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MAGICLANDSCAPES: AN INTRODUCTION TO A “GREEN INFRASTRUCTURE“ PROJECT

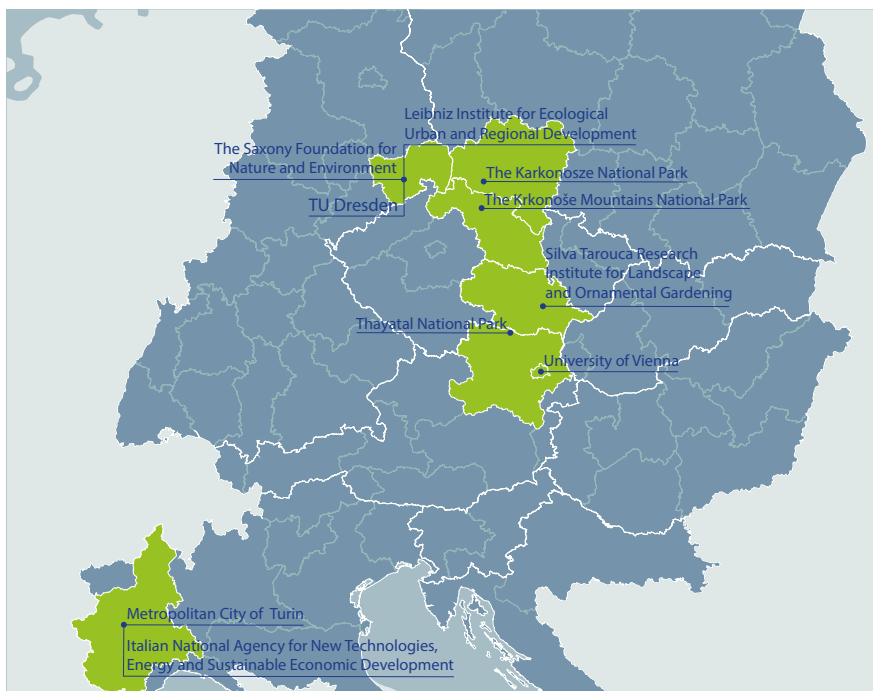
Green Infrastructure (GI) is a key strategy of the European Landscape Convention aimed at reconnecting vital natural areas to urban hubs and restoring and improving their functional roles. Thus, GI is an essential planning concept towards protecting natural capital and simultaneously enhancing quality of life. The project MaGICLandscapes will operationalise the GI concept in Central Europe providing land users, policy makers and communities adequate tools and the knowledge they need to ensure the persistence of GI functionality and consequent benefits to society.

Statistics of the European Environment Agency state: soil sealing in Europe is accelerating at an unprecedented rate. Transport infrastructure, housing and industrial development, modern agriculture requires more and more land and can have negative effects on biodiversity. Former green spaces are becoming part of the grey infrastructure of buildings, traffic routes etc. faster than ever before. Recent European and national publications acknowledge the fact that green spaces are an important and valuable asset in mitigating against the impacts of climate change, such as flooding and heatwaves, to improve human health and to restore ecosystem services. Communities and the public and private sector are advised to invest in GI to reduce costs and to improve conditions for both people and wildlife.

The MaGICLandscapes project supports the European Union’s efforts to establish and maintain a coherent network of GI across Europe and to encourage political actors and planners at all spatial levels to integrate elements of green GI into their planning and investments.

Ten project partners from Austria, the Czech Republic, Germany, Italy and Poland want to know.

- *What is the current status and*



MaGICLandscapes partner institutions all over Central Europe

functionality of GI in Central European regions?

- *How can we protect and enhance the current value of GI and support the design and implementation of new elements of the same?*

The mission: provide user-friendly tools enabling actors to make smart decisions on green infrastructure

In close cooperation with regional stakeholders the partners investigate this existing status and will develop user-friendly tools for the sustainable management of GI

in the following case study areas:

- *Tri-Border area of the Czech Republic, Germany and Poland*
- *Giant Mountains and foothills in the Czech Republic and Poland*
- *Kyjovsko, Czech Republic*
- *Eastern Waldviertel and western Weinviertel, Austria*
- *Thayatal National Park and surroundings, Austria*
- *Upper River Po plains, Italy*
- *Po Hills and area around Chieri, Italy*
- *Dübener Heide Nature Park, Germany*

The design of the tools considers the local circumstances and specific needs of GI and those that rely upon it. Regional actors are invited to participate in special tool-design workshops to contribute their local knowledge and expertise and to discuss the contents of a regional/local GI strategy or action plan and how to implement it. The strategies or

action plans will be harmonised with the respective national, regional and local planning policies and will take into account the wider spatial needs and functions of GI identified beforehand. Regional maps of and data indicating functions and ecosystem services provided by GI are the foundation for decision-making and strategy development.

