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Securing ecological connectivity in Romania and in the Carpathian Ecoregion

ELC & Biodiversity WG Meeting of the CC

26th of November 2019

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Wildlife and Landscape National Manager,
WWF RO

Project co-funded by European Union Funds (ERDF, IPA)

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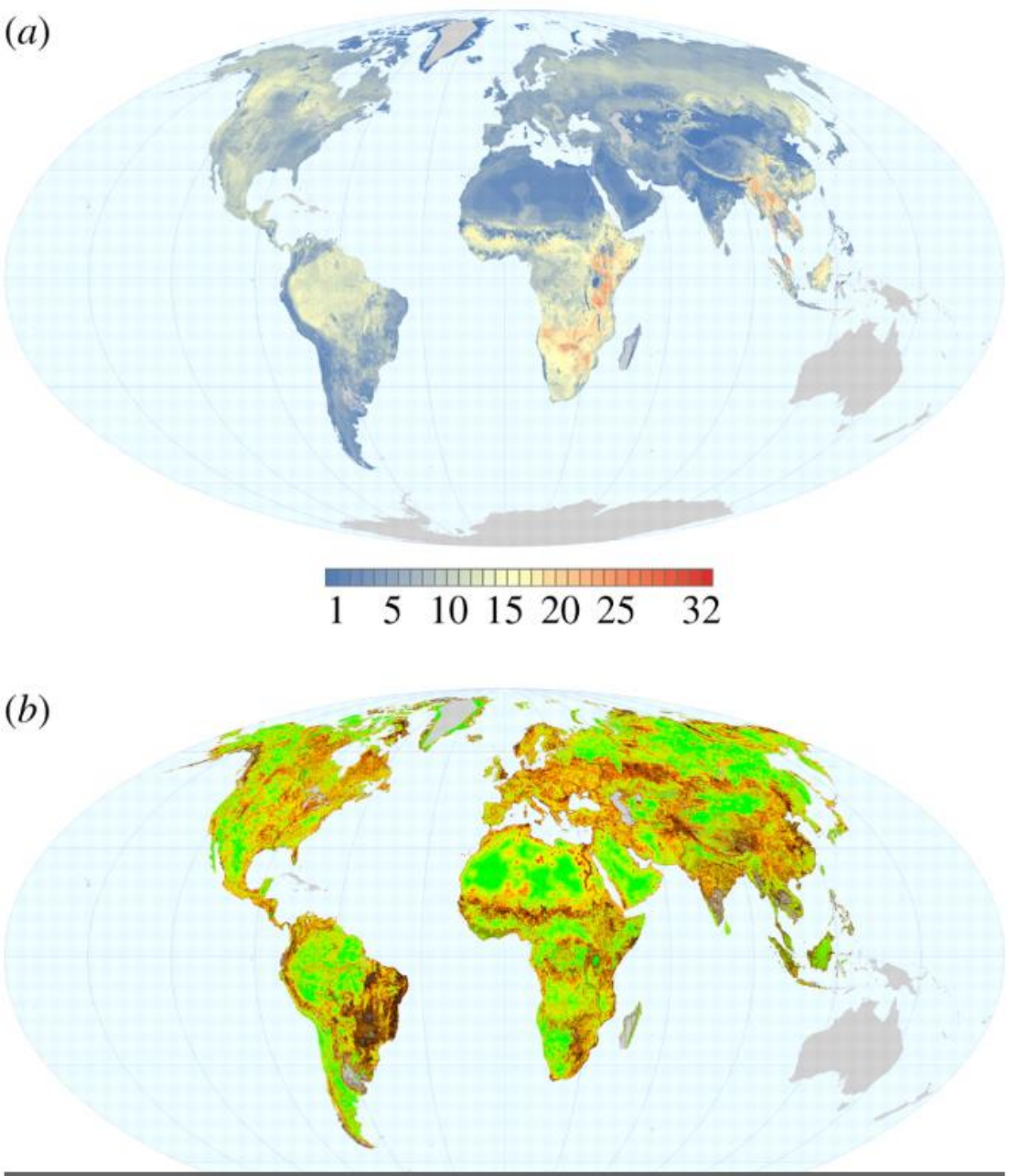
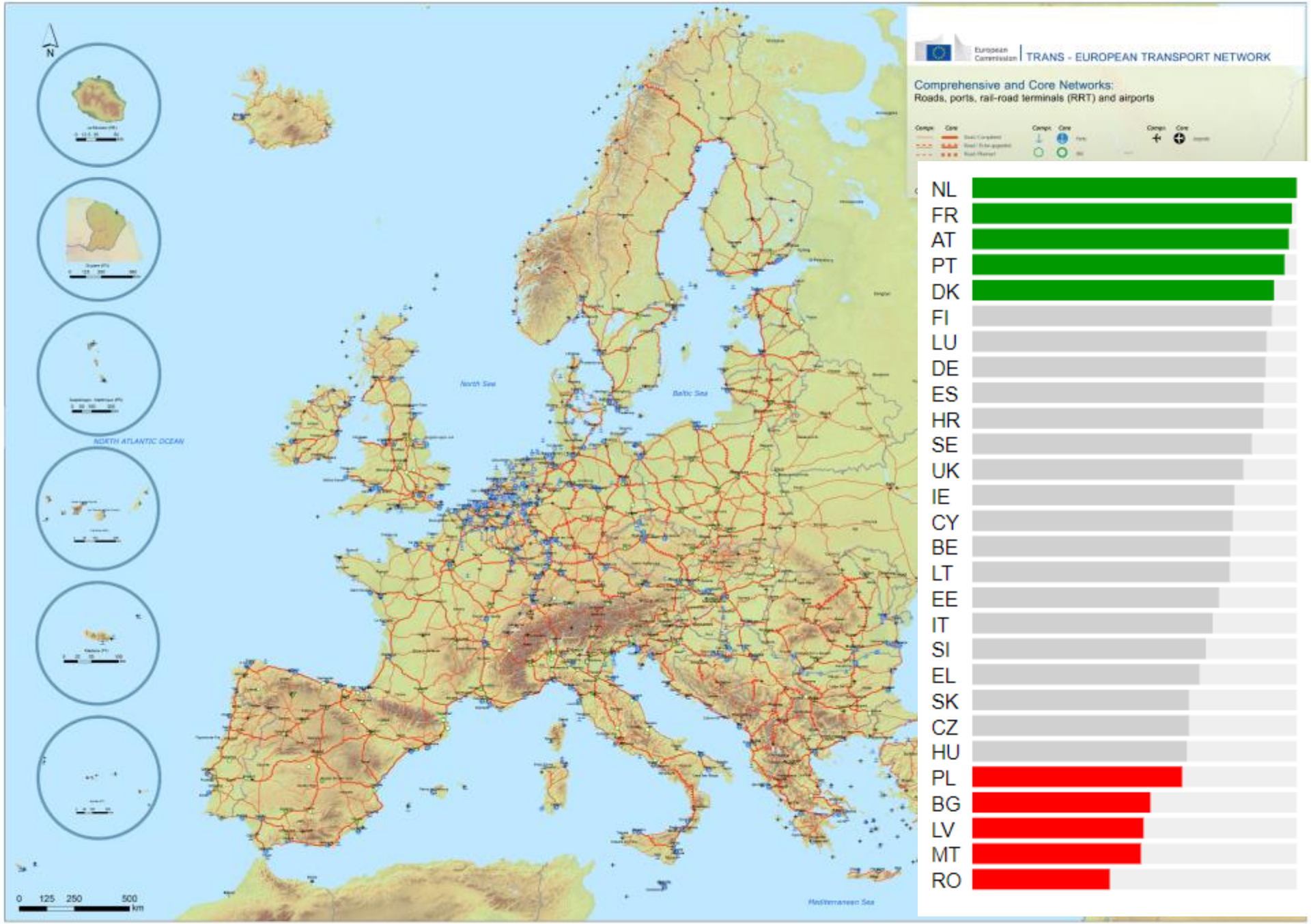


