

© Fuchs

WP 3: INTERCONNECTED GREEN BELT

Ecosystem-Services and indices derived from GIS and Remote Sensing (COPERNICUS)

Stefan Fuchs, University of Vienna
Public final conference, We., 10. November 2021



WP3 – OBJECTIVES

- **Enhancement of connectivity** of Natura 2000-areas along the Green Belt in the Danube Region (corridor of 50 km)
- **Identification of suitable ecological corridors** between **and areas** for the improvement of connectivity of protected areas
 - analysis of the current connectivity of the Natura 2000-network
 - and the areas between Natura 2000 sites
- **Analysis of suitable** transnational ecological **corridors**
 - potential for implementation
 - provision of ecosystem services (ESS)

WP3 – ACTIVITIES

● Activity 3.1

- Method development for assessment of natural features and ESS of the Green Belt in the Danube Region

● Activity 3.2

- Analysis of transnational ecological corridors and ESS assessment methodology

● Activity 3.3

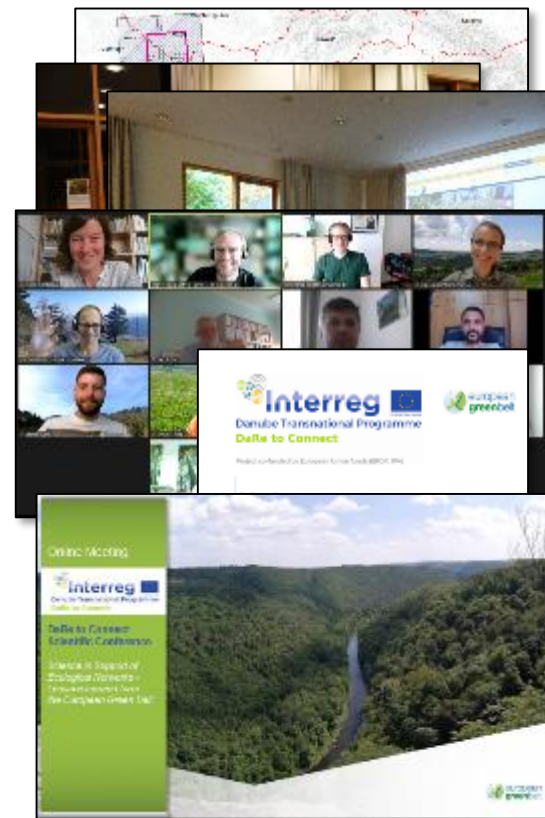
- Coordination of objectives and results with regional, national and transnational stakeholders

● Activity 3.4

- Transnational strategic vision „Green Belt in the Danube Region 2030"