The following three manuals are decision-support tools:

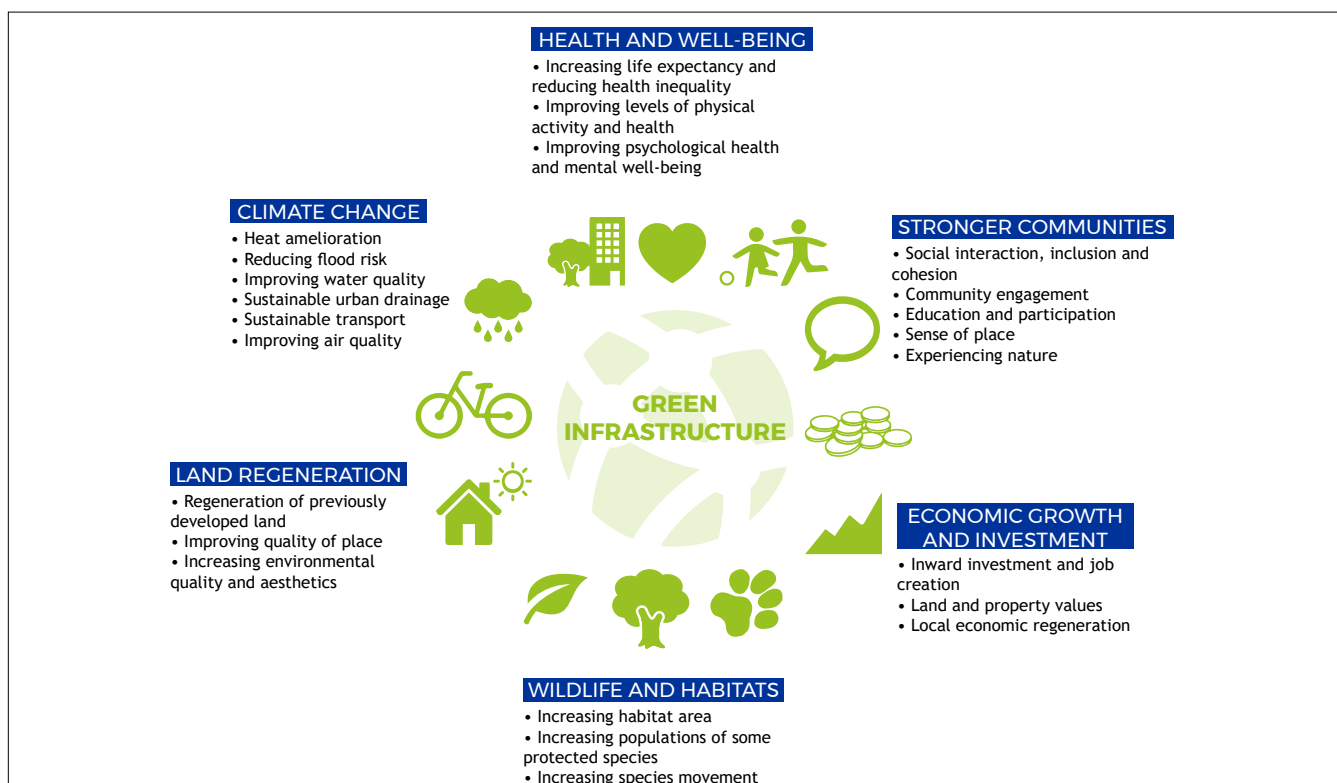
- a) *Manual of Structural and Spatial Green Infrastructure Assessment*
- b) *Manual of Green Infrastructure Functionality and Ecosystem Services Assessment*
- c) *Manual of Creating Evidence-Based GI Strategies and Action Plans*

ENVIRONMENTAL EQUALITY AND QUALITY OF LIFE: BENEFITS OF GREEN INFRASTRUCTURE

The benefits of well-planned and well-managed green infrastructure (GI) are manifold. They go beyond those often associated with natural green spaces such as providing space for wildlife. GI also provides the benefits and services that we as human beings require to thrive and maintain a quality of life. It is therefore an important consideration in planning for development and meeting the needs of the population as well as protecting and enhancing biodiversity.

Green infrastructure should be considered as multifunctional, with different types providing different services/benefits dependant on local needs and circumstances. Those needs include making space for and protecting wildlife, providing access to nature, recreation and social interaction, reducing flood risk, improving despoiled landscapes (including those within our settlements) and reducing the negative effects of climate change among many others.

Green infrastructure has been proven to be sound investment with returns far higher than the initial investment. Research in the United Kingdom has evaluated the benefits in terms of monetary value for example a proven reduction in costs to health services where GI is accessible and promoted. The most important aspect of a GI approach is promoting and demonstrating the benefits of it. This multifunctional understanding of GI is what makes it relevant to everybody and all levels of society.



