



**ERASMUS+ project** “Integrated Doctoral Program for Environmental Policy, Management and Technology – INTENSE”

**International Visegrad Fund project** “GAP - Green & Blue Infrastructure in Post-USSR Cities: Exploring Legacies and Connecting to V4 Experience”

## **REPORT**

on the Summer School

**“Green & Blue Infrastructure in a Post-Communist City:  
Exploring Legacies and Developing Innovation”**

*Duration: 13 – 27 September, 2021*

2021



## General information

The Summer School “**Green & Blue Infrastructure in a Post-Communist City: Exploring Legacies and Developing Innovation** ” was carried out in the framework of ERASMUS+ project “Integrated Doctoral Program for Environmental Policy, Management and Technology – INTENSE” and International Visegrad Fund project “GAP - Green & Blue Infrastructure in Post-USSR Cities: Exploring Legacies and Connecting to V4 Experience”.

**Duration:** 13 – 27 September, 2021.

**The working languages** are English and Ukrainian.

**Format:** hybrid (online) and field trip to Yaremche, Ukraine.

**Total number of participants:** 31 (registration list is attached).

**The School target audience** are PhD students, junior researchers, faculty members and practitioners interested in the development and management of GB infrastructure.

The Summer School was prepared by **V. N. Karazin Kharkiv National University** (Kharkiv, Ukraine), **Estonian Life Science University** (Tartu, Estonia) and **Institute for the Carpathians’ Ecology of the Ukrainian Academy of Sciences** (Lviv, Ukraine) in cooperation with Ukrainian and international partners.

## Aim and tasks

The research-intensive school set to explore and find solutions to real life problems, with rapidly urbanising Carpathian Mountains selected as the case study area, will include intensive research methodology training and group work on multidisciplinary research projects.

Development of Green & blue (GB) infrastructure in mountain urban areas is a significant challenge due to complex land-use and cover settings, dynamic geophysical processes, and high vulnerability of mountain ecosystems to climate change. GB infrastructure development traditionally was an important issue for the Ukrainian Carpathians, a major recreational area of Eastern Europe. Stakeholder participation in city landscaping projects is one of the most important aspects.

This summer school builds research capacity and strengthen science-policy interactions for addressing these issues in urban areas of Carpathian Mountains and beyond. The focus was on NBS, smart GB, participatory approaches and crowdsourcing. This discussion was primarily based on the V4 experience. It was analysed for its applicability in Ukrainian socio-economic, political and biophysical context.



## Description

The Summer School “**Green & Blue Infrastructure in a Post-Communist City: Exploring Legacies and Developing Innovation**” included online part and field trip to Carpathian National Nature Park (Yaremche), local organizer: Institute of Ecology of the Carpathians of the National Academy of Sciences of Ukraine, duration: 13 – 27 September 2021.

The purpose of summer school was to study of theoretical materials from professors of partner organizations of the project and to prepare group projects, what was relevant to topics of PhD thesis. The task of the summer school set to explore and find solutions to environmental problem of The Carpathians regions.

For selection of participants, an online competition was organized.

The summer school included three periods:

- **Pre-Field period** (13-15 September, 2021): online lectures;
- **In-Field period** (15-21 September, 2021) in Yaremche and around: intensive research methodology training and group work on multidisciplinary research projects in The Carpathians regions;
- **After-Field period** (21-27 September, 2021): online work, preparation of group projects and presentations, hybrid (online and offline) presentation of group projects.

Participants of the Summer School were divided into 3 research groups (3-5 PhD students in each group):

Group 1. Green-blue infrastructure in large cities

Group 2. Green-blue infrastructure in small towns

Group 3. Natural vegetation of Yaremche

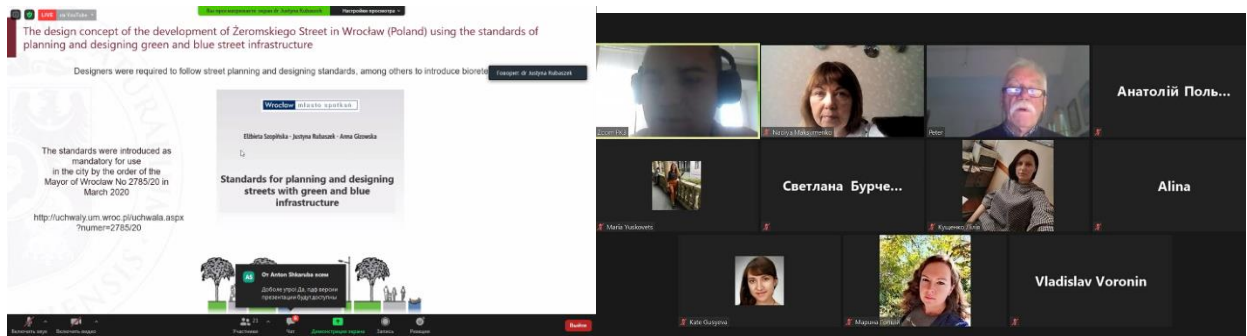
Each group has developed a research project and presentation.