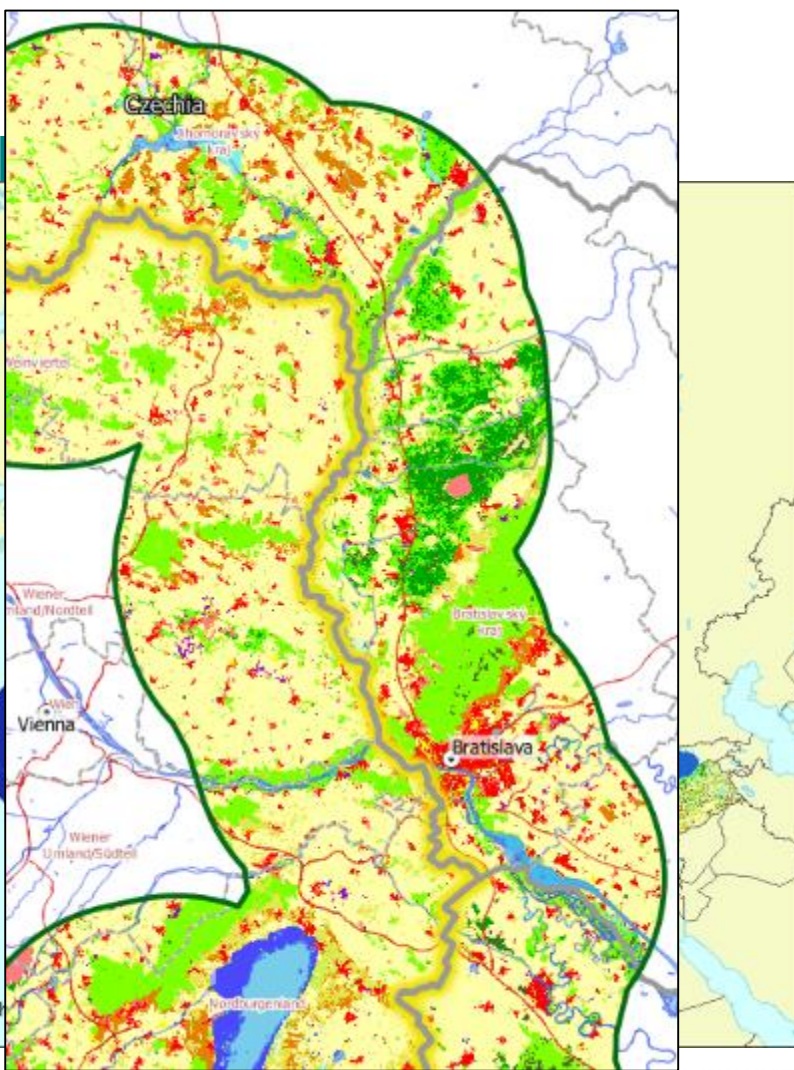
● Activity 3.5

- European Stakeholder dialogues and learning interactions supporting transnational connectivity



PII

EUNIS



EUROPEAN GREEN BELT



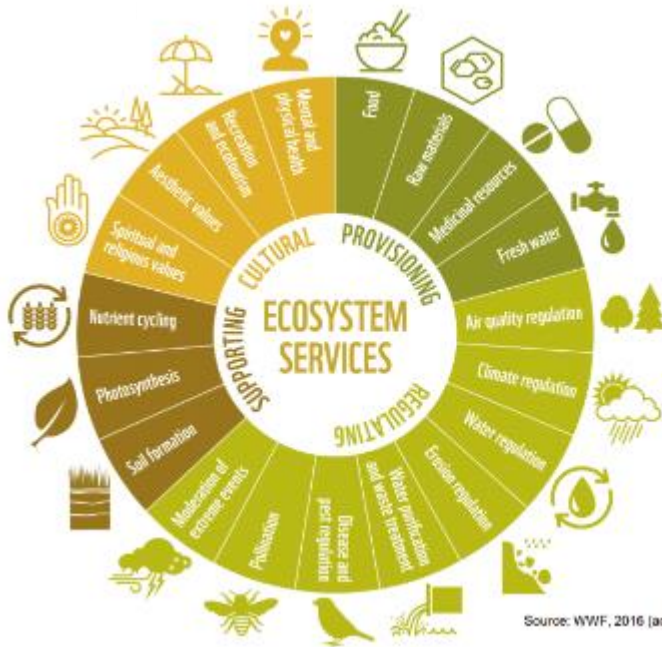
D2C BHT
2017/18

- C1 - Inland surface waters
- D - Mires, bogs and fens
- E1 - Dry grasslands
- E2a - Mesic grassland, intensively used
- E2b - Mesic grassland, medium intensive
- E3 - Seasonally wet and wet grasslands
- G1 - Broadleaved deciduous woodland
- G3 - Coniferous woodland
- G5.8 - Recently felled areas
- I1 - Arable land and market gardens - intensive
- Ja - Constructed, industrial and other artificial habitats



at

ECOSYSTEM SERVICES



- all goods and services that **landscapes provide for sustaining life** as well as **benefit for human well-being**
- includes **potentials, materials and processes of the nature** (e.g. raw materials, biomass, biodiversity etc.)
- services of **cultural elements and constructions** that come into being through human creation (e.g. agriculture, buildings, infrastructure etc.)
- Indicator for the **functional quality** of Broader Habitat Types



