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ConnectGREEN

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SLOVAK ENVIRONMENT AGENCY

ConnectGREEN

Restoring and Managing Ecological Corridors in Mountains as the Green Infrastructure in the Danube basin

Integration of Ecological Corridors into Spatial Planning

Protected Areas – Cornerstones of Ecological connectivity in Carpathians and Beyond
ConnectGREEN final conference, Visegrad, 28. – 30. 9. 2021

Ing. Rastislav Staník, Slovak Environment Agency

Project co-funded by European Union Funds (ERDF, IPA)
www.interreg-danube.eu/connectgreen

- ecological connectivity and landscape fragmentation

- in the EU and Slovakia

- project outputs implementation into spatial planning process in Slovakia

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Ecological connectivity and landscape fragmentation

Probability with which it is possible to connect two randomly selected points in the chosen area, which tells us to what extent migration is possible between different parts of the landscape. The more barriers to migration in the landscape, the lower the probability.
This is of course related to the species locomotion abilities (birds – large mammals – amphibia – insects).
The reasons for animal migration are searching for food, shelter, need to change territory or to breed.
Landscape fragmentation is the result of transformation of large, continuous areas of habitats into smaller, more isolated fragments. The fragments do not have to be completely isolated to lose the function of ecological connectivity, depending on the target species and natural conditions.
The level of ecological connectivity is affected by the so-called fragmentation geometry (FG), which represents a set of all migration barriers in the given area.
The density of the elements of fragmentation geometry per area (s_{eff}) represents degree, to which fragmentation geometry interrupts movement between different parts of the landscape.
(Jaeger, 2000)

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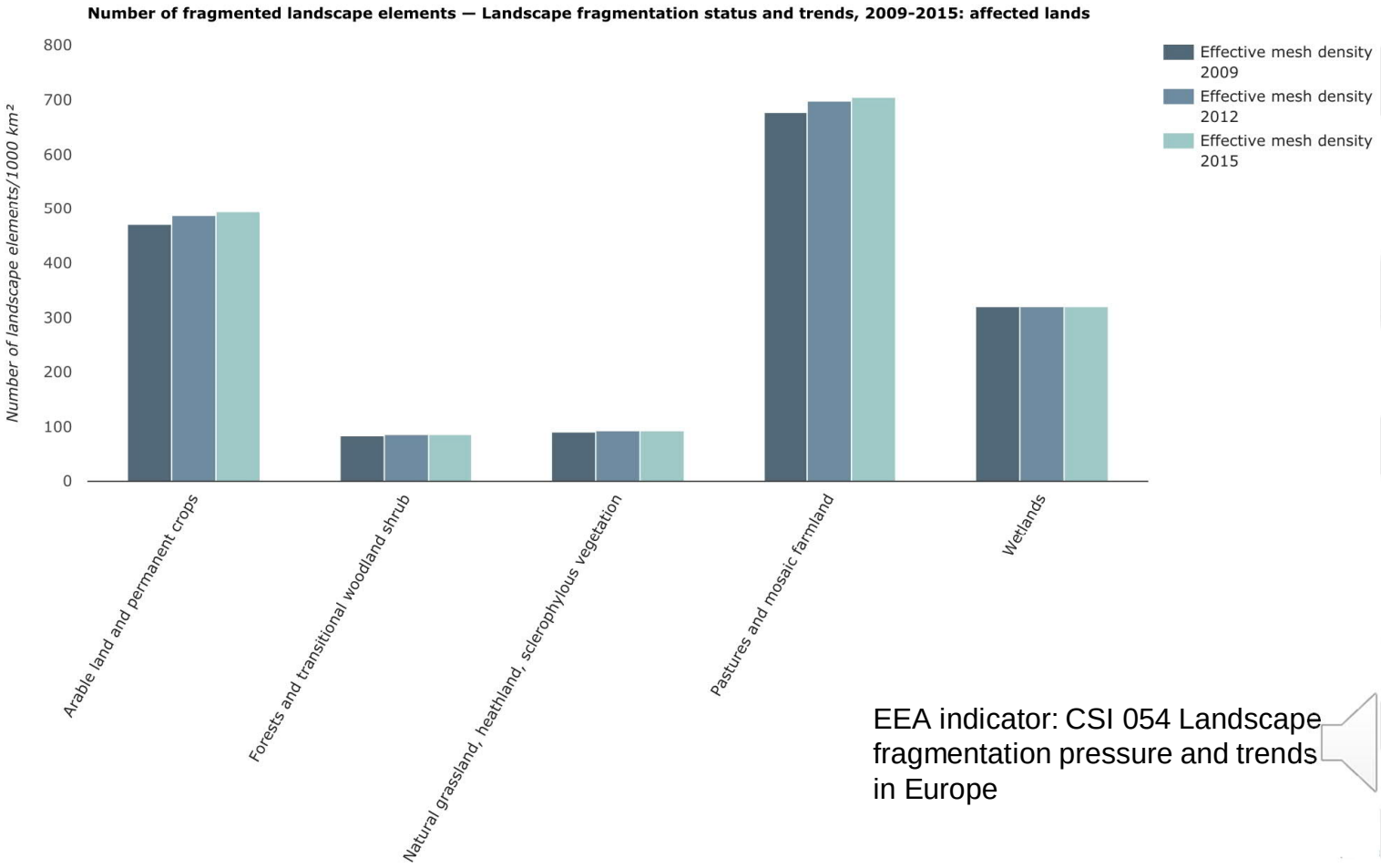
Landscape fragmentation on the EU level