Benefits of Green Infrastructure

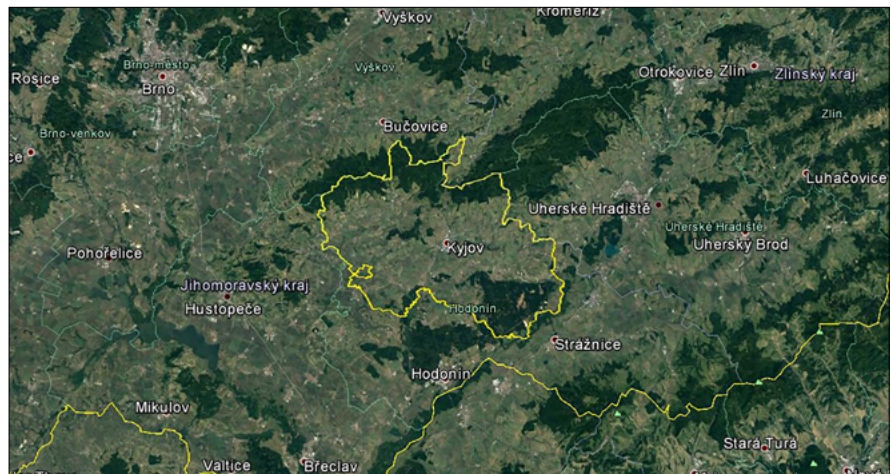
Source: adapted from Forest Research (2010)

CASE STUDY AREA KYJOVSKO (CZ): “WE WOULD LIKE TO KNOW HOW MUCH THE GREEN INFRASTRUCTURE IS FRAGMENTED HERE.”

The Silva Tarouca Research Institute for Landscape and Ornamental Gardening (VÚKOZ) concentrates on the research of all landscape types and environmental risks related to them. The institute also researches biodiversity and its protection and provides expert support for nature protection and landscape maintenance as well as undertaking research in ornamental gardening. Within MaGICLandscapes Dr. Hana Skokanová and the team from the VÚKOZ division in Brno are investigating green infrastructure in the area in and around the Municipality of Kyjov in South Moravia.

“In our case study area the green infrastructure consists of the remnants of valuable natural elements.” Hana Skokanová characterises the elements of green infrastructure in the Kyjovsko area of which 61% is intensive agriculture. Thus, the landscape has many large continuous cultivated areas dominated by arable land. Vineyards and orchards are also found in the area. Forests are concentrated to the north and south of the City of Kyjov and represent nearly 30% of the case study area. They are mostly deciduous, dominated by oak but there are many coniferous trees on the sandy soils in the southern parts as well. The area contains some small protected areas, including several NATURA 2000 sites and two nature parks. The Kyjovsko area is well known for its traditional folklore, historical monuments and viticulture. Tourists also appreciate the extensive cycling network in the region.

The large continuous areas of arable land and the lack of green infrastructure present a considerable risk of soil erosion and a limited permeability of the landscape for living organisms, threatening biodiversity etc. *“We would like to know how much the green infrastructure is fragmented, which parts of the Czech System of Territorial Stability (TSES) (see infobox) are already there and which are only “on paper“, which elements are not suggested by TSES but are valuable and should be included,”* says Skokanová. VÚKOZ is working in close cooperation with the Department of Environment and Territorial Planning of the Kyjov



MaGICLandscapes case study area Kyjovsko in South Moravia (Czech Republic)

Source: Google 2017, Landsat/Copernicus

Municipality as well as other stakeholders in the area. *“We also want to trace the occurrence and connectivity of*

green infrastructure back into the past to find an inspiration about which elements we should restore for a better connectivity now



The contrasting landscapes of Kyjovsko: arable and remnant patches (above) and the old orchards of Šardice (below) | Source: VÚKOZ/Hana Skokanová

and in the future. (...) We look at the benefits of the current green infrastructure focusing on those elements with multiple ecosystem services. And finally, we will do a revision of the existing TSES planning based on our results.“

By means of MaGICLandscapes the VÚKOZ researchers would like to find ways how to improve the current state of green infrastructure and minimise risks around the South Moravian area Kyjovsko.



The national natural monument “Na Adamcích“ west of Kyjov is part of the case study area | Source: VÚKOZ/Hana Skokanová

The Czech National Territorial System of Ecological Stability (TSES)...

...is a mutually interconnected network of both natural and semi-natural, altered ecosystems that maintain natural balance. Its main purpose is to reinforce ecological stability of the landscape by conservation or restoration of ecosystems and their mutual interconnection.

Elements of TSES are biocentres (biotope), ecological corridors (connecting elements) and interaction elements (landscape patches). The whole TSES contains supraregional (at least 1000 ha), regional (10-50 ha) and local (5-10 ha).

Source: [AOPK České republiky](#)

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