ECOSYSTEM SERVICES

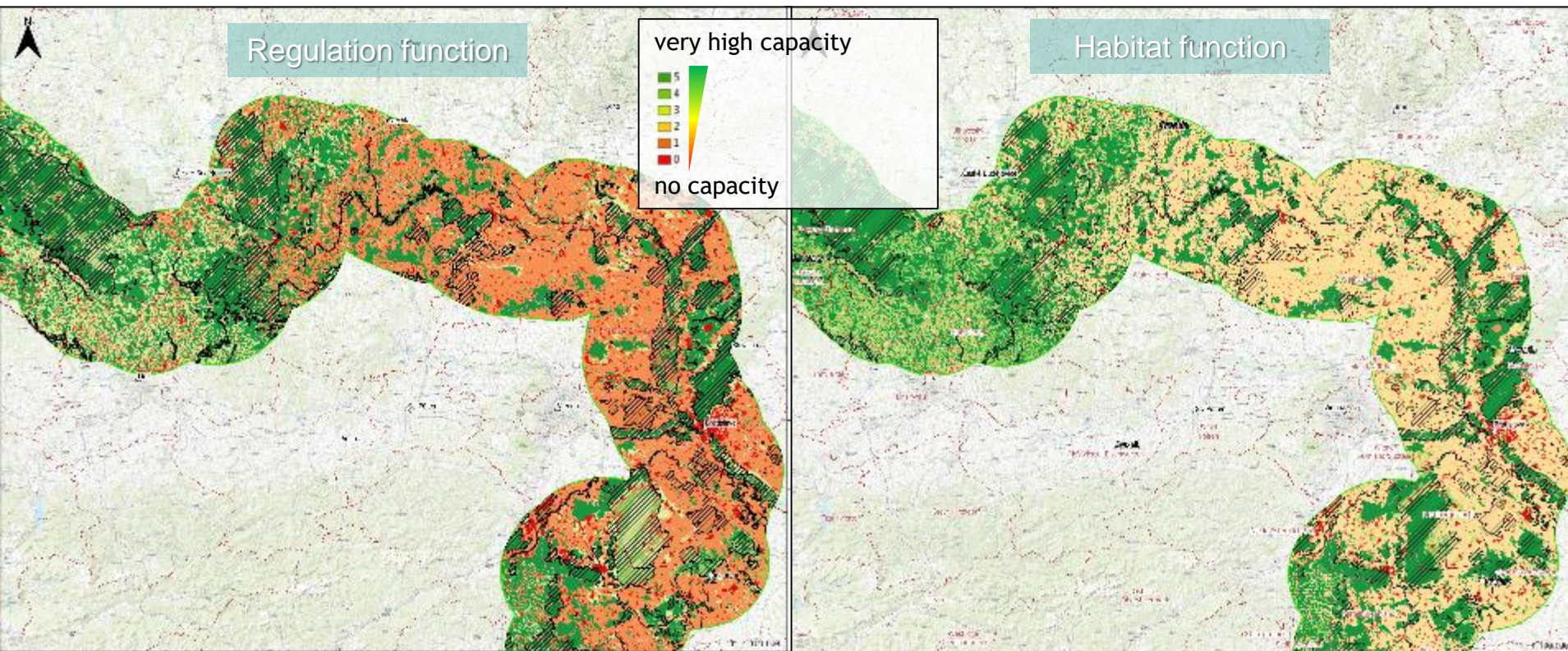
[illegible]

1. **Basis for capacity values:** existing matrix for the whole of Europe by Stoll et al. (2015)
2. First round of **expert based revision** by D2C partners (group discussion)
3. Second round of **expert based validation** by D2C partners (consensus)
4. **Final matrix of ecosystem services** for the European Green Belt

ECOSYSTEM SERVICES

[illegible]