European Environment Agency



EEA indicator: CSI 054 Landscape fragmentation pressure and trends in Europe

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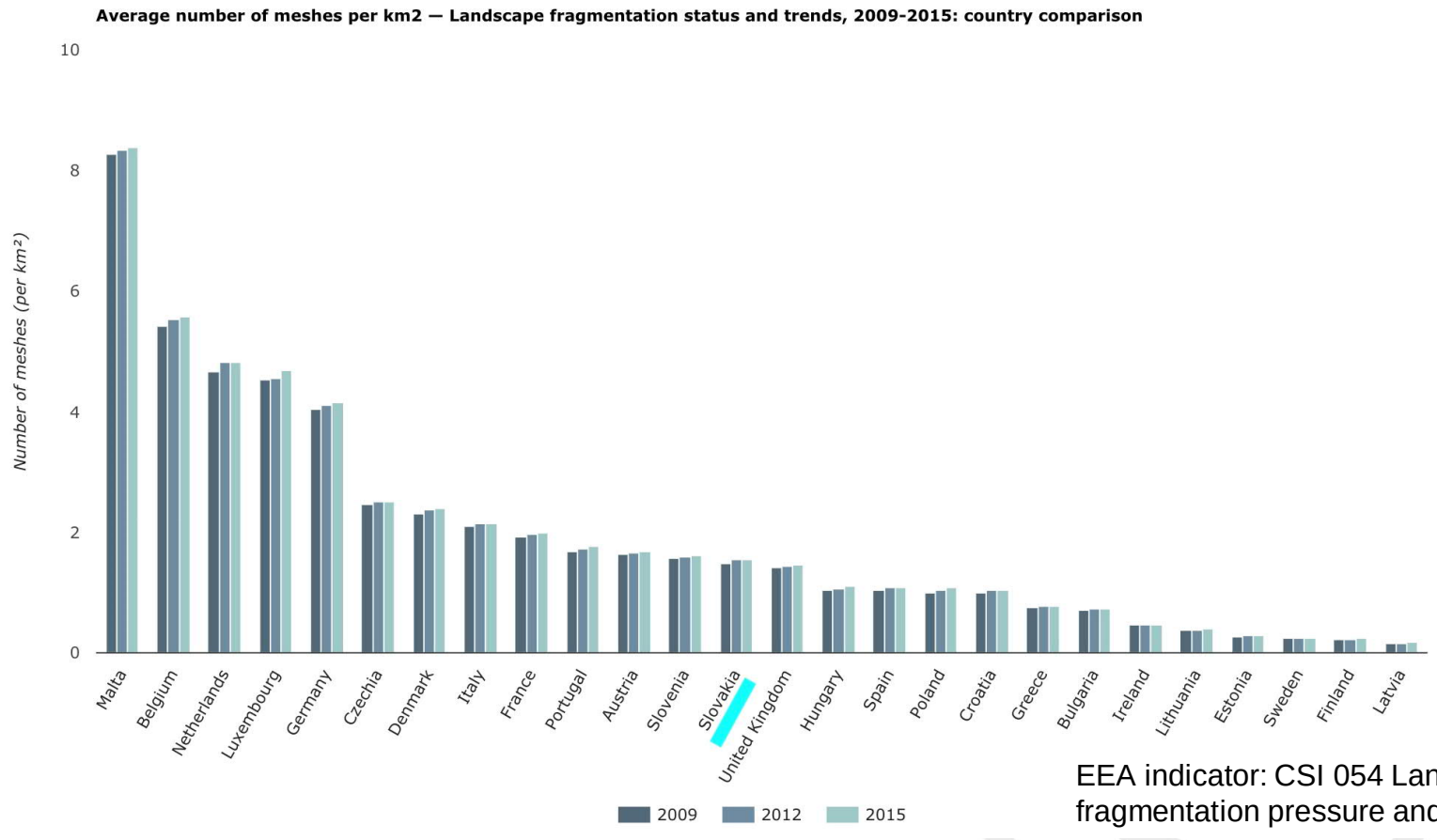
Landscape fragmentation on national level in the EU

European Environment Agency



EEA indicator: CSI 054 Landscape fragmentation pressure and trends in Europe

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Ecological connectivity and networks in Slovakia

In Slovakia, the legally implemented concept of the Territorial System of Ecological Stability (TSES), which has three hierarchical levels (local, regional and supraregional), represents an integrated, analytical-synthetic approach of landscape-ecological planning to ensure sustainable use of natural resources as well as preserving and increasing ecological stability of the landscape. It includes i. a. proposal of elements of the TSES network, which directly takes into account the need to maintain and improve ecological connectivity in the addressed area, with focus on fauna migration in the territory. The TSES documentation represents one of the legally binding inputs in the process of territorial planning.

