



Co-funded by the
Erasmus+ Programme
of the European Union



Building winter/summer school programs in water resources management

Barbara Karleuša
University of Rijeka, Faculty of Civil Engineering

Final Conference
Podgorica, 31.03.2022.

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

University of Nis



www.swarm.ni.ac.rs

Strengthening of master curricula in water resources
management for the Western Balkans HEIs and stakeholders
Project number: 597888-EPP-1-2018-1-RS-EPPKA2-CBHE-JP



Co-funded by the
Erasmus+ Programme
of the European Union



WINTER / SUMMER SCHOOLS

- **FOR STUDENTS**
- **FOR WB TEACHING STAFF**

Strengthening of master curricula in water resources management
for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER / SUMMER SCHOOL – for students

NMBU - SUMMER SCHOOL - 14TH TO 28TH JUNE 2021

BOKU - WINTER SCHOOL - 15TH TO 26TH NOVEMBER 2021

UNIRIFCE - WINTER SCHOOL - 15TH TO 26TH NOVEMBER 2021

AUTH - WINTER SCHOOL - 6TH TO 17TH DECEMBER 2021

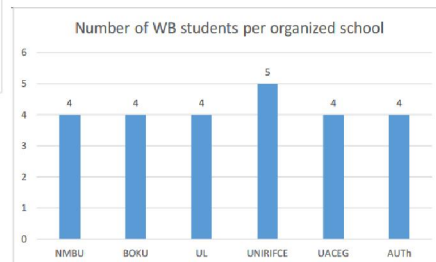
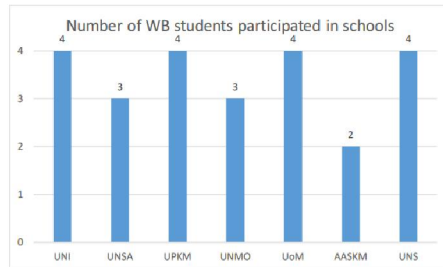
UACEG - WINTER SCHOOL - 29TH NOVEMBER TO 10TH DECEMBER 2021

UL - WINTER SCHOOL - 31ST JANUARY TO 11TH FEBRUARY 2022

WINTER / SUMMER SCHOOL – for students

- They covered different topics that are related to water resources management.
- The overall aim of organized schools is to enhance knowledge in the field of water resources management, give confidence to talk in a foreign language, improve general skills such as giving a presentation and giving insights into working on an individual research topic.
- The students have different study backgrounds. None of the participants, neither students nor teachers, have English as their native language.
- The schools consist of lectures and practical work. Unfortunately, because of COVID-19 social events and excursions have not been organized.
- In total, 25 virtual student mobilities were realized.
- 10 working days.
- As platforms for giving lessons, Microsoft Teams and Zoom have been used.
- All activities of winter/summer schools that were held before the meeting in Thessaloniki (20.-21.12.2021.) were presented during that meeting.

WINTER / SUMMER SCHOOL – for students



Strengthening of master curricula in water resources management
for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER / SUMMER SCHOOL - students

UL - WINTER SCHOOL - 31ST JANUARY TO 11TH FEBRUARY 2022

The following topics have been presented to students:

- Flood analysis,
- Drought analysis,
- Hydrological extremes,
- Introduction to water management,
- Simulation of reservoirs operation,
- Optimization of reservoir operation,
- Groundwater management.

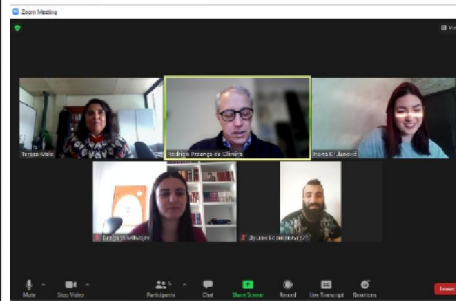
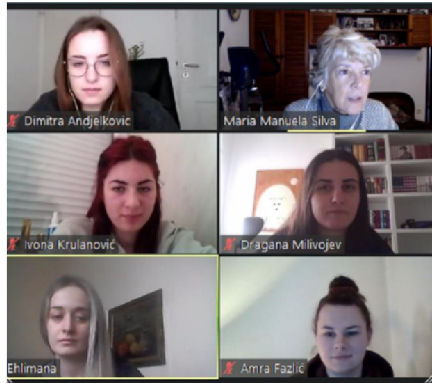
Students present their work on themes assigned in lectures in previous days of the course.

