Restoring and managing eco corridors in mountains as the green infrastructure in the Danube basin

13th Meeting of the Carpathian Convention
Working Group on Biodiversity

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ConnectGREEN:

- Duration: June 2018 – 31 October 2021
- 11 Partners from 6 EU countries (ERDF)
- 2 Partners from Serbia (IPA)
- 10 Associated Strategic Partners (ASP)
- Coordinated by: WWF Romania
- Value: ~ 2.6 million euros
Aim: ConnectGREEN, aimed at maintaining and improving the ecological connectivity between natural habitats in the Carpathian ecoregion.

01. Eco-corridors and connectivity gaps identified in the Carpathians

02. Capacity for identifying and managing eco-corridors improved

03. Identify and implement strategic directions and instruments/practices in order to promote the value of ecological connectivity, in particular of large carnivore corridors, among planners and decision makers
Project co-funded by European Union Funds (ERDF, IPA)

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(Crooks et al., 2011)
### Main threats as identified by PA managers

**4. Transportation and service corridors within the protected area**
(Threats from long narrow transport corridors and the vehicles that use them, including associated wildlife mortality)

<table>
<thead>
<tr>
<th>Threat Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Roads and railroads (include road-killed animals)</td>
<td>38.39%</td>
</tr>
<tr>
<td>4.2 Utility and service lines (e.g. electricity cables, telephone lines, etc.)</td>
<td>32.74%</td>
</tr>
<tr>
<td>4.3 Shipping lanes and canals</td>
<td>13.39%</td>
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<tr>
<td>4.4 Flight paths</td>
<td>9.82%</td>
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</tbody>
</table>

**7. Natural system modifications**
(Threats from other actions that convert or degrade habitat or change the way the ecosystem functions)

<table>
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<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 Fire and fire suppression (including arson)</td>
<td>29.76%</td>
</tr>
<tr>
<td>7.2 Dams, hydrological modification and water management / use</td>
<td>30.06%</td>
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<tr>
<td>7.3 Increased fragmentation within protected areas</td>
<td>37.5%</td>
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<tr>
<td>7.4 Isolation from other natural habitat (e.g. deforestation, dams without effective aquatic wildlife passages)</td>
<td>30.06%</td>
</tr>
<tr>
<td>7.5 Other &quot;edge effects&quot; on park values</td>
<td>23.81%</td>
</tr>
<tr>
<td>7.6 Loss of keystone species (e.g. top predators, pollinators etc.)</td>
<td>27.68%</td>
</tr>
</tbody>
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(CCPAMETT, 2018)
Pilot areas:
1. Piatra Craiului National Park / Bucegi Nature Park (Romania)
2. Apuseni mountains / Southwest Carpathians (Romania) / National Park Djerdap (Serbia)
3. Western Carpathians (Czech Republic – Slovakia)
4. Bük National Park (Hungary) / Čerová vrchovina Protected Landscape Area (Slovakia)
Target Groups

- Local Public Authorities
- National Public Authorities
- Sectoral Agencies
- Infrastructure and (public) Service Providers
- Interest Groups including NGOs
Some Project Results
Project co-funded by European Union Funds (ERDF, IPA)

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Assessment of cumulative impact at landscape level
Ecological corridors database within CCIBIS

The CCIBIS project has created an online portal for the Ecological Corridors Database within the CCIBIS project, funded by European Union Funds (ERDF, IPA). The database allows users to access data on ecological corridors in the Danube region, including information on core areas and corridors for large carnivores in the Carpathians.

The database is available at: https://experience.arcgis.com/experience/03d1f6f67404518b3efe0d1f444e5a

The document also includes a map of the project area, highlighting the main areas of interest:

1. Piatra Craiului National Park / Bucegi Nature Park (Romania)
2. Apuseni mountains / Southwest Carpathians (Romania) / National Park Djerdap (Serbia)
3. Western Carpathians (Czech Republic - Slovakia)
4. Bükk National Park (Hungary) / Cerová vrchovina Protected Landscape Area (Slovakia)
Decision support tool (DST)

User interface

User interface - using DST – input

User interface - using DST – output
International Action Plan on LCs and connectivity

INTRODUCTION, LEGAL BACKGROUND AND IMPLEMENTATION

The Carpathians are a range of mountains in Central and Eastern Europe, stretching across seven countries in the form of an arch, starting in the north-west of the Czech Republic, continuing through the whole Slovak Republic, southern Poland, eastern Hungary as well as the west of Ukraine and Romania, and then going south to the eastern part of Serbia.

The Carpathian region is one of Europe’s last great wilderness areas, with exceptional levels of biodiversity, extensive tracts of old-growth forest and one of the most important and biggest large carnivore populations in Europe. It is estimated that over 7,200 brown bears, 3,000 grey wolves, and 2,150 Eurasian lynxes currently exist in the Carpathian region (Chapron et al., 2014).

The above-mentioned species require extensive, non-fragmented habitats to establish their large home ranges and be able to move long-distance movements to satisfy their biological and ecological needs. Moreover, the size of habitats and their connectivity are being challenged by increasing pressures of current and future development of transport and other types of infrastructure in the Carpathian region.

Furthermore, despite their functional role as ecosystem key species and their long-term protection in some countries, human-carnivores conflicts can occur.

The large carnivore species existing in human-dominated landscapes often face a multi-dimensional problem, ranging from human-caused mortality to habitat loss and fragmentation. Compared to other

DECISION COP6/9

Conservation and sustainable use of biological and landscape diversity

Article 4 of the Carpathian Convention

The Conference of the Parties

1. Adopts the International Action Plan on Conservation of Large Carnivores and Ensuring Ecological Connectivity in the Carpathians

6. Welcomes the implementation of the project ConnectGREEN - Restoring and managing ecological corridors in mountains as the green infrastructure in the Danube basin, funded by the Interreg Danube Transnational Programme; encourages the Parties to promote and use the results of the project, as appropriate, thanks the WWF Romania and other partners, especially CEEweb for continued support in implementing the project;
Multi-sectoral meetings and fora
Project cofunded by European Union Funds (ERDF, IPA)

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E-learning training course on eco-corridors

Course 1
The Carpathian Large Carnivores
- There will be 6 lessons within this course
- Covers the basic ecological principles and ideas that are important to understand

Course 2
The Methodology
- There will be 5 lessons within this course
- Covers what the methodology is, using models, and ecological networks

Course 3
Spatial Planning
- There will be 3 lessons within this course
- Covers the diversity of problems when it comes to spatial planning, and the national differences in spatial planning regulations
- A number of case studies will be examined to give practical insight into the steps, problems, and solutions

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Knowledge transfer conference for PA professionals
Cooperation with multi level stakeholders (from local to international) is key
Relevant stakeholders have to be identified and involved (from local organizations and experts to universities and ministries)
Borders should not represent a barrier, despite e.g. cultural differences, but rather an advantage (for improving/ adapting/ co-creating solutions to common projects)
Stakeholder consultations should happen in every stage, from early planning to implementation
Transdisciplinary approach is crucial to address complex issues (multiple use of land, management of conflicts)
Connection with higher level policy makers (e.g. Secretariat of the Carpathian Convention, EUSDR) is important
Good personal contacts, including with representatives of international professional networks can facilitate synergies and smooth implementation
Synergies are crucial, either planned or organized on demand