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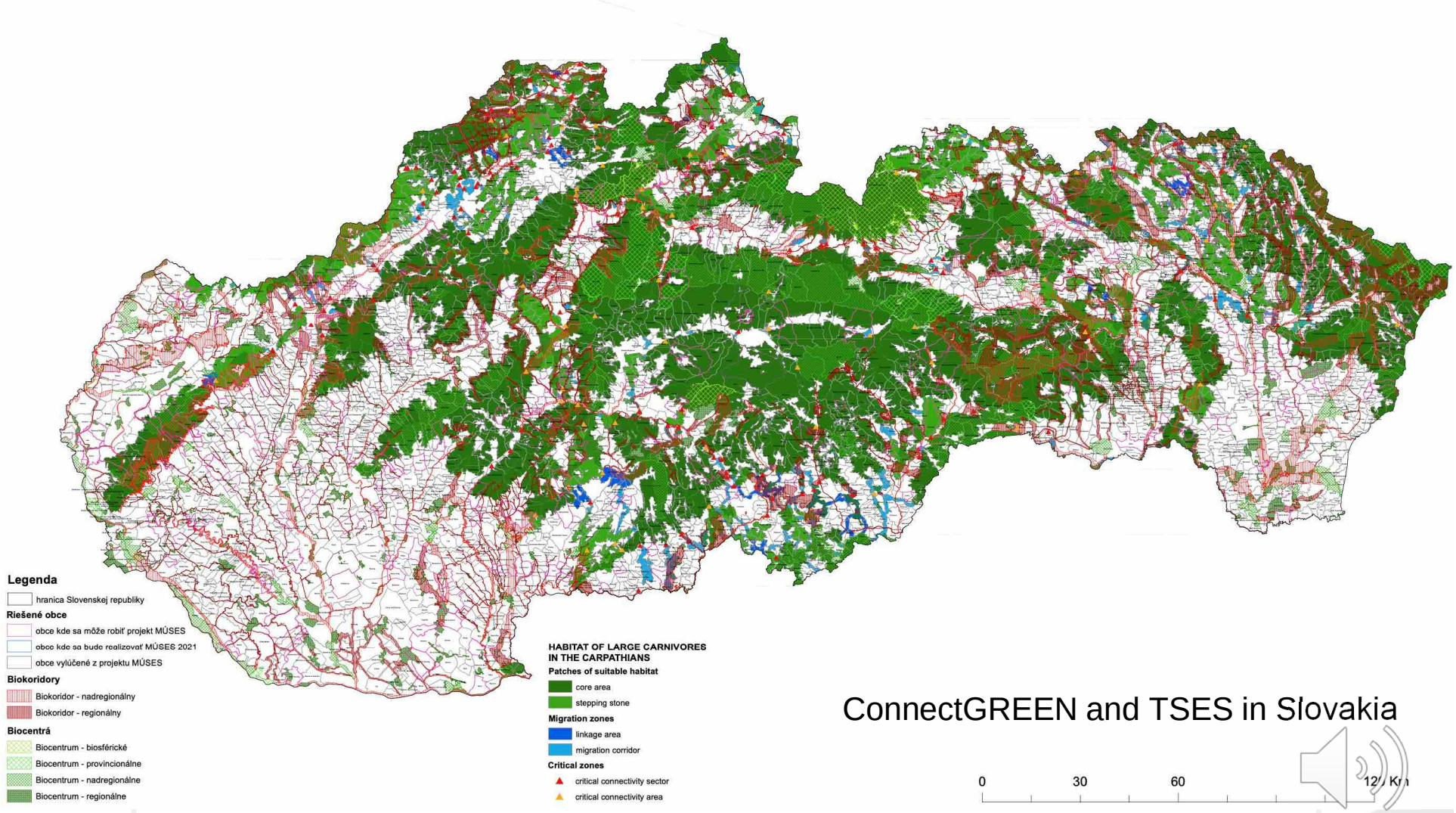

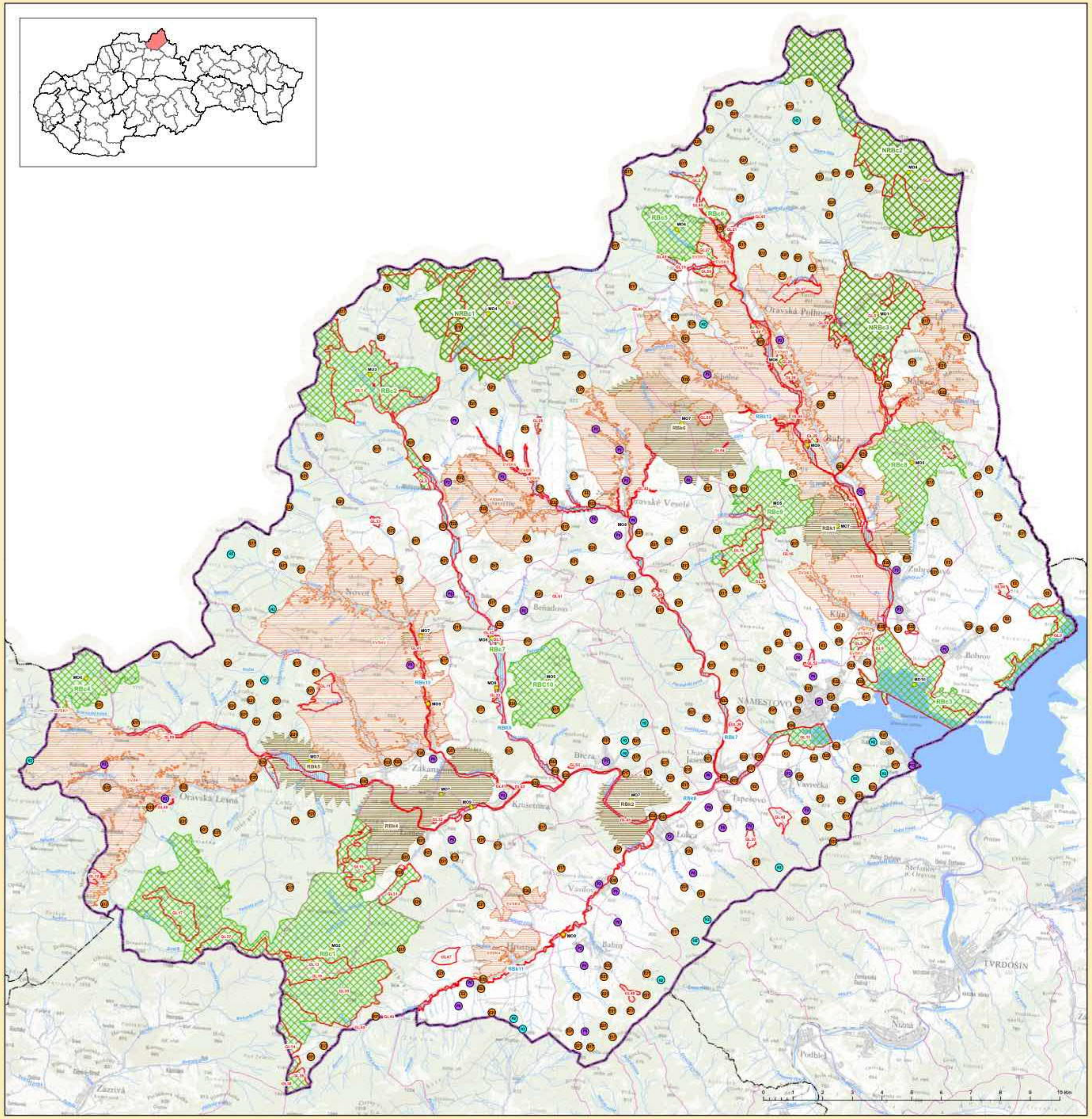

SPRACOVANIE DOKUMENTOV REGIONÁLNYCH ÚZEMNÝCH SYSTÉMOV EKOLOGICKEJ STABILITY PRE POTREBY VYTVORENIA ZÁKLADNEJ VÝCHODISKOVEJ BÁZY PRE REGULÁCIU NÁVRHU BUDOVANIA ZELENEJ INFRAŠTRUKTÚRY

