

Strengthening the Resilience of Urban Areas to Climate Change-Education through the Interreg Danube Region Project SPONGECITY



EUROPEAN
GREEN
CONFERENCE

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INTRODUCTION

Urban areas are increasingly affected by natural disasters resulting from climate change, increasing the intensity and frequency of heat waves, droughts, fires and heavy rains with flash floods at the local level. A sponge city is an urban area which has been designed to cope with excess rainfall using a variety of techniques. It mitigates/prevents urban floods by providing the area with the ability to naturally absorb the water. It reduces the extent of impermeable surfaces and increases the amount of absorbent land: green surfaces, green walls, bioswales, innercity lakes, rain gardens, permeable pavements. Supplementing this approach with channelling and storage systems also helps to counter water shortages.



PARTICIPANTS OF THE TRAINING PROGRAMME

As part of the "Education for Citizens – Training and Raising Awareness on the Importance of Urban Green Infrastructure" envisaged within the Interreg Danube Region project SpongeCity, implemented by the University of Mostar, Faculty of Civil Engineering, Architecture and Geodesy as project partner PP7 together with 12 other partners, a professional study visit and training programme was organized at the project's lead partner – the University of Pécs (LP) in Hungary – and at the project partner in Croatia (KC VODE, Koprivnica, PP2) from 20 to 22 April 2026.

Accompanied by the SpongeCity project manager for the Faculty of Civil Engineering, Architecture and Geodesy of the University of Mostar, as well as project team members, the following student representatives from our Faculty participated in the professional study visit and training programme:

two representatives from the undergraduate university study programme in Architecture and Urban Planning (Martina Barbarić and Barbara Lasić),
two representatives from the undergraduate university study programme in Civil Engineering (Nika Buhač and Petra Kulaš), and
two representatives from the graduate university study programme in Civil Engineering – specialization in Hydraulic and Environmental Engineering (Mandalena Doko and Božena Marić).

RESULTS

The students actively participated in field teaching activities at the University of Pécs on 21 April 2026, during which Imre Marcell, a member of the lead partner's project team, presented all phases of the construction of the "rain garden," the installed measuring equipment, and the network connection to the cloud for the purpose of collecting and further analysing the monitored data. The training was interactive in nature. The following day, on 22 April 2026, at the „KC Vode in Koprivnica“, the hosts organized a tour and educational presentation at the "rain garden" constructed within the wastewater treatment plant complex of KC Vode, as well as an educational tour of the wastewater treatment facility with a capacity of 100,000 population equivalent (PE).

As part of the project activities, the University of Mostar, Faculty of Civil Engineering, Architecture and Geodesy, has planned the procurement of measuring equipment – an integrated meteorological station and its network connection to the cloud – which will make the collected data available to our future researchers (graduate students, doctoral candidates, etc.). All participants of this professional study visit and training programme received certificates of participation signed by the Dean of the Faculty of Sciences of the University of Pécs and the SpongeCity project coordinator for the University of Pécs.

THE FINAL CONFERENCE The Final Conference was organized in Satu Mare, Romania, and included invited lectures on projects conceptually related to nature-based solutions. As part of the Final Conference, a visit to the rain garden in the Livada settlement was organized.



CONCLUSION

Increasingly pronounced climate change is leading to urban flooding. Nature-based solutions help mitigate the consequences and build the resilience of urban environments to these challenges. In order to bring such solutions closer to the public as well as to decision-makers, education represents the first step toward the successful implementation and integration of Nature-based Solutions (NbS) into urban planning documentation, as it promotes a change in mindset. Cities should not be viewed solely through roads, buildings, asphalt, concrete, sewage systems, and other infrastructure; rather, in addressing the growing challenges of climate change, water and greenery should also be used to tackle flooding, urban heat islands, pollution, social and economic challenges, as well as the overall sustainability of cities.