p>Local-level budgets (provide funds for local policies and implementation measures)</p> <p>Grants received by educational institutions</p>

TABLE 30

EU sources

Articles 3 and 5	<p>PHARE programme (significant role in shaping country spatial planning)</p> <p>SAPARD funds (spatial planning objectives)</p> <p>ISPA (spatial planning objectives)</p> <p>European Investment Bank</p> <p>European Agency for Reconstruction Interreg (the programme offers grants for cross-border cooperation projects between EU and non-EU member countries)</p>
Article 4	<p>Life Nature Fund (provides funds to improve the situation of species and habitats of European interest)</p> <p>Life Environment (helps the member and candidate countries to implement the environmental acquis)</p> <p>European Rural Development and Structural Funds</p> <p>PHARE programme</p> <p>INTERREG III programme (supports a few projects in the Carpathian area supporting the modernisation of the communal waste and sewerage system)</p>
Article 6	<p>Life Nature Fund</p> <p>European Fund for Regional Development (provides funds for projects in the field of water protection and rational utilisation)</p> <p>INTERREG III programme (supports a few projects in the Carpathian area supporting the modernisation of the communal waste and sewerage system)</p> <p>PHARE programme (finances measures relating to the environmental rehabilitation of degraded industrial sites and closed enterprises in heavily polluted areas)</p> <p>SAPARD funds (finance measures for safeguarding against the consequences of natural phenomena)</p> <p>ISPA facility (finances the strategy proposed by the Ministry of the Environment - improvement of the quality of water to reach EU standards)</p>
Article 7	<p>Life Nature Fund (provides funds related to Natura 2000)</p> <p>LEADER+ (programme supporting local activities in rural areas)</p> <p>Operational Programme infrastructure (the Structural Fund contains measures in relation to agriculture in mountain areas)</p> <p>European Agricultural Guidance and Guarantee Fund</p> <p>SAPARD Programme (a financial instrument helping candidate states in the pre-accession process in the domain of agriculture and rural development, which promotes forestry, including reforestation)</p> <p>Agri-Environment Programme (will be the basis for the EU funds that will support sustainable agriculture in the period 2007-2013)</p> <p>European Agency for Reconstruction</p> <p>PHARE programme</p>

TABLE 30

EU sources, continued

Article 8	European Regional Development Fund (ERDF) PHARE programme European Bank for Investment
Article 9	INTERREG Programme (the most important source for cross-boundary cooperation, often concentrated on tourism) LEADER+ (programme dedicated to improving living conditions in the countryside and rural development) PHARE Programme
Article 10	INTERREG programme (programme offering grants for cross-border cooperation projects between EU and non-EU member countries) European Agency for Reconstruction
Article 11	INTERREG III programme (dedicated to the support of transboundary cooperation) Integrated Regional Operational Programme Culture 2000 programme (aims to implement a new approach in its cultural policy, trying to encourage European cultural creation and to promote cooperation between cultural operators across Europe)
Article 13	Human Resources Development Programme of the European Social Fund PHARE programme Life programme Leonardo programme

TABLE 31

International sources

Articles 3 and 5	<p>World Bank</p> <p>UNDP</p> <p>Organization for Security and Co-operation in Europe</p> <p>Regional Environmental Center for Central and Eastern Europe (REC) (acts as the secretariat for the Regional Environmental Reconstruction Programme for South Eastern Europe and provides funding)</p>
Article 4	<p>International Visegrad Fund (for cross-border cooperation involving the member countries of the Visegrad Treaty; available for organisations from Poland, the Czech Republic, Slovakia and Hungary)</p> <p>Carpathian Foundation (offers funding for NGO work in the region; environmental programmes might receive funding through one of the following programmes: Cross Border Co-operation, Local Initiatives Programme and Integrated Rural Community Development Programme)</p> <p>Funds from developed countries (including international programmes of different EU member states – MATRA, Senter in the Netherlands, DANCEE in Denmark, programmes from USA, Canada, Germany, the United Kingdom, Switzerland, France, Austria, and others)</p> <p>Global Environmental Facility (supports the establishment of the Carpathian Biosphere Reserve)</p> <p>INTAS (International Association for the Promotion of Co-operation with Scientists from the New Independent States of the Former Soviet Union)</p> <p>UNEP</p> <p>Council of Europe</p> <p>The Foundation for Eastern Carpathians Biodiversity Conservation (ECBC) (finances transboundary cooperation and activities carried out within the framework of the Biosphere Reserve “Eastern Carpathians”)</p>
Article 6	<p>The UNDP/GEF Danube Regional Project (covers the Danube river basin geographic area, including the rivers of the Carpathian region)</p> <p>Global Environmental Facility (has financed the Danube River Enterprise Pollution Reduction Project)</p> <p>European Economic Area</p> <p>World Bank (Water Management Rehabilitation project)</p> <p>For NGOs, there are also funds available from the Partnership Foundation, the Carpathian Foundation, the REC, MATRA KNIP and KAP.</p>
Article 7	<p>FAO–Technical Cooperation Programme (offers grants and technical assistance in the field of agriculture)</p> <p>World Bank (grants or loans for different agriculture issues, including agricultural pollution control and rural development)</p> <p>GEF/World Bank (financed Biodiversity Conservation Management Project)</p> <p>GEF/UNDP (financed project for Maramures Mountains Natural Park)</p>