RÚSES okresu Námestovo

NÁVRH R-ÚSES A EKOSTABILIZAČNÝCH OPATRENÍ

EKOSTABILIZAČNÉ OPATRENIA

E2 – zvýšiť podiel nelesnej drevinovej vegetácie

E21 – stabilizovať zosuvné územia a zabezpečiť monitoring

E22 – zabezpečiť výsadbu izolačnej hygienickej vegetácie

E24 – monitorovať a sanovať environmentálne záťaže

E27 – zosúladiť rekreačné aktivity s ochranou prírody

HYDROEKOLOGICKÉ OPATRENIA

H2 – monitorovať kvalitu povrchových vôd, eliminovať vypúšťanie odpadových vôd

H3 – zrealizovať opatrenia na zlepšenie kvality povrchových vôd

PROTIERÓZNE A PROTIPOVODŇOVÉ OPATRENIA

P2 – zamedzovať vytváraniu nepriepustných plôch

P6 – zatrávniť ornú pôdu

P9 – zalesniť TTP a lesy zaradiť do kategórie ochranné lesy

P13 – previesť lesy hospodárske na lesy s ochrannou funkciou

MANAŽMENTOVÉ OPATRENIA PRE PRVKY RÚSES

skupina manažmentových opatrení (viď textová časť)

NAVRHOVANÉ PRVKY RÚSES

biocentrum nadregionálneho významu

biocentrum regionálneho významu

biokoridor regionálneho významu – terestrický

biokoridor regionálneho významu – hydrický

ekologicky významný segment krajiny

genofondová lokalita

ADMINISTRATÍVNE HRANICE

hranica riešeného územia

štátna hranica

hranica okresu

hranica základnej územnej jednotky

SPRACOVANIE DOKUMENTOV REGIONÁLNYCH ÚZEMNÝCH SYSTÉMOV EKOLOGICKEJ STABILITY PRE POTREBY VYTVORENIA ZÁKLADNEJ VÝCHODISKOVEJ BÁZY PRE REGULÁCIU NÁVRHU BUDOVANIA ZELENEJ INFRAŠTRUKTÚRY

Mapa č. 5

5

RÚSES okresu Námestovo

Mierka: **1 : 50 000**

NÁVRH R-ÚSES A EKOSTABILIZAČNÝCH OPATRENÍ

Rok: **2018**

Objednávateľ projektu:
SLOVENSKÁ AGENTÚRA ŽIVOTNÉHO PROSTREDIA, TAJOVSKÉHO 28, 975 90 BANSKÁ BYSTRICA

Zhotoviteľ dokumentu RÚSES:
ESPRIT SPOL. S R. O., PLETIARSKA 2, 969 01 BANSKÁ ŠTIAVNICA

Projektový manažér:
ESPRIT spol. s r. o.:
RNDr. Ivan Zvara
SAŽP: Ing. Marta Slámková

Odborný garant:
ESPRIT spol. s r. o.:
Mgr. Dušan Kočický, PhD., Ing. Ivana Špilárová
SAŽP: Doc. Ing. Ľubica Midriaková Zaušková, PhD.

Autori mapového výstupu:
RNDr. Martin Maretta, PhD.
František P...
Ing. ...

OPERAČNÝ PROGRAM KVALITA ŽIVOTNÉHO PROSTREDIA

EURÓPSKA ÚNIA

Realizované v rámci projektu OP KŽP z ... ...ndu.

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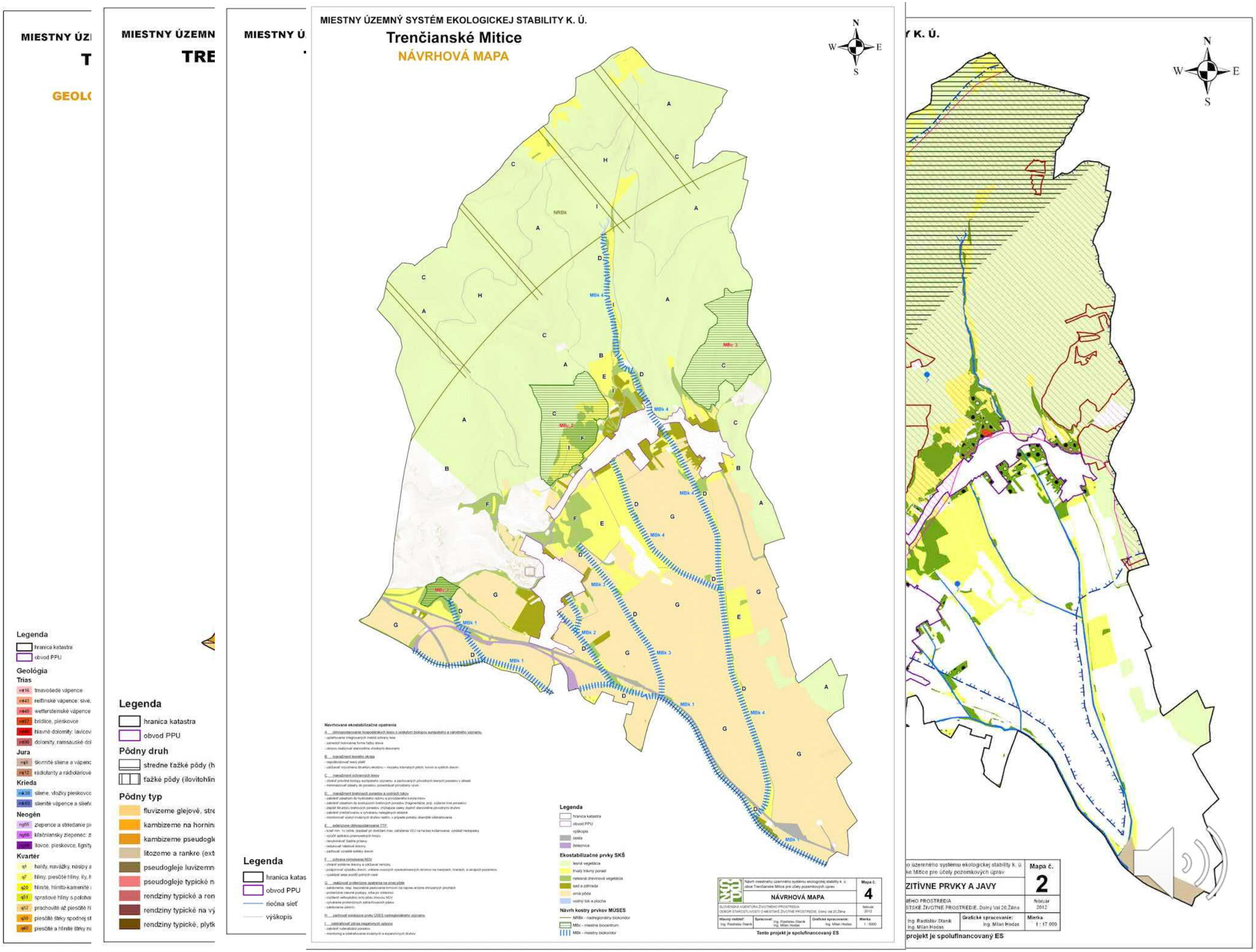
Tematické GIS vrstvy © SAŽP OSŽPEVV
Tematické GIS vrstvy © Esprit spol. s r. o., Banská Štiavnica