ECOSYSTEM SERVICES



CONNECTIVITY

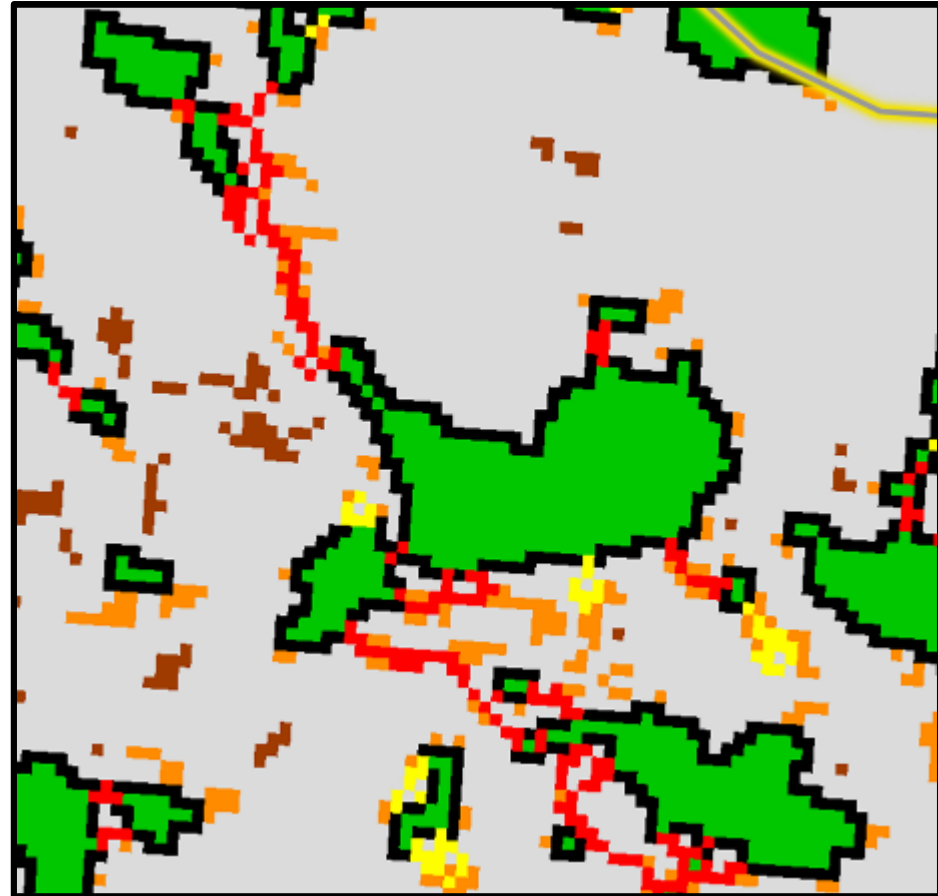


<https://forest.jrc.ec.europa.eu/en/activities/lpa/gtb/>

- Morphological Spatial Pattern Analysis (MSPA) by Guidos Toolbox
 - describes the *geometry, connectivity & spatial arrangement* of image components (Vogt et al., 2007)



Example:
Connectivity analysis of broadleaved & coniferous forests



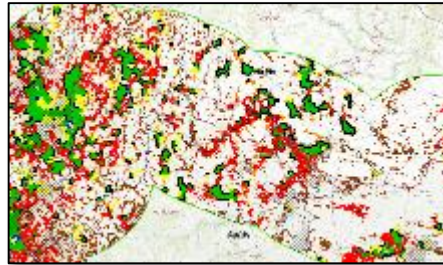
DARE TO CONNECT!

- Combining the **functionality & connectivity indices** for the European Green Belt

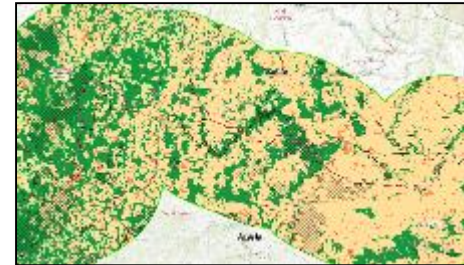
→ Connectivity-Functionality Index

- Indicator for areas with **high potential** as **multifunctional corridor between PAs**
- Elements of **high functional value & connecting importance**
- Designation of **Areas of Action**

Connectivity (MSPA)
→ MSPA components
(scaled from 0 to 1)