(a) Species richness of the world's terrestrial mammalian carnivores (n = 246) based on the extent of suitable habitat. Blue denotes sites with few carnivore species, and red denotes sites with the highest species richness. (b) Global hotspots of fragmentation and core habitat, standardized by species richness. Green denotes sites with low fragmentation, where carnivores, averaged across species with suitable habitat at a site, have the most intact high-quality core habitat. Black denotes sites with high fragmentation, where carnivore species on average have relatively little core habitat.

(Crooks et al., 2011)



Coordinate System: ETRS_1989_LAEA Projection: Lambert_Azimuthal_Equal_Area Datum: D_ETRS_1989

EuroGeographics 2014 for the administrative boundaries European Commission – DG MOVE, TENtec Information System, 19th of May 2017

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Threats to biodiversity (IUCN-CMP)

4. Coridoare de transport şi servicii in cadrul ariei protejate
(Ameninţări provenite de la coridoare înguste, lungi de transport şi vehiculele care le utilizează incluzând mortalitatea în rândul speciilor de plante şi animale sălbatice asociate)

4.1 Drumuri şi căi ferate (include animalele ucise pe acestea)	40.23%
4.2 Linii de comunicaţii şi utilităţi (de ex. cabluri electrice, linii de telefonie, etc.)	28.74%
4.3 Culoare şi canale de navigaţie	10.34%
4.4 Căi aeriene	8.05%

7. Modificări ale sistemelor naturale
(Ameninţări rezultate din alte activităţi ce transformă sau degradează habitatul sau schimbă modul de funcţionare al ecosistemului)