MIESTNY ÚZEMNÝ SYSTÉM EKOLOGICKEJ STABILITY K. Ú.
Trenčianske Mitice
NÁVRHOVÁ MAPA
Legenda
hranica katastra
obvod PPU
Pôdny druh
Pôdny typ
Geológia
Trias
Jura
Krieda
Neogén
Kvartér
riečna sieť
výškopis
Navrhované ekostabilizačné opatrenia
Ekostabilizačné prvky SKŠ
Návrh kostry prvkov MÚSES
NÁVRHOVÁ MAPA
Mapa č.
4
Tento projekt je spolufinancovaný ES
ZITÍVNE PRVKY A JAVY
Mapa č.
2
projekt je spolufinancovaný ES

Ecological connectivity and networks in Slovakia

Currently, the Slovak Environmental Agency (SEA SR) is also implementing a project „Elaboration of documents of Local Territorial Systems of Ecological Stability, as one of the inputs for the basic database for regulation of Green infrastructure proposal development".

The aim is to implement a system for semi-automatic elaboration of these documents, using up-to-date, official and scientifically correct datasets and geodatabases, providing a tool for faster production of cheaper, high quality outputs based on current science, that will be supporting the spatial planning process on municipality level and incorporation of the concept of green infrastructure into the nature and landscape protection and planning systems in Slovakia.

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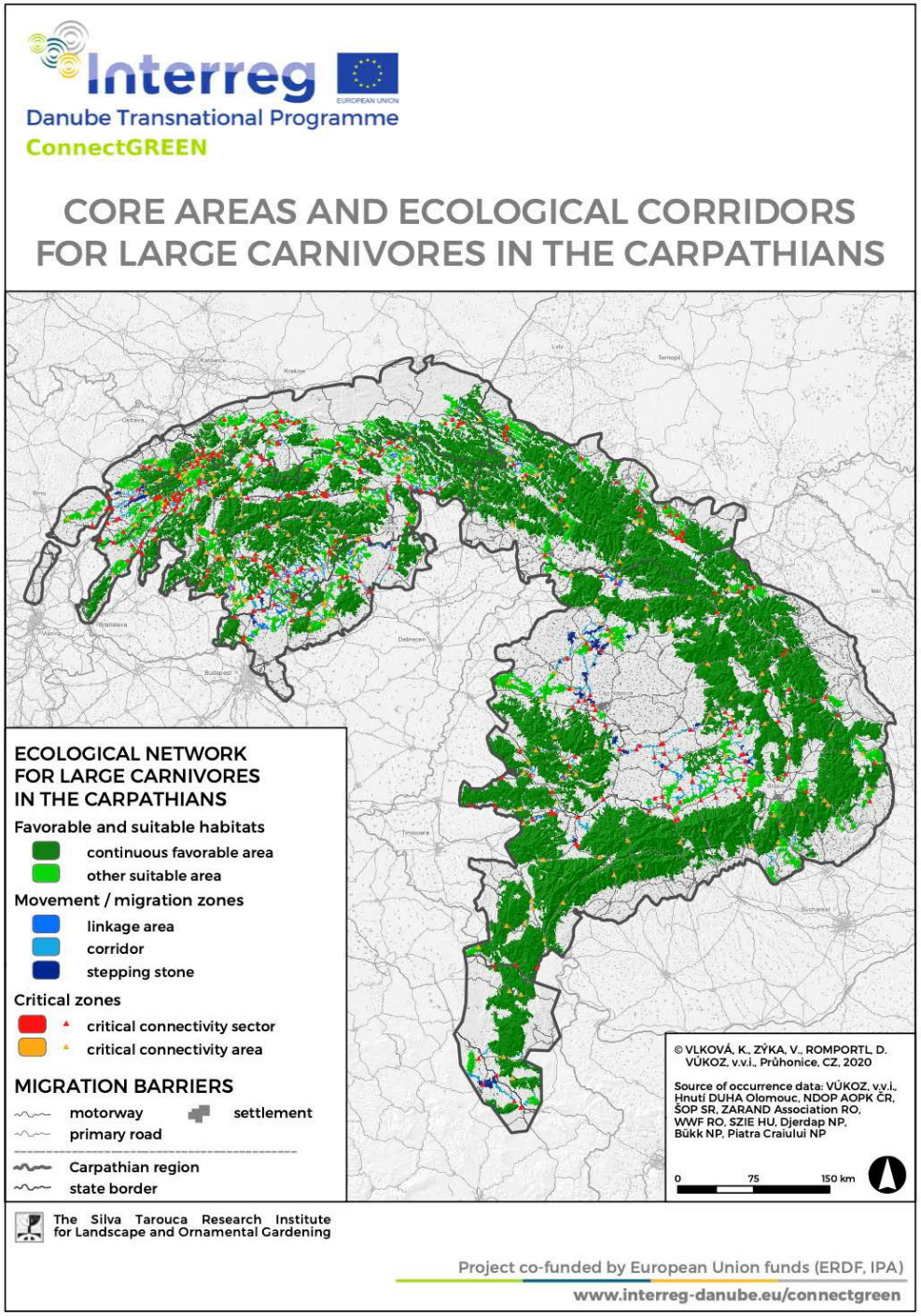
Ecological c ovakia