TABLE 31

International sources, continued

Article 7	<p>MATRA PIN, (for projects of the Research and Management Planning Institute on Forestry relating to the virgin forest inventory or the development of ecological networks in the Carpathian Mountains)</p> <p>United States Agency for International Development (USAID)</p> <p>UNDP (financed the project Agricultural Policy for Human Development designed to support and facilitate the development and implementation of effective agricultural and rural development policies)</p>
Article 8	<p>World Bank</p>
Article 9	<p>Global Environment Facility (provides funds for biodiversity conservation projects, which include components for the development of ecotourism)</p> <p>Carpathian Fund</p> <p>Technical Aid to the Commonwealth of Independent States</p> <p>USAID</p> <p>British Ministry for International Development (DFID)</p> <p>FORZA (Switzerland)</p> <p>Pfeiffer Foundation</p> <p>Eurasia Foundation, the USAID Program of Development of Local Communities</p>
Article 10	<p>World Bank</p> <p>USAID</p>
Article 11	<p>Visegrad Fund (supports projects focused on cultural, scientific and transboundary cooperation, scientific research, youth exchanges, and the promotion of tourism)</p> <p>GETTI and KRES funds (provide for the preservation of monuments of wooden architecture)</p> <p>Government of Flanders (through the Cooperation Programme with Central and Eastern European Countries)</p> <p>Open Society Foundation</p>
Article 13	<p>Organisation for Security and Co-operation in Europe</p> <p>REC (supports capacity building for implementing the Aarhus Convention, mainly through training and workshops for representatives of governmental institutions, NGOs and other stakeholders)</p>

Annex II
**Status of Participation of
Carpathian Countries in Relevant
Multilateral Agreements**

TABLE 32

Status of participation of Carpathian countries in relevant multilateral agreements (as of December 1, 2007)

GLOBAL CONVENTIONS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)	X*	X	X	X	X	X	X
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	X	X	X	X	X	X	X
Convention on the Conservation of Migratory Species of Wild Animals (CMS)	X	X	X	X		X	X
Agreement on the Conservation of Populations of European Bats	X	X	X	X		X	X
Agreement on the Conservation of African-Eurasian Migratory Waterbirds	X	X		X		X	X
Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas			X				
Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area				X			X
Vienna Convention for the Protection of the Ozone Layer (Ozone Convention)	X	X	X	X	X	X	X
Montreal Protocol on Substances that Deplete the Ozone Layer	X	X	X	X	X	X	X
Basel Convention on the Transboundary Movements of Hazardous Wastes and their Disposal	X	X	X	X	X	X	X

* X = ratification, acceptance, approval, accession or succession

TABLE 32

Status of participation of Carpathian countries in relevant multilateral agreements (as of December 1, 2007), continued

GLOBAL CONVENTIONS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
United Nations Framework Convention on Climate Change (UNFCCC)	X	X	X	X	X	X	X
Kyoto Protocol to the United Nations Framework Convention on Climate Change	X	X	X	X	X	X	X
Convention on Biological Diversity (CBD)	X	X	X	X	X	X	X
Cartagena Protocol on BioSafety (Cartegena Protocol)	X	X	X	X	X	X	X
United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (CCD)	X	X	X	X		X	X
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention)	X	X	X	X		X	X
Stockholm Convention on Persistent Organic Pollutants (POPs)	X			X		X	X
Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO World Heritage Convention)	X	X	X	X	X	X	X