7.1 Focul şi stingerea focului (incluzând incendierea)	28.74%
7.2 Baraje, modificări hidrologice şi managementul/ utilizarea apei	29.89%
7.3 Fragmentare crescută (a habitatelor) în cadrul ariei protejate	43.68%
7.4 Izolare de alt habitat natural (de ex. despădurire, baraje fără pasaje efective pentru viaţa sălbatică acvatică)	27.59%
7.5 Alte \"efecte limită\" asupra valorilor parcului	21.84%
7.6 Pierderea speciilor cheie (de ex. prădători de vârf, polenizatori, etc.)	21.84%

(CCPAMETT, 2018)

Relevant Legislation concerning ecological corridors

Governmental Emergency Act 57/2007

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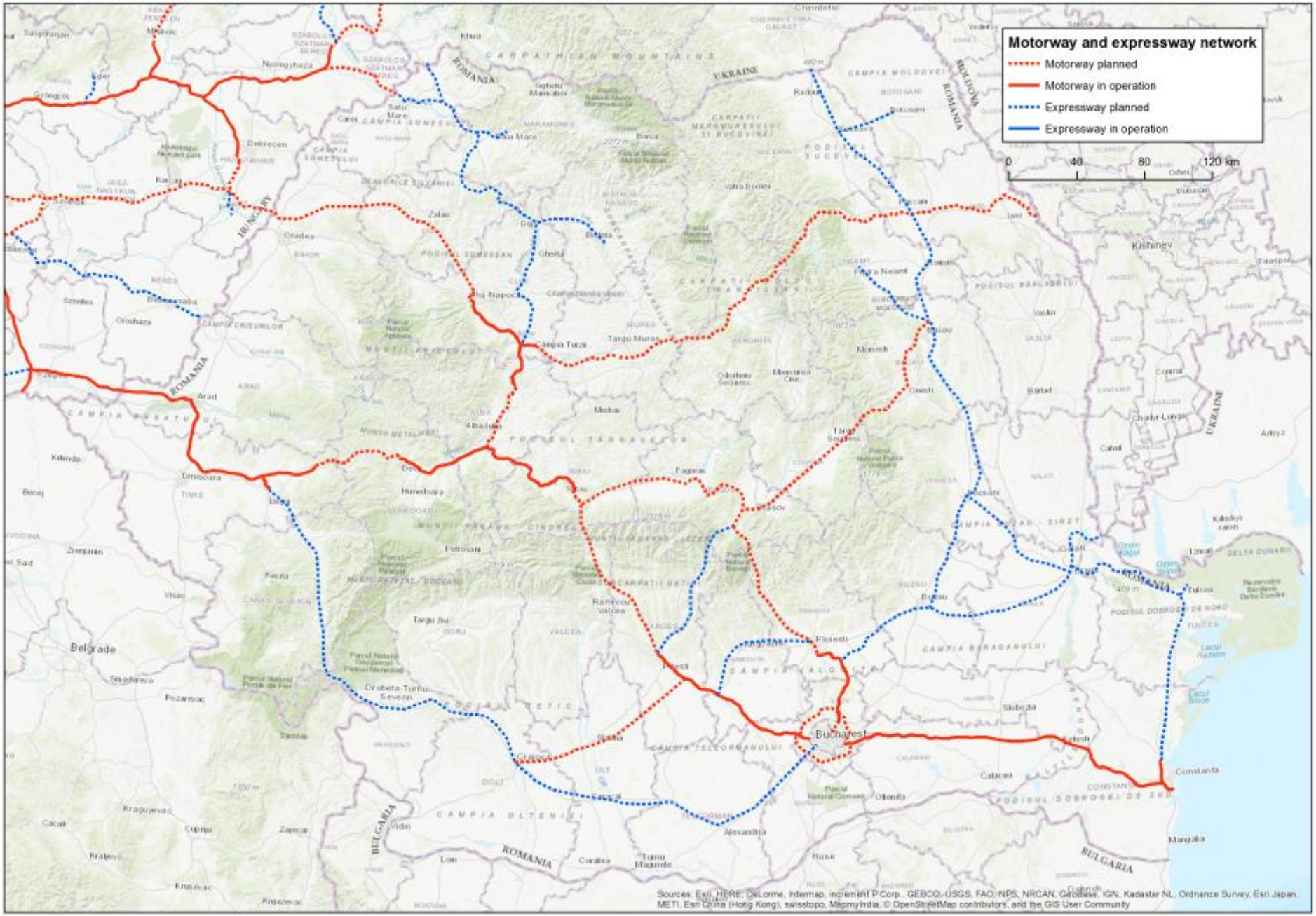
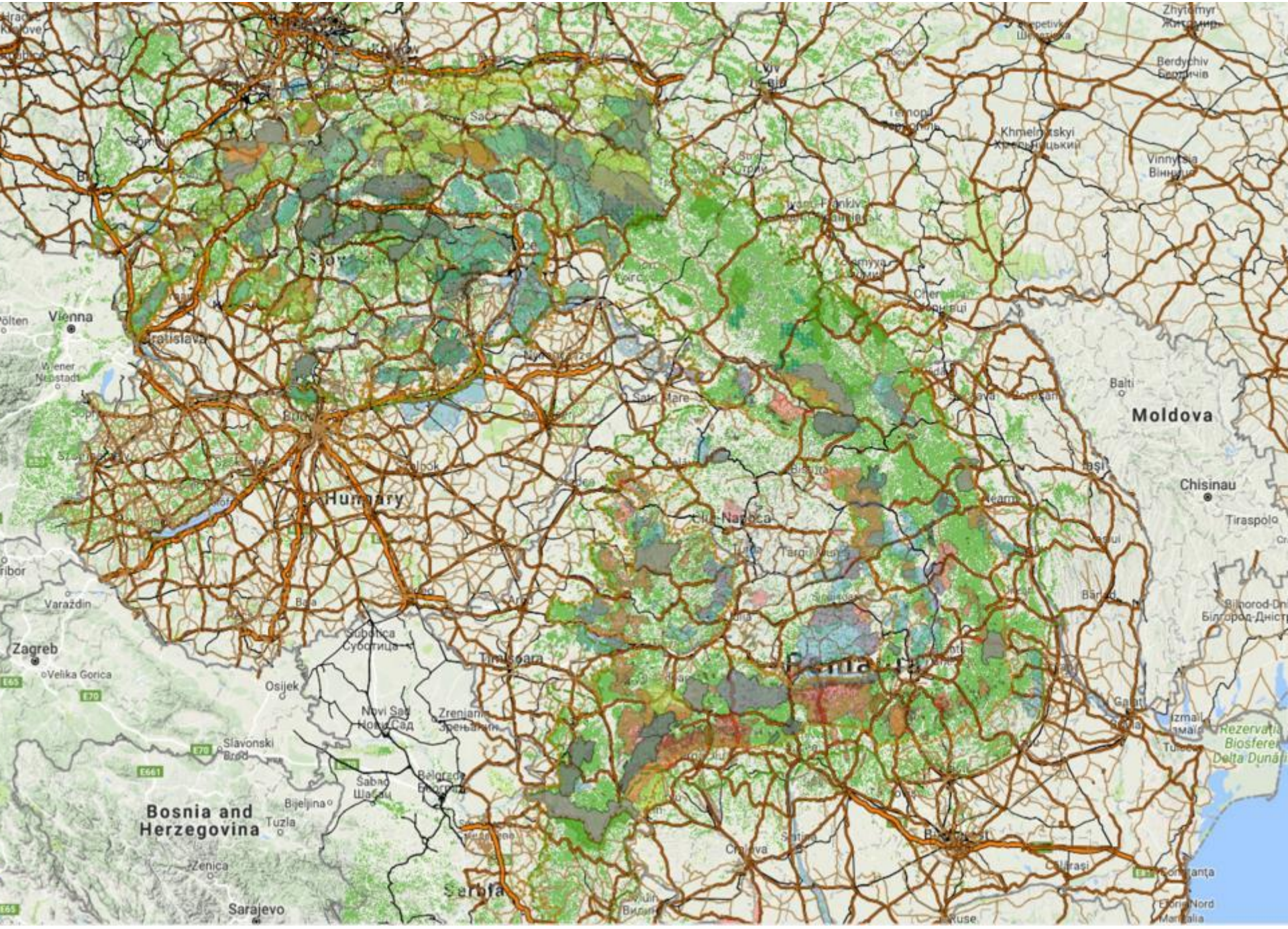