The Map of Co arge Carnivores
in the Carpathi s in the process
of TSES docu roposals of a
functional net the territories
concerned, but ond its border,
for the whole ery helpful in
proposing func

One very imp e scientifically
correct, have of the State
Nature Conse field, and are
therefore grea ration of these
documents.



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Implementation of the ConnectGREEN project results in the elaboration of TSES documents

Practical example of how we currently use and integrate the outputs from the ConnectGREEN project in the documents of the Local TSES in Slovakia

- selection process
- field mapping and analytical – synthetic phase
- propositions of the ecologocal networks

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ECOLOGICAL NETWORK
FOR LARGE CARNIVORES
IN THE CARPATHIANS

Favorable and suitable habitats

- continuous favorable area
- other suitable area

Movement / migration zones

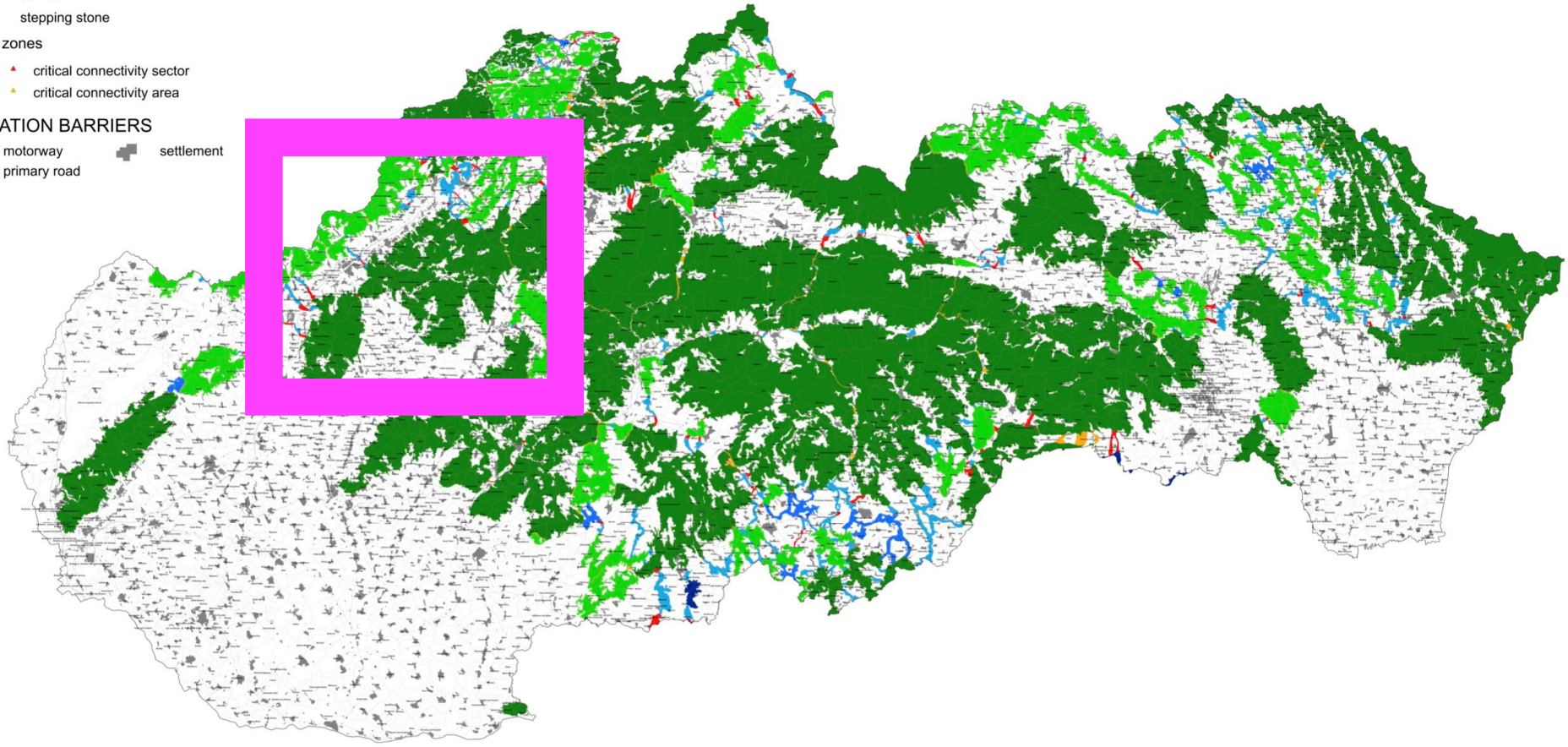
- linkage area
- corridor
- stepping stone