TABLE 32

Status of participation of Carpathian countries in relevant multilateral agreements (as of December 1, 2007), continued

REGIONAL CONVENTIONS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
<i>UNECE:</i>							
Convention on Long-Range Transboundary Air Pollution (LRTAP)	X	X	X	X	X	X	X
Convention on Environmental Impact Assessment in a Transboundary Context (Espoo)	X	X	X	X		X	X
Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention)	X	X	X	X		X	X
Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters (Aarhus Convention)	X	X	X	X		X	X
Convention on the Transboundary Effects of Industrial Accidents (TEIA)	X	X	X	X		X	
Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters (not yet in force)		X					
<i>OTHER CONVENTIONS:</i>							
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)	X	X	X	X		X	X
European Landscape Convention	X	X	X	X		X	X

TABLE 32

Status of participation of Carpathian countries in relevant multilateral agreements (as of December 1, 2007), continued

SUB-REGIONAL CONVENTIONS	CZECH REPUBLIC	HUNGARY	POLAND	ROMANIA	SERBIA	SLOVAKIA	UKRAINE
Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention)				X			X
Convention on Cooperation for the Protection and Sustainable Use of the Danube River (Danube Convention)	X	X		X	X	X	X
Framework Convention on the Protection and Sustainable Development of the Carpathians (Carpathian Convention)	X	X	X	X	X	X	X

Annex III

Framework Convention on the Protection and Sustainable Development of the Carpathians

“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 protec-

tion 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 modified 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 water-courses, 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 trans-boundary 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 internationally 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 development of new environmental, social and economic indicators,
 - (e) a system of early warning, monitoring and assessment of natural and manmade environmental risks and hazards, and
 - (f) an 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 intersectoral 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 ratification, 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 Regional Environmental Center for Central and Eastern Europe (REC) is a non-partisan, non-advocacy, not-for-profit international organisation with a mission to assist in solving environmental problems in Central and Eastern Europe (CEE). The center fulfils this mission by promoting cooperation among non-governmental organisations, governments, businesses and other environmental stakeholders, and by supporting the free exchange of information and public participation in environmental decision making.

The REC was established in 1990 by the United States, the European Commission and Hungary. Today, the REC is legally based on a charter signed by the governments of 29 countries and the European Commission, and on an international agreement with the government of Hungary. The REC has its head office in Szentendre, Hungary, and country offices and field offices in 17 beneficiary countries, which are: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia and Turkey.

Recent donors are the European Commission and the governments of Austria, Belgium, Bosnia and Herzegovina, Bulgaria, the Czech Republic, Croatia, Denmark, Estonia, Finland, Germany, Hungary, Italy, Japan, Latvia, Lithuania, the Netherlands, Norway, Poland, Slovakia, Slovenia, Sweden, Switzerland, the United Kingdom, and the United States, as well as other inter-governmental and private institutions.

The European Academy (EURAC) is an innovative institute for research and scientific training, located in Bolzano, Italy (www.eurac.edu). Founded in 1992, it is divided into nine research institutes. The institute's international character is especially noticeable in the diverse origins of its staff: 120 researchers from 11 different European countries are currently working at EURAC.

Located in the central Alps, EURAC is in an ideal position to carry out applied research in mountainous regions, and is proud to host the outposted seat of the permanent secretariat of the Alpine Convention.

One of the research institutes of the EURAC is the Coordination Unit "Alpine Convention-IMA (International Mountain Agreements)" that is directly involved in the consulting activities that the European Academy gives to Italian institutions, such as the Italian Ministry for the Environment, Land and Sea, and to international institutions, such as, for example, UNEP, OECD, the European Commission and the Mountain Partnership.

In the framework of the Carpathian Convention EURAC has been really active since the period of the Italian Presidency of the Alpine Convention, (2001-2002) together with UNEP and some Countries from the Carpathian Area in the promotion of this Convention; for example EURAC organised and hosted the first negotiation meeting for the Carpathian Convention in June 2002, and the last one where the draft of the Convention was finalised in March 2003.



A Heightened Perspective

Regional Assessment of the Policy, Legislative and Institutional Frameworks Implementing the Carpathian Convention