Motorway and expressway network
Motorway planned
Motorway in operation
Expressway planned
Expressway in operation
0
40
80
120 km
ROMANIA
UKRAINE
BULGARIA
MOLDOVA
Bucharest
Belgrade
Kishinev
Arad
Timisoara
Oradea
Cluj-Napoca
Targu Mures
Brasov
Ploiesti
Constanta
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community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Moldova
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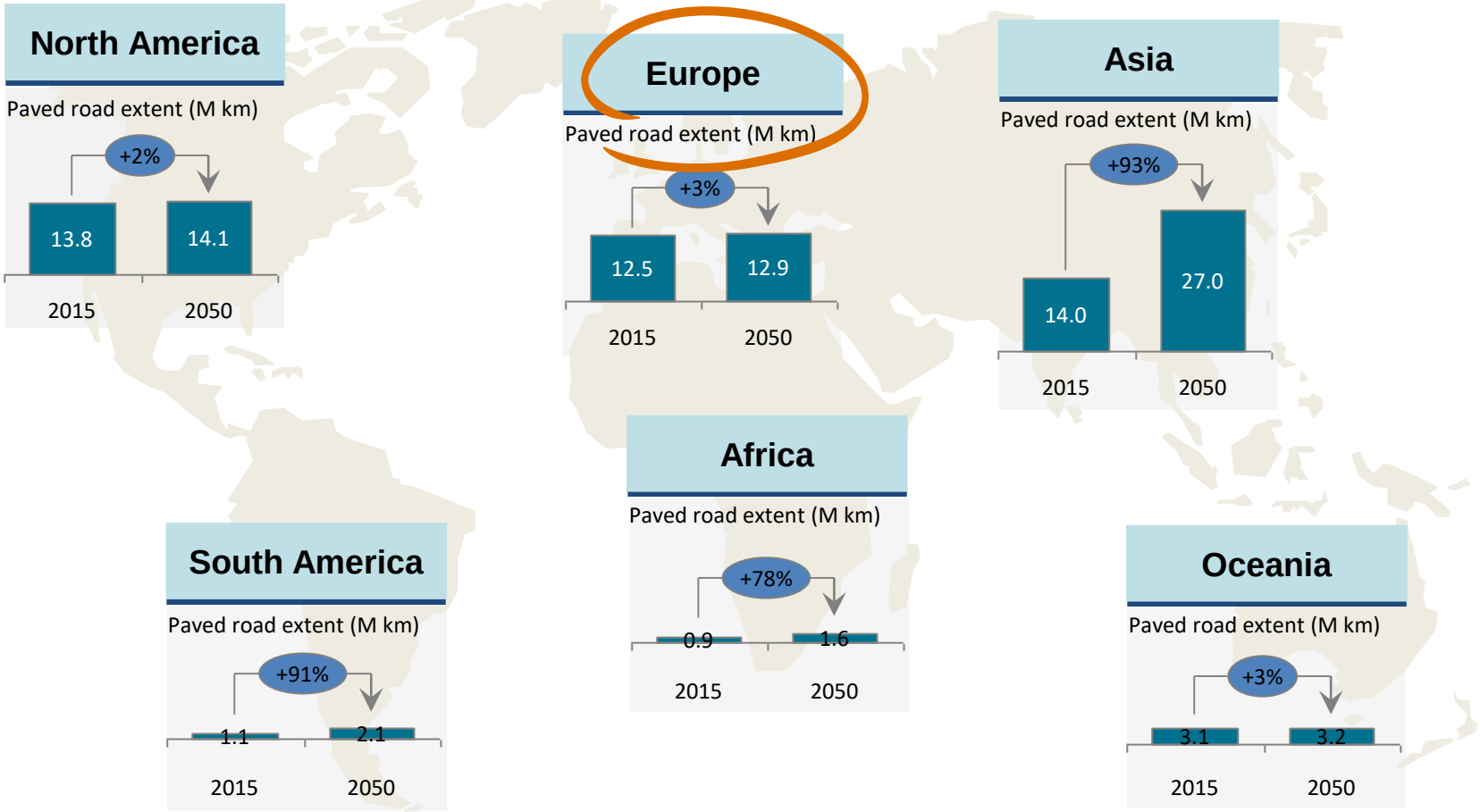
Tiraspolo
Zagreb
Velika Gorica
Varaždin
Osijek
Novi Sad
Нови Сад
Zrenjanin
Зрењанин
Subotica
Суботица
Timişoara
Slavonski Brod
Bosnia and Herzegovina
Bijeljina
Tuzla
Zenica
Sarajevo
Serbia
Craiova
Cluj-Napoca
Târgu Mureş
Iaşi
Bălți
Khmelnytskyi
Хмельницький
Vinnytsia
Вінниця
Berdychiv
Бердичів
Zhytomyr
Житомир
Rezervația Biosferei Delta Dunării