Strengthening of master curricula in water resources management
for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER / SUMMER SCHOOL - students

UL - WINTER SCHOOL - 31ST JANUARY TO 11TH FEBRUARY 2022

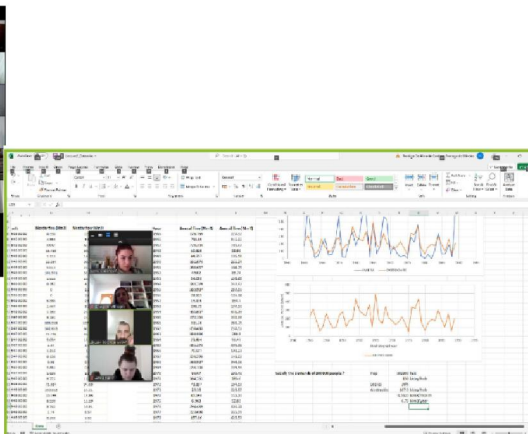
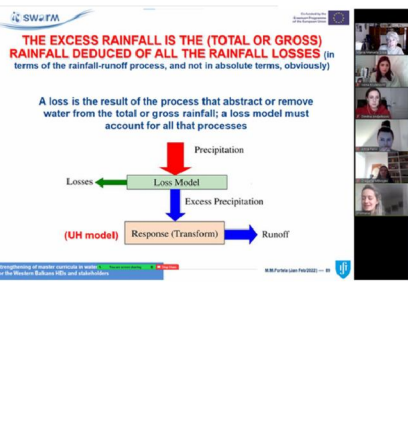


Strengthening of master curricula in water resources management for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER / SUMMER SCHOOL - students

UL - WINTER SCHOOL - 31ST JANUARY TO 11TH FEBRUARY 2022

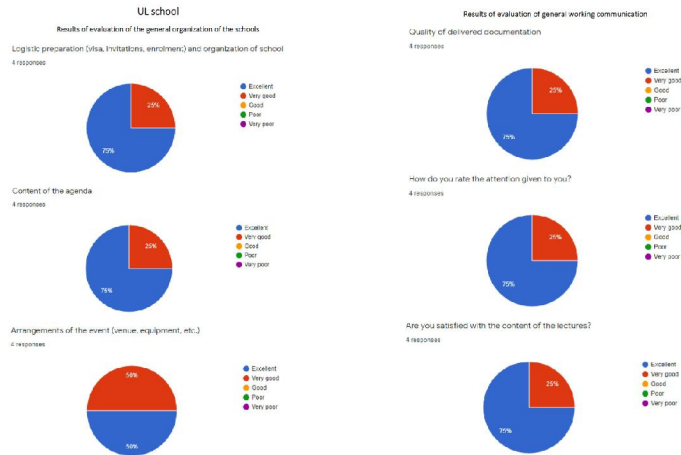


Strengthening of master curricula in water resources management for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER / SUMMER SCHOOL - students

UL - WINTER SCHOOL - 31ST JANUARY TO 11TH FEBRUARY 2022

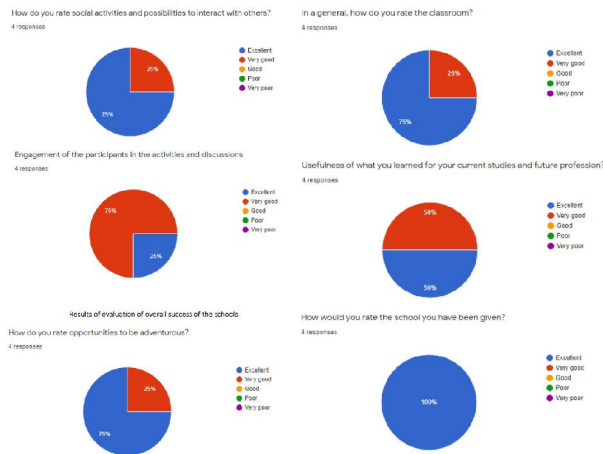


Strengthening of master curricula in water resources management for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER / SUMMER SCHOOL - students

UL - WINTER SCHOOL - 31ST JANUARY TO 11TH FEBRUARY 2022



Comments:

It was such a good experience.