### ***Summer School - Pre-field period (online format)***

The online lectures during the pre-field period were conducted by lectures: Anton Shkaruba (Estonian University of Life Sciences (Tartu, Estonia), Hans-Peter Nachtnebel (University of Natural Resources and Life Sciences (Vienna, Austria), Anatoliy Polevoy (Odessa State Environmental University (Odessa, Ukraine), Marcin Spyra (Opole University of Technology (Opole, Poland) and Martin Luther University Halle-Wittenberg (Halle, Germany), Hanna Skryhan



EKAPRAEKT (Minsk, Belarus), Justyna Rubaszek (Wrocław University of Environmental and Life Sciences (Wrocław, Poland).



### ***Summer School - In-Field period (field trip format)***

Field period included:

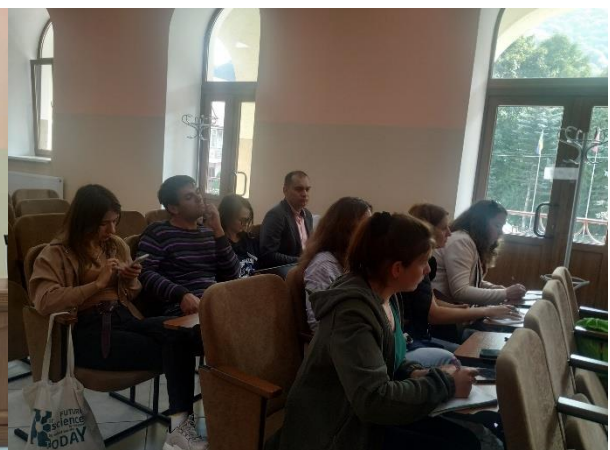
A. Lecture sessions by: Nadiya Maksymenko (V. N. Karazin Kharkiv National University (Kharkiv, Ukraine), Iryna Shpakivska (Institute of Ecology of the Carpathians NAS of Ukraine), Viktor Kireyeu (Erda RTE (Rotterdam, Netherlands) and EKAPRAEKT (Minsk, Belarus), Oksana Maryskevych (Institute of Ecology of the Carpathians NAS of Ukraine), Kalev Sepp (Estonian University of Life Sciences (Tartu, Estonia), Valdo Kuusemets (Estonian University of Life Sciences (Tartu, Estonia), Siiri Külm (Estonian University of Life Sciences (Tartu, Estonia), Valeriya Ovcharuk (Odessa State Environmental University (Odessa, Ukraine), Hans-Peter Nachtnebel (University of Natural Resources and Life Sciences (Vienna, Austria), Alla Nekos (V. N. Karazin Kharkiv National University (Kharkiv, Ukraine), Kateryna Utkina (V. N. Karazin Kharkiv National University (Kharkiv, Ukraine).





B. Field activity and meetings with stakeholders:

- visit to Yaremche City Council







- visit to Ivano-Frankivsk “City development and recreation center” and conversation with its Director Ryslana Vasylyuk



- on the way to Hoverla visited Viaduk Vorokhta



- research excursion to Zaroslyak and Hoverla;







- discussion with Vice-director of scientific work of Carpathian National Nature Park



Also, during the group work participants visited: touristic road and waterfall (Divochi Slozy, Probiyi), water meter posts of the Ukrainian Hydrometeorological Center (Chornogirchyk stream, Potik tract and Zhonka river, Chepeliv tract).



### C. Group work and consultations with lecturers

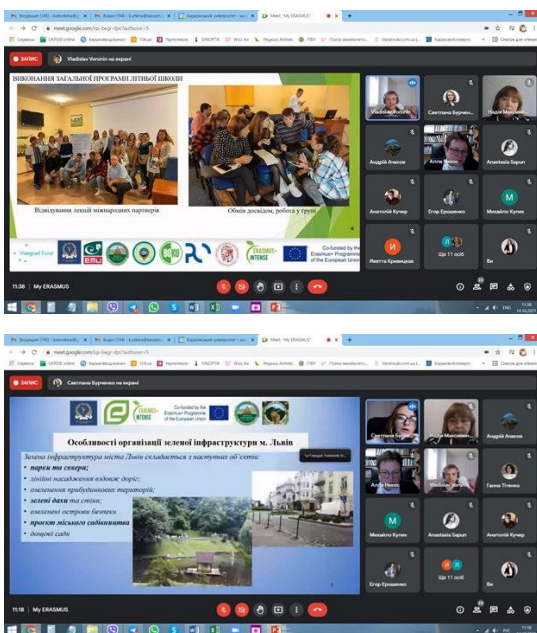
For development of research projects there was time for group work, search and gathering of materials and consultations with lecturers.





**Summer School - After-Field period (hybrid format)**

The results were presented at a conference in a hybrid format, which took place on 27 September, 2021, the target audience – PhD students, graduate students, academic staff. After making presentations, PhD students received certificates.







## Conclusions and recommendations

The Summer School was successful and all targets are achieved. Hybrid format was selected as most appropriate, taking into account COVID-19. Invited academic staff presented EU and UA experience and advanced knowledge in GB infrastructure development. Meetings with stakeholders gave possibility to find out most problematic issues and share knowledge. Developed recommendations were disseminated to local authorities and other stakeholders for making decisions and introduction into practice. Results were presented on workshops, in ERASMUSDAS-2021 and are planned to be published in UA scientific journals.



Detailed information can be found here: <https://intense.network/summer-school-in-yaremche-on-green-blue-infrastructure/> and <https://www.facebook.com/groups/INTENSE.Doctoral>