IEA, 2013

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Aims at maintaining and improving the ecological connectivity between natural habitats in the Carpathian ecoregion.

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Project in numbers

- Duration: June 2018 – May 2021
- 11 Partners from 6 EU countries (ERDF)
- 2 Partners from Serbia (IPA)
- 10 Associated Strategic Partners (ASP)
- Coordinated by: WWF International Danube-Carpathian Programme - Romania
- Value: ~ 2.46 million euros

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Project Partners

- **Romania:** WWF DCP Romania (Lead Partner); National Institute for Research and Development in Constructions, Urban Planning and Sustainable Spatial Development; Piatra Craiului National Park Administration;
- **Austria:** WWF International Danube-Carpathian Programme;
- **Czech Republic:** Nature Conservation Agency; Silva Tarouca Research Institute for Landscape and Ornamental Gardening;
- **Hungary:** CEEweb for Biodiversity; Szent Istvan University;
- **Slovakia:** The State Nature Conservancy of the Slovak Republic; Slovak University of Technology in Bratislava - SPECTRA Centre of Excellence of EU;
- **Serbia:** Institute of Architecture and Urban & Spatial Planning of Serbia; National Park Djerdap.

Associated Strategic Partners

- **Czech Republic:** Ministry of the Environment; Ministry of Regional Development;
- **Hungary:** Bükk National Park Directorate;
- **Romania:** Ministry of Environment;
- **Serbia:** Ministry of Agriculture and Environmental Protection;
- **Slovakia:** Ministry of Transport and Construction;
- **Ukraine:** Ministry of Ecology and Natural Resource;
- **Austria:** Danubeparks - Danube River Network of Protected Areas;
- **France:** Alpine Network of Protected Areas – ALPARC;
- **Montenegro:** Parks Dinarides – Network of protected areas of Dinarides.

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Why ConnectGREEN?

Danube-Carpathian region is one of the Europe's last remaining strongholds for the large carnivore species: *gray wolf*, *Eurasian lynx* and *brown bear*

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Why ConnectGREEN?

- barriers for wild species movements

→ landscape and habitat fragmentation

- change of land use

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Why ConnectGREEN?

- Biodiversity
- Wildlife movement/ dispersal routes
- Stability and resilience of ecosystems
- Ecosystems services
- Regional prosperity

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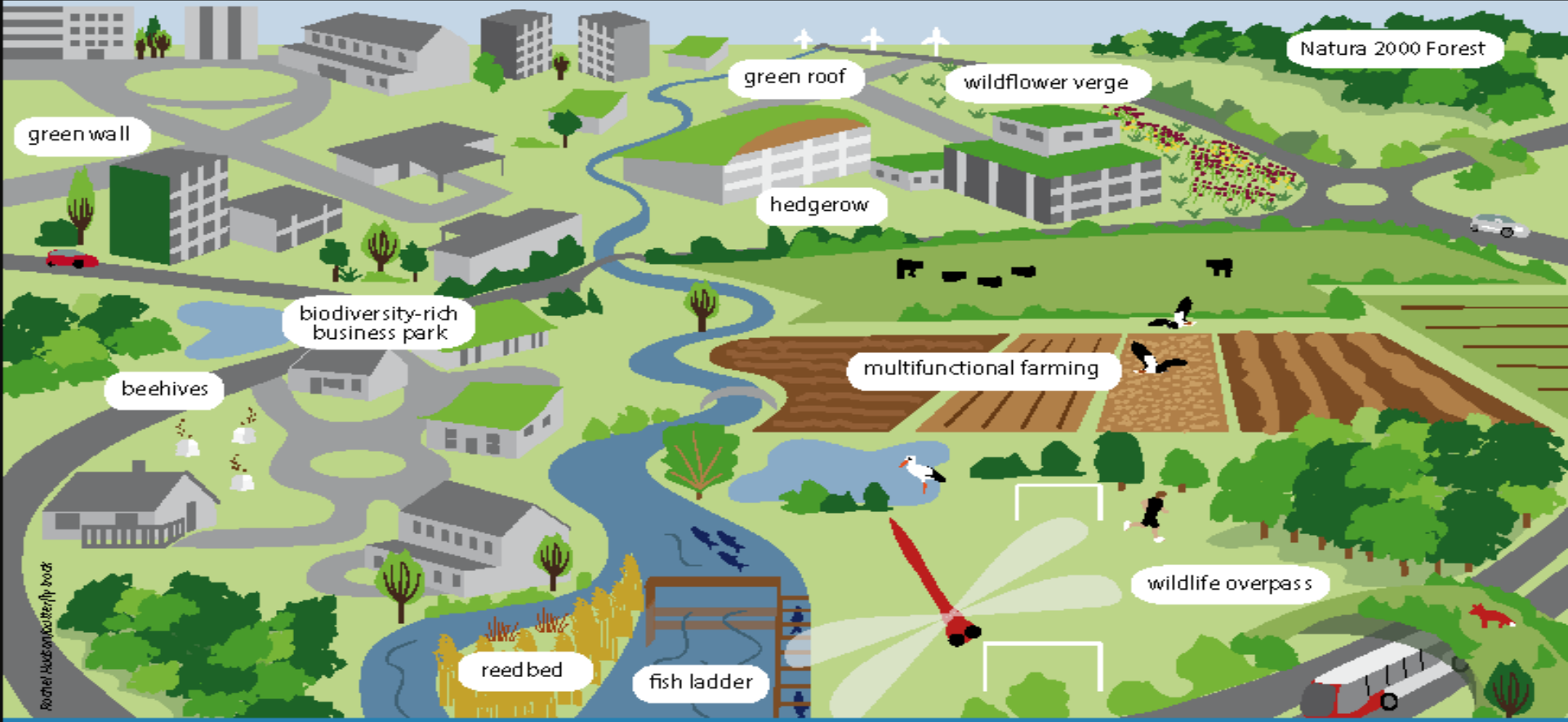
Policy Context

The integrated planning for transport and other infrastructure works prioritized by public policies and international reglementations ...

- EU Strategy for the Danube Region
- EU 7th Environmental Action Plan
- EU 2020 Biodiversity Strategy
- EU Strategy on Green Infrastructure
- TEN-T – Trans-European Network of Transport
- Carpathian Convention (an its relevant Protocols).

