

### ORAL PRESENTATIONS

#### **Carpathian integrated assessment of vulnerability to climate change and ecosystem-based adaptation measures: the CARPIVIA project**

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The CARPIVIA project aims to assess the vulnerability to climate change of the main ecosystems and ecosystem based production systems in the Carpathian region. It will produce an inventory of climate change impacts and ecosystem-based adaptation measures. By providing access to state-of-the-art information on vulnerability in the Carpathian region and on potential adaptation measures the CARPIVIA project aims to support for the new 'Working Group on Adaptation to Climate Change' under the Carpathian Convention. The CARPIVIA project is funded by the European Commission under the preparatory action 'Climate of the Carpathian Basin' approved by the European Parliament. It will run from 2011 to 2013.

This paper will summarise the interim results of the CARPIVIA project for debate with Forum Carpaticum participants. In particular the paper will focus on the inventory of climate change impacts and ecosystem-based adaptation measures in the Carpathian region and the results of the first 'Working Group on Adaptation to Climate Change' where these impacts and adaptation measures will be prioritised. In addition the paper will report on the knowledge system developed for CARPIVIA project.

Background: The CARPIVIA project aims to assess the vulnerability of the Carpathian region primarily to climate change. Based on this vulnerability assessment an inventory will be made of the potential and already implemented adaptation measures. A framework to assess the vulnerability and adaptation measures in the region will be provided. The focus will be on ecosystem-based adaptation measures. Results of the project will be disseminated by a dedicated website, by cooperation with key regional stakeholders, and through presentations at workshops and conferences in the region.

The main objectives of the CARPIVIA project are:

- To gather, in a structured way, information on vulnerability to climate change impacts in the Carpathian Basin, and on that basis identify and assess potential adaptation measures, with a particular focus on ecosystem based approaches. The level of analysis will be based on the availability of data and information from external project;

- To identify knowledge gaps to be filled in by additional field research or case studies. The latter will be executed by a parallel separate framework contract for in-depth assessments of vulnerability of environmental resources and ecosystem-based adaptation measures;
- To contribute to on-going national or regional adaptation strategies or related policy processes, and to the EU Knowledge Base on Climate Vulnerability and Adaptation (among others via the Adaptation Clearinghouse of the EU).

The Third Meeting of the Conference of the Parties (COP3) to the Carpathian Convention (Bratislava, Slovenia, 2011) approved the Terms of Reference for the Working Group on Adaptation to Climate Change by its Decision COP3/15. This Working Group aims to support the Parties to the Carpathian Convention by providing advice on adaptation to climate change in the Carpathian region. The working group will debate the available information on vulnerability to climate change impacts in the Carpathian Region, and provide guidance and recommendations for the development of policy proposals in line with the objectives of the Carpathian Convention and the European Commission's White Paper on Adapting to Climate Change.

More information: [www.carpivia.eu](http://www.carpivia.eu)

## **In-depth assessments of vulnerability of environmental resources and ecosystem-based adaptation measures in the Carpathian Region**

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The Carpathian region was one of the less investigated areas of Europe, especially of the European Union. Therefore, the European Commission allocated funds for the better and coordinated investigation of the region.

European Commission proposed to focus work on the analysis of the vulnerability of water and ecosystems of the Carpathian region to climate change impacts and other man-made pressures and on identifying potential adaptation measures, focusing on adaptive water management and ecosystem-based approaches in the 2010 plan. This would provide strong benefits to national and regional authorities of the Carpathian Region, and contribute to concrete policy proposals in line with the Commission White Paper on Adapting to Climate Change, such as National or Regional adaptation strategies, or a Danube Climate Adaptation Strategy. The results of this analysis will be strongly interrelated with the work already underway and will also provide a contribution to the forthcoming EU Information System on Climate Change Vulnerability and Adaptation (EU Clearinghouse).

A preliminary assessment of potential climate change impacts in the Carpathian basin identified the following key vulnerabilities 1) lack of water due to increasing drought tendency; 2) increasing frequency of heat waves; with their subsequent effects on ecosystems, ecosystem based production systems (agriculture, forestry, energy) and health. No clear picture can be drawn about possible changes in the flood conditions: it is expected that the frequency of both winter floods and torrential flood events will increase.

A tender call was published with the title 'Preparatory action on climate in the Carpathian region – Framework contract for in-depth assessments of vulnerability of environmental resources and