



INSTITUTE OF THE REPUBLIC OF SLOVENIA  
FOR NATURE CONSERVATION



REPUBLIC OF SLOVENIA  
MINISTRY OF THE ENVIRONMENT  
AND SPATIAL PLANNING



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Alpine Space



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## AlpGov and EUSALP AG7 event: »Green Infrastructure 4 Green Future«

Škocjanski zatok Nature Reserve, Koper, Slovenia  
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### ABSTRACTS / POVZETKI

#### Green infrastructure and biodiversity

Biodiversity is a fundament of green infrastructure. There is no green infrastructure without ecosystem or without plants or at least some organisms. All functions of green infrastructure are provided by nature or biodiversity building it. Green infrastructure functions provide. Ecosystem services. More preserved is nature building green infrastructure more ecosystem services it can provide. Utilization of natural fundament of green infrastructure makes us possible to use some ecosystem services better and, in some cases, also over limits of sustainable use.

We use term green infrastructure in too senses. In broader sense green infrastructure includes terrestrial elements and waters. But sometimes we use green only for terrestrial and we add blue infrastructure for waters. Due to carst areas in Slovenia we should think also about green – dark infrastructure of underground. Underground is not only reservoir of drinking water; it is complex and sensitive ecosystem. Meaning of sky is also underestimated. We should be more attendant to green – light infrastructure of flying and migration corridors for birds, bats. Different flying devices and activities can seriously interfere with ecological needs of flying animals.

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#### Green infrastructure concept within Spatial development strategy of Slovenia (challenges faced and lessons learned)

The draft Spatial development strategy of Slovenia introduced green infrastructure on three levels: national, regional and local level. The GI on regional and on local level are, according to the Spatial Planning Act, regional green system and settlement green system. The interconnections among all three levels is a precondition in order to provide multifunctionality of the system, functioning as a backbone of healthy and safe environment and attractive landscape. Although the green infrastructure definition within the strategy is focused on its physical aspect (GI as a system of

green areas), the strategy introduces green infrastructure as a framework for addressing several issues regarding landscape development and protection, nature conservation, climate change, and the quality of living environment. The novelty of GI concept within Slovenian spatial planning practice raised the question whether GI is the right “tool” to address complex problems, whose domain is it and how it should be planned. Another issue emerged from the need to define the starting point to GI planning. Considering the fact that multifunctionality is one of the key demands of GI, should GI planning start from defining the functions of the system or defining the (green) areas, which are the backbone of the system.

The presentation will focus on challenges we faced during the GI planning, which emerged from aforementioned issues, and the proposed answers/solutions to these challenges.

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**SPRS**

STRATEGIJA PROSTORSKEGA  
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## PRESERVING GREEN CORRIDOR OF KOKRA RIVER

Twenty years ago, preserving green corridors along the river was not an idea accepted by default. More common was the idea of narrowing the riverbeds, draining the flood plains and cutting down the forests along the river. Because of low prices of the land, many factories and houses were built on these areas or the areas were used for agriculture. The presentation wants to show the results of preserving green corridor of Kokra river in last fifteen years. Kokra is alpine river with two main characteristics: upper part of river has fast water flow and is narrowed in tight gorge of mountain area. In lower part of the river the water flow is slower (river still has characteristics of alpine river), there are several settlements along the river and the best land for agriculture. Since the land was mostly preserved for agriculture, the settlements could only expand towards and within the Kokra river corridor. First years the idea of preserving the green areas was not well accepted. Later local people recognized that the river and its green corridor has many benefits, also for developing tourism, recreation and relaxation. Only few buildings were built in the corridor (waste water plant, small recreational facilities) and local community implemented a plan of providing several walking and educational paths and recreational areas with no significant negative impact on green corridor.

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## VIPava project – new corridors in Vipava valley

Project VIPava includes three working packages which are directly related to green infrastructure in selected Natura 2000 sites. The first activity includes renovation of an old river meander and establishment of new wet habitats for Italian agile frog (*Rana latastei*). These measures will improve conditions for local population of this species and they will contribute to better connectivity of its populations in Vipava valley. The second group of activities is related to improved conditions for Eurasian otter (*Lutra lutra*). The project plans include construction of fish passes on four existing dams to improve conditions for fish species, which are major food of this species. These plans require careful planning to prevent further spread of alien species like catfish (*Silurus glanis*), which is present downstream. The third set of activities includes establishment of 46 km long educational path for pedestrians and cyclists. The path will avoid sensitive natural areas, but it will lead visitors close enough to enable their education about the importance of these areas and about our responsibility to keep them as quiet areas and to preserve them for future generations. The major goal of these activities are improved conditions for a single species. On the other hand, each set of activities will influence many other species as well as wellbeing of local people.