... demands a balanced infrastructure development taking into account the nature conservation for generating durable solutions



Potential components of a Green Infrastructure

- Core areas of high biodiversity value which act as hubs for GI, such as protected areas like Natura 2000 sites

- Core areas outside protected areas containing large healthy functioning ecosystems

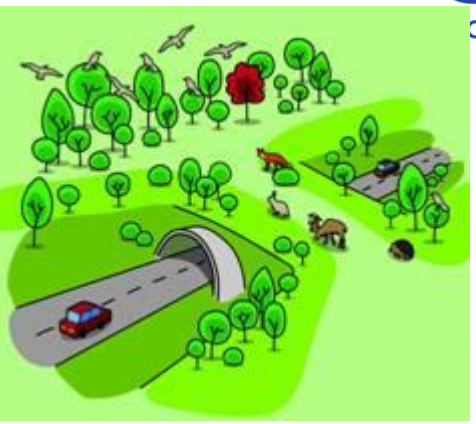
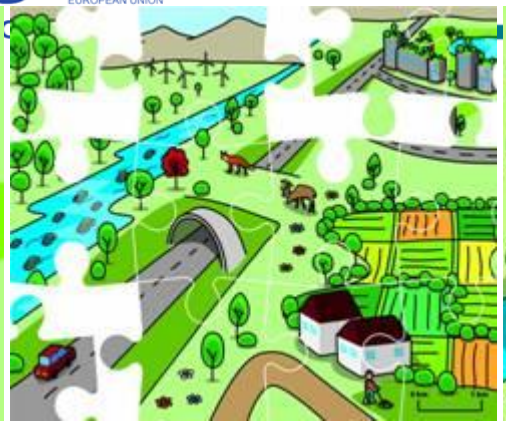
- Restored habitats that help reconnect or enhance existing natural areas, such as a restored reedbed or wild flower meadow

- Natural features acting as wildlife corridors or stepping stones, like small watercourses, ponds, hedgerows, woodland strips

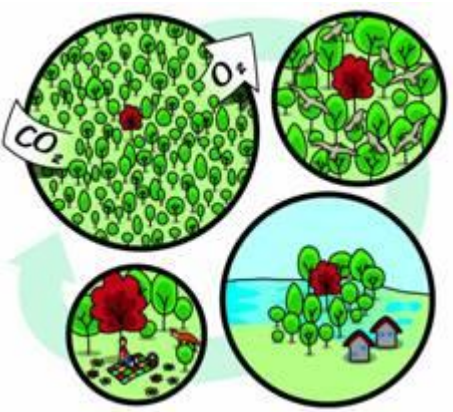
- Artificial features that enhance ecosystem services or assist wildlife movement such as eco-ducts or eco-bridges, fish ladders or green roofs

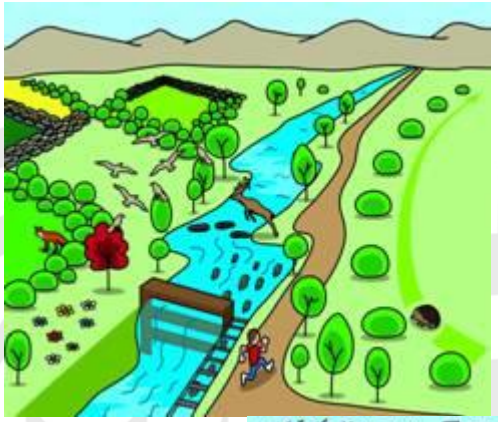
- Buffer zones that are managed sustainably and help improve the general ecological quality and permeability of the landscape to biodiversity, e.g. wildlife-friendly farming

- Multi-functional zones where compatible land uses can join forces to create land management combinations that support multiple land uses in the same spatial area, e.g. food production and recreation



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Main Objective

Maintain and improve the ecological connectivity between natural habitats, especially Natura 2000 and other protected area categories of transnational relevance in the Carpathian ecoregion through...

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Specific Objectives

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

2. Capacity for identifying and managing eco-corridors improved

3. 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

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Pilot Areas

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Deliverables (I)

- **Methodology** for identifying ecological corridors
- **State of the Art Report** on the existing planning systems and their application for ecological corridor identification and management
- **GAP analysis report** on the identification of the needs for improving the planning processes and tools
- **Set of recommendations** developed together with spatial planners to avoid/ minimise fragmentation of ecological corridors and Natura 2000 sites

Deliverables (II)