Critical zones

- critical connectivity sector
- critical connectivity area

MIGRATION BARRIERS

- motorway
- primary road
- settlement



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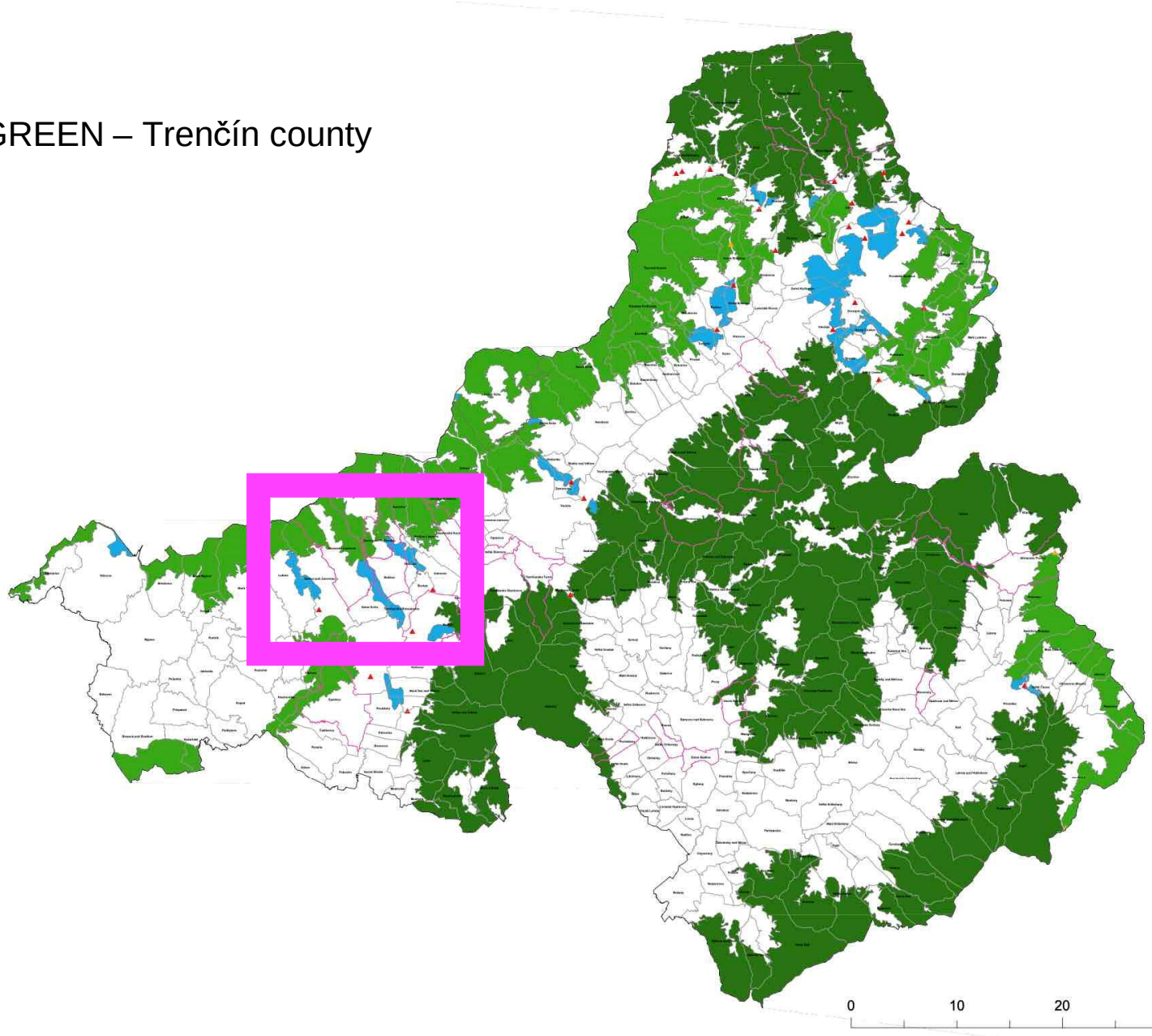
ConnectGREEN – Trenčín county



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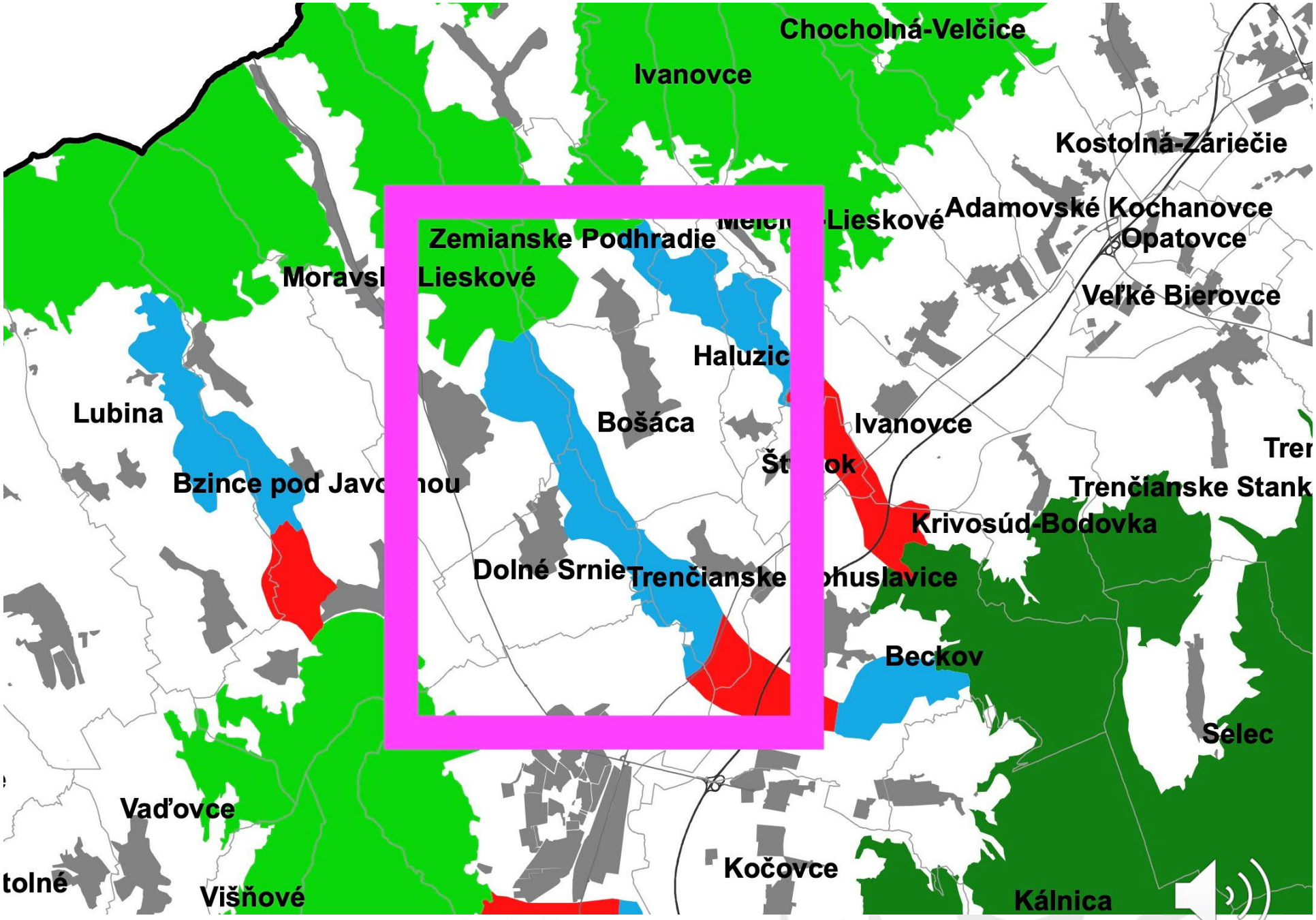