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## LIFE Stržen

Cerkniško jezero is the largest intermitten lake in EU located in central Slovenia. The lake normally stays on the Cerknica plain for about eight months a year. Water usually spreads over the surface of 20 km<sup>2</sup>, but at its fullest, the lake covers a surface of nearly 30 km<sup>2</sup>. Periodic flooding and draining of Cerkniško jezero has created and determined typical specific ecological conditions, so it has been designated as a wetland of international importance – Ramsar Site, because of its importance for the preservation of endangered birds.

The main objective of Project LIFE Stržen is renaturation of old riverbed. In history the meanders of river Stržen, were redirected into straight channels. The goal of these interventions was to dry out the lake and obtain more land for agricultural use on the intermittent lake.

By excavating the original riverbed the habitat will increase from 0,6 km to 2,1 km. Restoration will slow down water run-off in the most critical period of the year and provide increased soil moisture in the surrounding area. Longer water retention times in the riverbed will improve the conditions for natural populations of aquatic invertebrates, fish and water related mammals and birds.

Restoration of riverbed, redirection of visitors (quiet zone) and positive change of key stakeholders' attitude will have positive effects on target species Bittern and on 14 qualifying species of Natura 2000.

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## JOIN US

The project's main objective is to ensure the durability of the conservation and restoration of target species in Natura 2000 areas of the rivers Sotla and Kolpa in Risnjak National Park, the Radensko polje area, and the Kamačnik canyon. The partnership was composed so as to ensure that species and measures planned for improving their state of conservation are dispersed across comparable areas in Slovenia and Croatia. By implementing programmes of measures consisting of actual demonstration activities in nature, we will improve the state of conservation of the otter, stag beetle, great apicorn beetle, marsh fritillary, large copper and amphibians. The project strives to set up sustainable structures for the long-term conservation of biodiversity. The Institute of the Republic of Slovenia for Nature Conservation will perform the following activities: in agreement with landowners, on the appropriate sites along the Sotla River, 50 dead oak tree piles will be placed as a home for stag beetles. We will buy 25 existing oak trees and plant 100 oak seedlings that will become the habitat of the great apicorn beetle. Web of old oak trees and new oak seedlings will not be used only by beetles but also for birds, bats, other insects and humans. By involving teachers, landowners and local population in the implementation of nature preservation measures, the project will bring nature protection and care for nature closer to the wider public.

For more information contact Nataša Hribernik (Municipality of Grosuplje) or visit our web page <https://vezinarave.si/>

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## European strategy for the alpine region – EUSALP and project AlpGov – enhancing the concept of green infrastructure and ecological connectivity

Strategy for the alpine macro-region and its Action group 7 (EUSALP AG7) offers a strategic frame for promoting development of transnational vision for ecological connectivity and green infrastructure in Alpine region. Strategy implementation started in 2016 and since then more than 20 action group members from alpine states are joining forces for reaching the EUSALP goals and goals of EU Strategy for GI. Since the beginning, AG7 members are striving for dialogue and inclusiveness, building networks across state borders and sectors, establishing connections between people and organisations that are responsible or interested for the planning and/or maintenance of Green infrastructure. To become as concrete as possible in the given strategic and longterm frame, action group developed a list of Implementation Initiatives, so called Stars (since putted on the map, also as a priority areas). Selection criteria were prepared to help with narrowing the selection and focusing to priorities. From more than 40 suggestions, 12 were selected to be further developed. In the last year, some of the proposals were concretised, projects prepared and also approved – such as proposal regarding peatlands (Impluls4Action) and connecting Urban and Inner Alpine GI (LUIGI). The implementation of networking actions and coordination of AG7 work is supported by the Alpine Space Program project AlpGov (“Implementing Alpine Governance Mechanisms of the European Strategy for the Alpine Region”), that is bringing together all EUSALP Action Group Leaders.

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## Los\_dama! project: Thematic Green infrastructure approach for recreation and quality of life in Ljubljana Marsh wider area

The thematic green infrastructure concept was set-up and tested within the frame of the project Landscape and Open Space Development in Alpine Metropolitan Areas (LOS\_DAMA!). It is a planning tool relevant for large green areas, where it is not easy to determine the individual elements of green infrastructure, due to the general presence of large green spaces, and diverse nature protection regimes. The concept is an example of an expertise-based approach for comprehensive and suitable GI provision for specific development issues which are dependent on specific landscape characteristics and settings. It was tested in the context of recreational and leisure outdoor activities in the Ljubljana Marsh Nature Park wider area and resulted into the Recreational Green Infrastructure Plan. Such GI Plan focuses on relevant recreational activities and defines supportive GI elements and their interlinking. It goes beyond green space land use areas by emphasising multifunctionality of areas and paths that are co-developed, co-used and co-managed in the way to enable recreation besides all other use. The concept operates cross-scale. It is developed for intermunicipal, sub regional level and can be incorporated into municipal spatial plans and development strategies as well as regional development and green infrastructure plans to improve the overall function of the area. At a very micro scale it addresses place capacity issues. In such context it implements observation & behaviour mapping to address the question as to How much nature can take? and reflects on place carrying capacity for occupancy emphasising actual dimensions, frequency and intensity of use as valuable inputs for sustainable management and governance of GI.

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## Green Infrastructure Strategy of Ljubljana Urban Region - a showcase for participatory strategic planning of green infrastructure

Regional Development Agency of the Ljubljana Urban Region began preparation of Green Infrastructure Strategy in 2017. The preparation of the strategy is carried out within the project [PERFECT](https://www.interregeurope.eu/perfect/). The overall objective of project PERFECT is the identification, analysis, dissemination and transfer of good practices and policy experiences in the multiuse of Green Infrastructure (GI) into investment and planning strategies. It seeks to influence the policy-making process by raising awareness of the social, environmental and economic potential of green infrastructure.

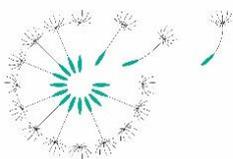
Through the project we have identified a lack of inter-departmental and cross-sectoral cooperation when it comes to planning and implementation of green infrastructure (GI). The lack of cooperation is perceived horizontally and vertically between various national and local institutions. That results in municipalities rarely agreeing on common priorities for the investment in GI and losing a chance to reach the desired multiple benefits and synergies of a well-planned GI.

Good practices from Ljubljana Urban Region and other PERFECT partners indicate that strategic, integrated and well-argued planning of GI is a first step towards creating a resilient environment. Therefore, inter-departmental and cross-sectoral working should start at the strategic level and persist to the implementation level as a common agenda of different stakeholders.

The strategy that is being prepared will: define priority areas of protection and development of GI in the region, set the priority list of measures and projects to be implemented and will represent the basis for the Regional Development Programme and Regional Spatial Plan, that must be prepared till 2021. The presentation will outline the process of strategy formation and the challenges we have encountered (and not fully resolved) along the way.

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## ECOSYSTEM SERVICES OF KARST PROTECTED AREAS AND UNESCO BEECH FORESTS

ECO KARST project tackled the challenge of reconciling nature conservation in the vulnerable karst protected areas (PAs) of the Danube region with the need for human economic development and wellbeing. While the project did not address green infrastructure, it dealt in detail with ecosystem services and their use for finding a balance between nature and economic prosperity, which could be considered a basis for further development of green infrastructure, as the logical next step. Throughout the project implementation seven protected areas from the Austrian Alps to the Carpathians and the Dinarides mapped and evaluated a range of ecosystem services relevant for their particular areas. The mapping then formed the basis for extensive and open public participation process through which specific opportunities for development of pro-biodiversity businesses were explored. Pro-biodiversity businesses (PBBs) are defined as enterprises that generate financial returns and at the same time make positive contributions to biodiversity preservation. The development of PBBs was supported through trainings, award incentives, and

targeted networking, while also combined with preparation of specific action plans for each pilot PA, which will be implemented by PA managers in close collaboration with the local civil society, thus leading to a brighter future for both nature and people.

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Workshop is organised within the Mediterranean Coast and Macro-Regional Strategies Week 2019.

<https://www.adriatic-ionic.eu/event/sea4future-the-mediterranean-coast-and-macro-regional-strategies-week-2019/>