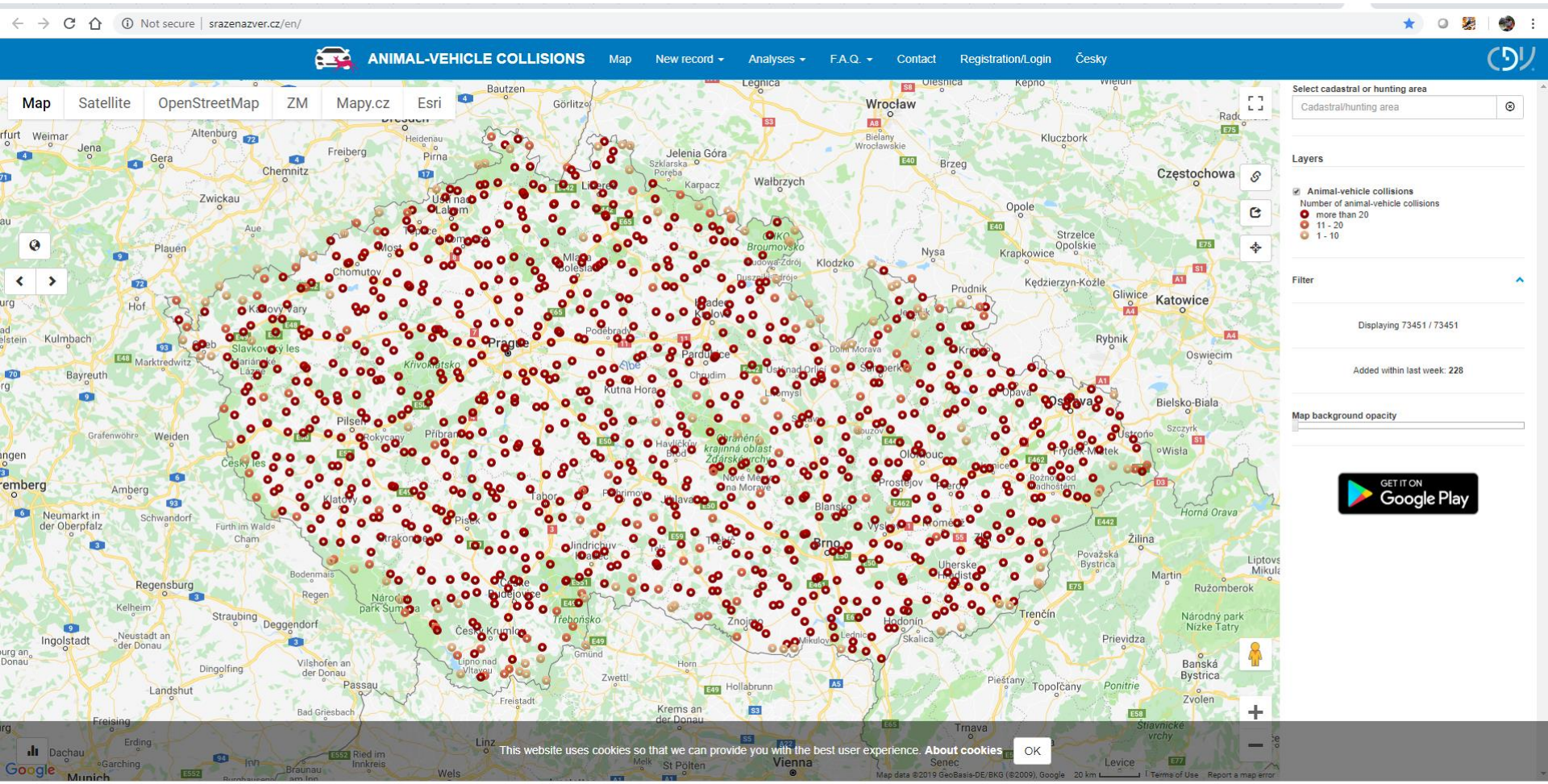
- Ecological connectivity related **database** under the CCIBIS
- Database with all relevant spatial information in each **pilot site**
- **Maps** with the distribution of target species, core areas, ecological corridors and critical barrier sites in each pilot areas
- **Strategy** on the identification, preservation and management of eco-corridors

Examples of Key Activities

- Develop a harmonized Methodology for the identification of ecological corridors
- Implement the Methodology for ecological corridors/core areas identification
- Identification of core areas and ecological corridors for large carnivores in the Carpathians
- Develop a Guideline on harmonizing the interests between nature conservation and different land uses

Examples of Key Activities

- Develop management measure to maintain and/or improve the connectivity in the pilot sites
- Develop an innovative Decision Support Tool and test it in pilot sites
- Develop an ecological connectivity related database within the CCIBIS
- Develop a Strategy on the identification, preservation and management of eco-corridors
- Capacity building and experience-sharing across the region and beyond
- Feeding into wider Danube and EU relevant processes and experience



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Kraljevo
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Pleven
Ниш
Niš
Шумен
Shumen
Варна
Varna
Marea Neagră
Чорне

Target Groups

- Local Public Authorities
- National Public Authorities
- Sectoral Agencies
- Infrastructure and (public) Service Providers
- Interest Groups including NGOs

Synergies

- TransGreen
  https://www.youtube.com/watch?v=AqIzdxYlX3g&t=22s
- BioGOV
- HARMON
- …

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