



REPORT ON ORGANISED ROUNDTABLES WITH THE NON-ACADEMIC SECTOR

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University of Nis



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

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List of abbreviations

AUTh Aristotle University of Thessaloniki

BOKU University of Natural Resources and Life Sciences, Vienna

CBHE Capacity Building in Higher Education

EACEA Education, Audiovisual and Culture Executive Agency

HEI Higher Education Institution

LLL Life Long Learning

NMBU Norwegian University of Life Sciences, Norway

PWMC VV Public Water Management Company "Vode Vojvodine"

SWARM Strengthening of master curricula in water resources management for the Western

Balkans HEIs and stakeholders

UACEG University of Architecture, Civil Engineering and Geodesy, Bulgaria

UNI University of Nis, Serbia
UL University of Lisbon, Portugal
UoM University of Montenegro
UNIRIFCE University of Rijeka, Croatia

UNMO Dzemal Bijedic University of Mostar

UNS University of Novi Sad UNSA University of Sarajevo

UPKM University of Pristina in Kosovska Mitrovica

AASKM Academy of Applied Sciences of Kosovo and Metohija

WB Western Balkan

WRM Water Resources Management



1 Introduction

Report on organized roundtables with non-academic sector is a part of work package (WP) 6 "Dissemination and exploitation" and activity 6.4 "Roundtables with non-academic sector" of the Erasmus+ Capacity Building in the Field of Higher Education project "Strengthening of master curricula in water resources management for the Western Balkans HEIs and stakeholders" (SWARM).

Seven roundtables were organized by the WB project partners (http://www.swarm.ni.ac.rs/activities?id=57) i.e.

- > Academy of Applied Studies in Kosovo and Metohija (AASKM) 03 November 2020
- University of Nis (UNI) 19 May 2021
- Dzemal Bijedic University of Mostar (UNMO) 24 June 2021
- ➤ University of Pristina in Kosovska Mitrovica (UPKM) 25 June 2021
- ➤ University of Montenegro (UoM) 28 June 2021
- ➤ University of Sarajevo (UNSA) 01 July 2021
- ➤ University of Novi Sad (UNS) 13 October 2021

The goal of the roundtables is to inform representatives from the non-academic sector regarding SWARM study programmes and developed training in the field of water resources management (WRM).

All materials are freely available at the SWARM website (www.swarm.ni.ac.rs).



2 Lessons learned

2.1 Academy of Applied Studies in Kosovo and Metohija (AASKM)

As a part of the WP6 Dissemination and exploitation, A6.4 Roundtables with non-academic sector, AASKM has organized a session with representatives of local industries and companies. The roundtable was organized on 03 November 2020 and lasted from 10:00 h to 14:00h.

The participants of the roundtable were representatives of 8 companies from Leposavic area: Public company Energetika; Public Utility Company Leposavic; Public Utility ElektroKosmet; Police; Fire Department; Leposavic Municipality, including AASKM representatives.

At the meeting, participants were introduced with the main objectives of the SWARM project and new AASKM study programme.

Participants expressed the interest for new study programme and concluded that future specialist will have opportunity to work on water quality programme. Namely, as representative from Public Utility Company Leposavic said, the Municipality of Leposavic planes to build wastewater facility in near future, and it would we be a great opportunity for AASKM graduate students of a new study programme to learn practical work and look for potential employment.

Tuesday, 03 November 2020			
Acad	Academy of Applied Studies in Kosovo and Metohija, 29. novembra, Leposavic		
10:00-10:10	SWARM roundtable participants regis	stration	
	First Session	on	
10:10-10:20	Welcome speeches	Predrag Stanojevic	
10:20-12:00	Introduction to SWARM project objectives	Jelena Rajovic	
12:00-12:20	Coffee break		
	Second Sess	ion	
12:20-12:40	Presentation of TCASU new study programme	Predrag Stanojevic	
12:40-13:10	Suggestions from nonacademic representatives regarding the cooperation	Non-academic representatives	
13:10-13:40	General discussion	All participants	
13:40-14:00	Final remarks and closure of the meeting	Predrag Stanojevic	











2.2 University of Nis (UNI)

As a part of the WP 6 Dissemination and exploitation, A6.4 Roundtables with non-academic sector, University of Nis (UNI) has organized a session with representatives of local companies. The roundtable was organized on 19th May 2021 and lasted from 12 h to 15 h in line with the previously prepared roundtable agenda.

The participants of the roundtable were representatives of 9 institutions: Public water company Srbija Vode, Water supply company NAISUS, Apoteke Knjaževac, Telenor Srbija, Amicos, Zelena gradnja, University of Natural and Life Sciences (BOKU), Faculty of Civil Engineering and Architecture and Faculty of Electronic Engineering.

At the meeting, participants were introduced with the main objectives of the SWARM project and new UNI study programmes developed under the SWARM project. Milan Gocić explained to participants the structure and the learning outcomes of the new study programmes.

After that, Michael Tritthart talked about the innovations in the water sector in Austria emphasizing the necessity for the introduction of innovation in this sector. Slavisa Trajkovic introduced the EU Water Policy under the Water Framework Directive, while Milan Gocić presented



EU best practices in the water sector. The topic of general discussion was implementation of EU Water Framework Directive in the water sector in Serbia.

Participants expressed the interest for new study programmes and concluded that future graduated students will have opportunity to work on water quality programme and in general in the civil engineering sector.