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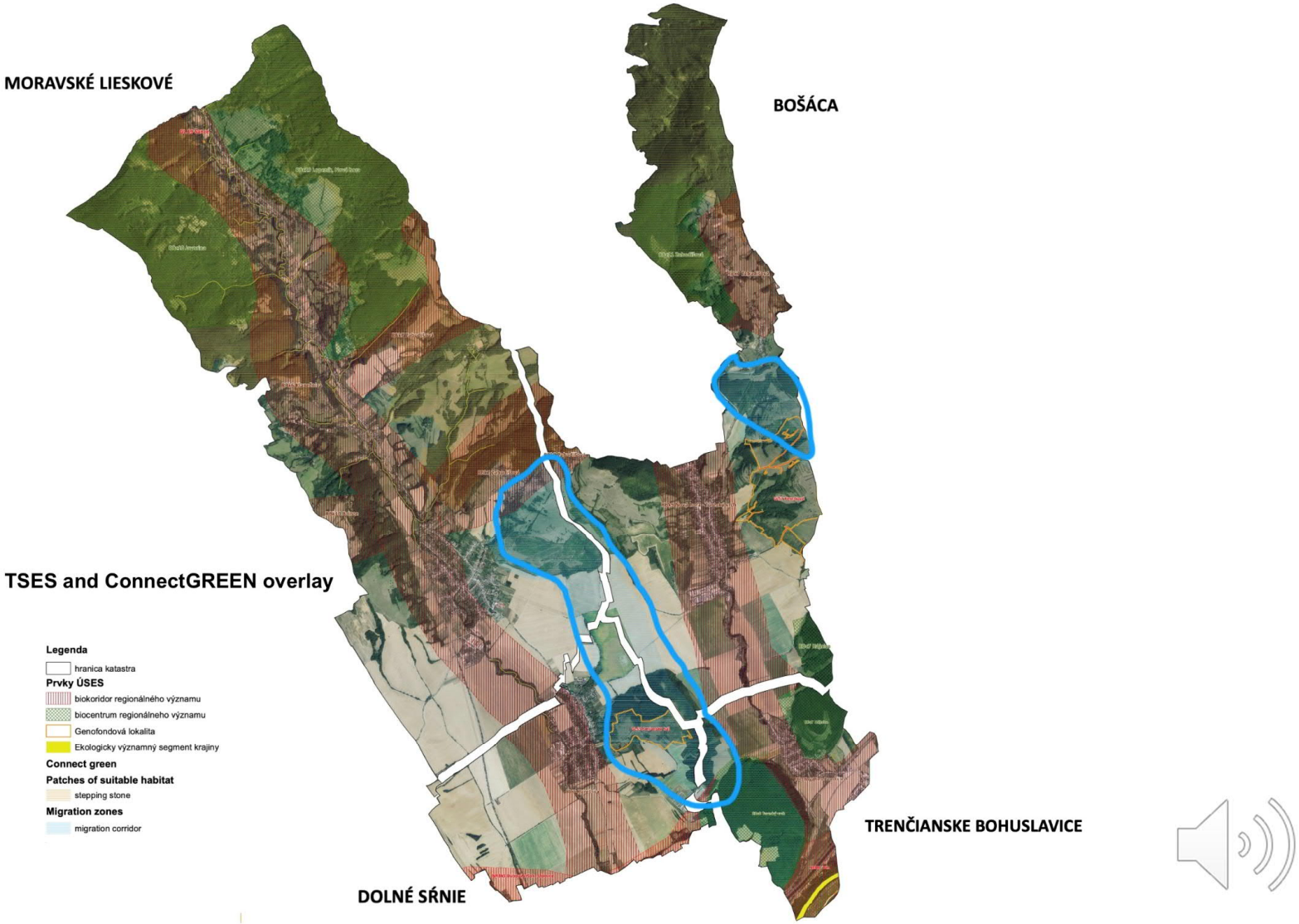
MORAVSKÉ LIESKOVÉ
BOŠÁCA
TSES and ConnectGREEN overlay
Legenda
hranica katastra
Prvky ÚSES
biokoridor regionálneho významu
biocentrum regionálneho významu
Genofondová lokalita
Ekologicky významný segment krajiny
Connect green
Patches of suitable habitat
stepping stone
Migration zones
migration corridor
DOLNÉ SŔNIE
TRENČIANSKE BOHUSLAVICE

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Implementation of the ConnectGREEN project results in the elaboration of TSES documents

The delineation of the migration corridors from the project ConnectGREEN is considered in its whole course, not just in a single municipality's territory, and the proposal process of the ecological networks will take this into account in order to ensure that the proposal represents a functional ecological network.

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Thank you for your attention!

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Maps: Milan Hodas, SEA SR

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