Great experience. The professors presented excellent material. They were dedicated and the lectures were interesting and useful. I am very satisfied. 5/5

I would like to thank you for this course and your time. I enjoyed and learned new things, which will be useful to me in my future work and learning. Thank you for all the presentations that have been remarkably well done with both precise and simple explanations. I hope I'll have the opportunity to listen to your lectures again.

Strengthening of master curricula in water resources management for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs



WINTER / SUMMER SCHOOL – for WB teaching staff

- Enhancing internationalisation across Europe has been a major concern of the European Union in the last years.
- SWARM trainings are part of this internationalisation strategy.
- They served in SWARM project to improve WB teaching staff skills and make networking between team members exchanging ideas and best practices.
- 6 trainings are organized.



WINTER / SUMMER SCHOOL – for WB teaching staff

- UACEG – 28 February – 04 March 2022 ✓
- UNIRIFCE – 21 March – 25 March 2022 ✓
- BOKU – 21 March – 25 March 2022 ✓
- NMBU – 04 April – 08 April 2022
- AUTh – 11 April – 15 April 2022
- UL – 18 April – 22 April 2022

WINTER / SUMMER SCHOOL – for WB teaching staff

- Trainings cover different topics that are related to water resources management.
- The overall aim of organized trainings is to enhance knowledge in the field of water resources management, give confidence to talk in a foreign language, improve organizational skills i.e. how to organize successfully schools, exams or improve quality of study programs.
- The WB teaching staff have different research backgrounds.
- None of the participants, neither WB nor EU teachers, have English as their native language.
- The trainings consist of lectures, practical examples and networking activities.
- 34 teachers trained.

WINTER SCHOOL

➤ UACEG – 28 February – 04 March 2022

The following topics have been presented to WB teaching staff:

- Presentation of the program of the Winter School,
- Irrigation Systems and Drought Management,
- Investments in Irrigation Infrastructure,
- Determining Potential Water Savings due to investments,
- Hydrological and Hydraulic modelling,
- Rainfall – Runoff models,
- Water Management Optimization Problems,
- Multicriteria analysis – an Example for Prioritization of Investments in Irrigation Infrastructure.

WINTER SCHOOL ➤ UACEG – 28 February – 04 March 2022

Some photos from the training:



Strengthening of master curricula in water resources management
for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER SCHOOL

➤ UNIRIFCE – 21 March – 25 March 2022

The following topics have been presented to WB teaching staff:

- Presentation of the program of the Winter School,
- Presentation and exchange of good practices in teaching: e-learning, students' work assessment, plagiarism detection,
- QA system at the UNIRIFCE,
- GIS in water management,
- Urban flood analysis and mapping,
- Monitoring of beaches,
- Laboratories for teaching and research,
- Remote sensing in water balance,
- Multi-criteria analysis in water management.

Strengthening of master curricula in water resources management
for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER SCHOOL ➤ UNIRIFCE – 21 March – 25 March 2022

Some photos from the training:



Strengthening of master curricula in water resources management
for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER / SUMMER SCHOOL – for WB teaching staff

➤ BOKU – 21 March – 25 March 2022

The following topics have been presented to WB teaching staff:

- The Sandoz/Rhine accident 1986,
- Heat and mass transport in free-surface water bodies,
- E-Learning tools,
- Automated exam creation and evaluation,
- Definition of exams questions using R/Exams,
- Preparation of exams on paper using R/Exmas,
- Preparation of online exams using R/Exmas.

Strengthening of master curricula in water resources management
for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

WINTER SCHOOL ➤ BOKU – 21 March – 25 March
Some photos from the trainin_ 2022



Strengthening of master curricula in water resources management
for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs

Thank you for your attention!

Strengthening of master curricula in water resources management
for the Western Balkans HEIs and stakeholders

www.swarm.ni.ac.rs