The final remarks were regarding the possible cooperation with present companies and UNI for potential internship programmes for UNI students and other projects concerning water where our students and potentials of our Institution could be utilized.

The roundtable finished at 15:00.

Wednesday, 19 th May 2021		
On-line (Teams platform), Face-to-face (University of Nis, Faculty of Civil Engineering and Architecture, classroom 205)		
12:00-12:20	Presentation of SWARM project	Milan Gocić, University of Nis
12:20-12:50	Innovations in the water sector in Austria	Michael Tritthart, University of Natural Resources and Life Sciences, Vienna
12:50-13:20	EU Water Policy – Water Framework Directive	Slaviša Trajković, University of Nis
13:20-13:50	Introducing EU best practices in the water sector	Milan Gocić, University of Nis
13:50-14:40	General discussion: Implementation of EU Water Framework Directive in the water sector in Serbia	
14:40-15:00	Final remarks and closing the event	Milan Gocić, University of Nis











2.3 Dzemal Bijedic University of Mostar (UNMO)

As a part of the WP 6 Dissemination and exploitation, A6.4 Roundtables with non-academic sector, Džemal Bijedić University of Mostar (UNMO) has organized a session with representatives of local companies. The roundtable was organized on 24th June 2021 and lasted from 11 h to 13:20 h in line with the previously prepared roundtable agenda.

The participants of the roundtable were representatives of 8 institutions: HEN Jablanica, Hydro Control d.o.o., Općina Jablanica, JKP Jablanica d.d., AVPJM, Vodovod Mostar, JKP "VIK" Konjic, Džemal Bijedić University of Mostar Faculty of Civil Engineering.

At the meeting, participants were introduced with the main objectives of the SWARM project and new and improved UNMO courses developed under the SWARM project. Suad Špago explained to participants the structure and the learning outcomes of the new courses and overall objectives of the project and project outcomes.

After that, Hana Genjac held the presentation entitled River protection using horizontal drilling technologies and spoke about possibilities of a new methods of drilling applied on river Una. Rijad Zolj



introduced participations about new technologies for detection wastewater leak with satellite technologies. Mahir Sarvan spoke about using CCT camera for detection of wastewater leak with good results in resolving pipe cracks and damage of pipes. Amina Sokolović presented a short description of conventional dredge technologies and new dredge technologies on water bodies, as well as a brief overview of the impact of this technology on the environment.

After a short discussion Suad Špago concluded the event. Participants praised the effort of the project to enhance curriculum in WMR and concluded that future graduated students will have opportunity to work on water quality programme and in general in the civil engineering sector.

The final remarks were regarding the possible cooperation with present companies and UNMO for potential internship programmes for UNMO students and other projects concerning water where our students and potentials of our Institution could be utilized. Since some students were present, Marko Ćećez handed brochures of master study programme Environmental infrastructure management.

The roundtable finished at 13:20.

Četvrtak, 24. Juni 2021.			
	Univerzitet "Džemal Bijedić" u Mostaru, Građevinski fakultet, učionica P105		
11:00-11:20	Prezentacija SWARM projekta	prof. dr Suad Špago, dipl. ing. građ.	
11:20-11:40	Zaštita Rijeka upotrebom tehnologija horizontalnog bušenja	Hana Genjac, dipl. ing. građ.	
11:40-12:00	Upotreba satelitskih tehnologija za detekciju curenja otpadnih voda	Benjamin Hadžić, dipl. ing. el.	
12:00-12:20	Upotreba CCTV kamere kod detekcije curenja otpadnih voda	Mahir Sarvan, dipl. ing. geod.	
12:20-12:35	Uklanjanje otpada i nanosa u riječnim koritima, jezerima i akumulacijama	Amina Sokolović, dipl. ing. građ.	
12:35-13:00	Završne riječi	prof. dr Suad Špago, dipl. ing. građ.	











2.4 University of Pristina in Kosovska Mitrovica (UPKM)

As a part of the WP 6 Dissemination and exploitation, A6.4 Roundtables with non-academic sector, UPKM has organized a session with representatives of local companies. The roundtable was organized on 25th of June 2021 and lasted from 12 h to 15 h in line with the previously prepared roundtable agenda.

The participants of the roundtable were representatives of 6 institutions: Municipality of Kosovska Mitrovica (Department for Urbanism), Public Utility Company Standard, Municipality of Zvecan (Department for Urban planning and Inspection, Department for Environment, water and forestry), Trepca Company for Mining, Metallurgy and Chemical industry and UN Habitat office in Zvecan and Faculty of Technical Sciences Department for Environmental engineering.

At the meeting, participants were introduced with the main objectives of the SWARM project and new UPKM study programmes developed under the SWARM project. Jelena Djokic explained to participants the structure and the learning outcomes of the new study programmes and how these skills and competencies could be used in the water sector.



After that, Jelena Djokic introduced the EU Water Policy under the Water Framework Directive and EU best practices in the water sector. The topic of general discussion was implementation of EU Water Framework Directive in the water sector in Serbia.

Participants expressed the interest for new study programmes and concluded that future graduated students will have opportunity to work on water quality programme and in general in sustainable use of water. The final remarks were regarding the possible cooperation with the municipalities in drafting and submitting the project proposals for financing under IPA III programme, considering the water production and waste waters treatment.

The roundtable finished at 15:00.

Friday, 25 th June 2021			
University of Pristina in Kosovska Mitrovica, