



## TAPPING THE POTENTIAL OF NATURE-BASED SOLUTIONS TO CREATE GREENER HUNGARIAN CITIES



### KEY POINTS

- Cities have tremendous potential to use nature-based solutions for sustainable urbanisation
- A range of nature-based solutions have been studied and promoted in Győr and its surroundings during the last four years
- There is a need for the national government to foster increased uptake of nature-based solutions by:
  - Increasing the level of awareness of nature-based solutions and their potential benefits for multiple sectors and stakeholder groups
  - Supporting local stakeholder processes for nature-based solutions' development
  - Integrating nature-based solutions into regional and local policies and strategies
  - Providing dedicated nature-based solutions' funding and introducing nature-based solutions as an obligatory elements of larger infrastructural development projects

### THE NATURVATION PROJECT

NATure-based URban inNOVATION is a 4-year project involving 14 institutions across Europe in the fields of urban development, geography, innovation studies and economics. We are creating a step-change in how we understand and use nature-based solutions for sustainable urbanisation.



## Protecting urban nature: The role of local and national governments



Local and subnational governments are increasingly recognised for their central role in protecting and restoring nature for sustainable urbanisation. Nature-based solutions (NBS) are at the forefront of such discussions, boasting a multifunctional character which can simultaneously contribute to socio-cultural, environmental and economic goals. Nature-based solutions can, for example, improve public health and wellbeing, reduce pollution, conserve biodiversity, decrease flood risk, increase resilience, enrich and regenerate urban spaces. Yet these benefits have not yet been realised to their full potential.

Wider implementation of nature-based solutions requires, amongst other factors, increasing the level of awareness of their benefits as an alternative to traditional grey infrastructure, leveraging resources and finances for implementation, capacity building and pilot projects, and developing standards for urban nature (e.g. quality, quantity and access). National governments have an important role to play in creating these conditions and developing a regulatory framework that supports local and subnational governments in mainstreaming nature-based solutions across planning and policy.

This brief outlines the activities of Győr to increase local uptake of nature-based solutions and highlights opportunities for increased support by various national institutions (e.g. the Ministry of Innovation and Technology, the Ministry of Agriculture, the National Development Bank) to help urban decision-makers overcome barriers and maximise positive nature-based solution impacts.

### What are nature-based solutions?

**Nature-based solutions are spatial interventions that use the natural properties of ecosystems to deliver multiple benefits. As such, they have the potential to limit impacts of climate change, enhance biodiversity and enhance the environmental qualities of the living environment while contributing to economic activities and social well-being**

## Győr: Paving the way towards sustainable urbanisation

As part of the EU Horizon 2020-funded Naturvation project, Győr has engaged over the last four years in a process of exploration of how nature-based solutions are understood and begun integrating these solutions into local policies. Led by the Central European University (CEU) and the Centre for Economic and Regional Studies (CERS) and with the involvement of many local partners, Győr is utilising the knowledge created by the project, applying collaborative approaches, and creating a shared vision for how to address critical sustainability challenges through nature-based solutions.

The main challenges in Győr are related to industrial development and to the installation of new residential areas, which are threatening air quality, biodiversity, and human health and well-being. To address these challenges, a series of interactive events, workshops, awareness raising campaigns and meetings were held to contribute to the development of the local Structural Plan (which is at the time of writing still underway).

In addition, nature-based solution practices from the city of Győr are featured in cutting-edge resources which can be applied in other cities, such as the Urban Nature Atlas (the largest European database of nature-based solutions

with 1,000 cases from 100 European cities) and the Urban Nature Navigator, which aims to support the evaluation of nature-based solutions and assess how they contribute to sustainability goals.



In line with the general project focus on outreach and impact, the Urban Regional Innovation Partnership in Győr (URIP Győr) will continue to showcase nature-based solutions in various exhibitions, initiate the preparation of the electronic tree cadastre of the city, and identification of urban heat islands. Additionally, it supports several large-scale tree planting programmes implemented in the city, including renewing (and re-naturalising) the structure of Bishop's Forest. Beyond the duration of Naturvation project, URIP Győr will also support and keep cooperating with nature-based solutions and green city projects initiated by the city and the local community. Additionally, linking to other activities, URIP Győr makes efforts to get the engagement of national and local politicians and decision makers to promote further nature-based solution implementation throughout Hungary.

### **Nature-based solutions in action: Beekeeping at Audi Hungaria**

Located in one of the most important traffic and logistics corridors of Central Europe, Győr experienced an enormous industrial development over the last decades with increasing risks to air quality and urban biodiversity. One major industry is the Audi plant in Győr. However, in order to minimise the aforementioned environmental risks, the plant has a special commitment to the environment and maintains closed to two-third of the factory area as green space. A range of awareness raising and conservation activities are held by the company. For example, beekeeping, and - most importantly – environmental effect of industry has investigated by bio monitoring, where bees have acted as bio-indicators.

The success of this project relied on the ambition of Audi Hungaria and its flexible and innovative process to address multiple needs related to biodiversity, landscape conservation, education, and research. Through their flexible approach and partnerships with schools, research, and marketing, the Audi project integrates biodiversity preservation efforts, environmental education, awareness raising, biomonitoring environmental emissions, and marketing. Beekeeping at Audi Hungaria, as a good case, may encourage and could be an incentive to set up similar beekeeping projects for other companies and cities across Hungary.

### **Opportunities for increased national support**

Building on the lessons learned throughout this project, several opportunities have been identified for how the national government and institutions such as the Ministry of Innovation and Technology, the Ministry of Agriculture, the National Development Bank can provide increased support to local and subnational governments for increased implementation and effectiveness of nature-based solutions:

- Integration of nature-based solutions into national and regional development plans and local spatial plans by adding a nature-based solution component or priority to newly developed strategies or updated versions of existing strategies and plans. This can support the prioritisation of nature-based solutions when setting funding priorities (i.e. for EU funding) as well as guide and drive investment planning to integrate more urban nature in



newly developed urban plans.

- o Concerning Győr and its surroundings, the Szigetköz 2050 (a major island plain by the Danube) strategic development process will be launched in the near future, in which the local Széchenyi University will play a key role. The university's proposal is guided by aspect of nature-based solutions, circular economy and the UN Sustainable Development Goals (SDGs. Some of the university actors are also members of the URIP Győr (e.g. the departments of Environmental Engineering, Transport, Water Management and Transport Infrastructure). In Central and Eastern Europe, this will be one of the first regional (cross-border) strategies integrating nature-based solutions.
- Support the dissemination of targeted information about nature-based solutions to specific stakeholder groups and sectoral actors (e.g. through newsletters, conferences, educational events about nature-based solutions to relevant ministries, agencies, municipal associations, cities with county rights and public and private financing institutions). Information should be centrally collected and disseminated about good practices implemented across Hungary (and beyond), the range of potential benefits that nature-based solutions can deliver towards environmental and socio-economic objectives, and investment and maintenance costs and concrete implementation settings.
- Support the maintenance/continuation of the URIP Győr and similar local stakeholder processes in other cities to ensure sustained nature-based solutions scale-up by mayors, local governments and local utilities. Local stakeholder groups can be institutionalised to meet regularly and be tasked with contributing to the development or the revision of local development strategies or urban plans to ensure that sufficient consideration is given to the integration of urban nature during new construction, investments, renovations or maintenance activities.
- Allocate national funds through a dedicated call to support the research community and related institutions in developing nature-based solutions projects as part of different Operative Programmes of the European Regional Development Fund (ERDF) (beyond the Environmental and Energy Efficiency Operative Programme).
- Require the development of nature-based solutions for larger infrastructural projects costing more than EUR 1 million.