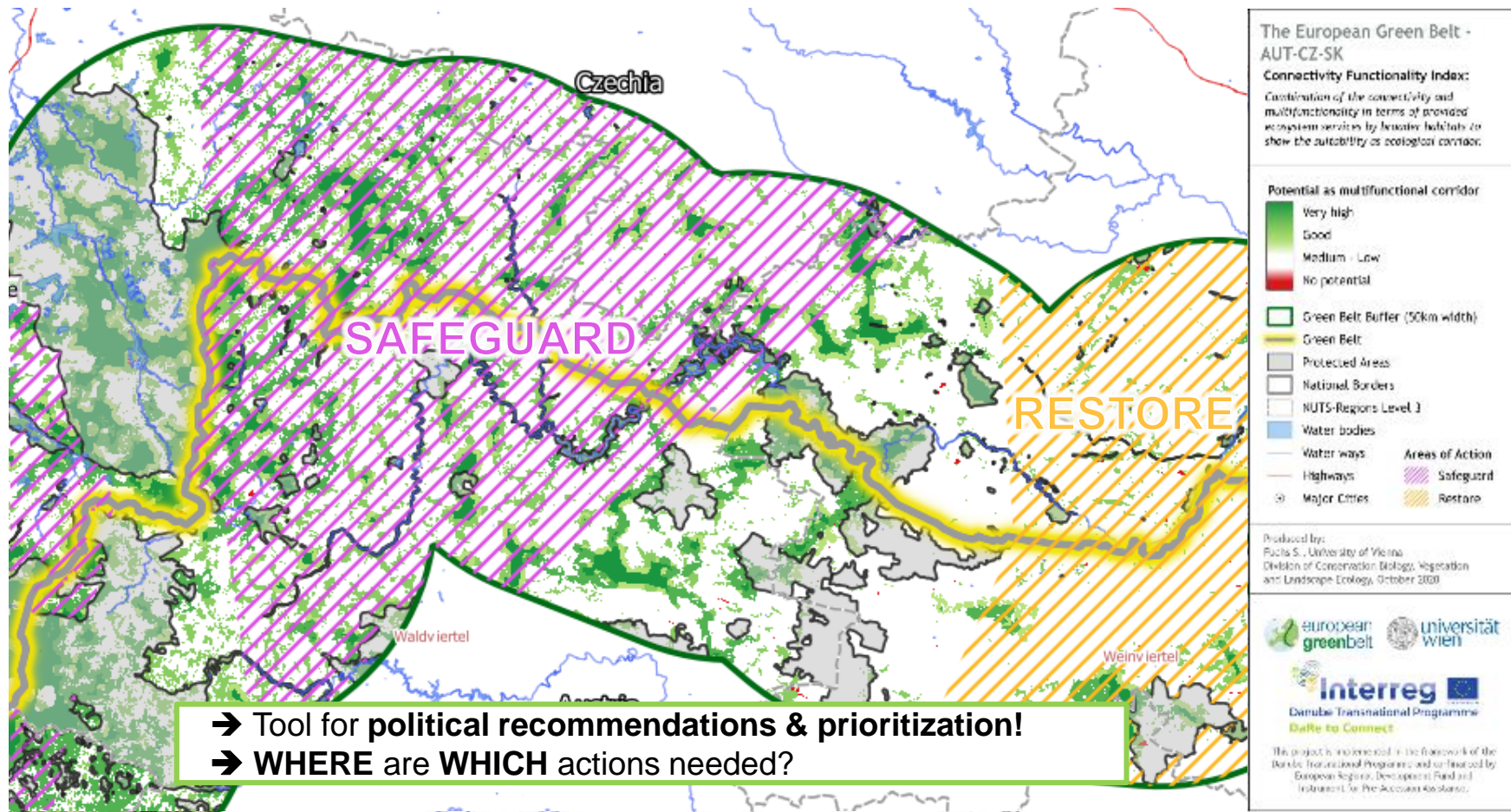


Functionality (LSS)
→ Total function value
(scaled from 0 to 1)



Mean value
CFI

AREAS OF ACTION



OUTPUTS

- High resolution **habitat classification & analysis** of the 4 Pilot Regions
- **Hot & Cold Spots** of BHTs with potential as multifunctional corridors along the European Green Belt

- **Areas of Action**

- ➔ **Data basis for:**

- Regional Guiding Principles of the Pilot Regions
- Transnational Guiding Principles
- Transnational Strategic Vision
- Measures in current & future projects (cross-linking the EGB, restauration plans, etc.)

SHARING KNOWLEDGE

Transnational capacity building and knowledge transfer via:

- Workshops with stakeholders & partners
- Hosting & participating conferences (e.g. [D2C Scientific Conference](#))
- Webinars ([user-friendly GIS Tool](#), *Fri., 12.11.!*)
- Making data available



CONTACT & INFORMATION

Stefan Fuchs, MSc
Ass.-Prof. Dr. Thomas Wrבka

✉ stefan.a.fuchs@univie.ac.at



University of Vienna
Department of Botany and Biodiversity Research
Division of Conservation Biology, Vegetation and Landscape Ecology



www.cvl.univie.ac.at



www.facebook.com/UniversityofViennaCVL

Dare to Connect: Public Conference
Online ● 10. November 2021



universität
wien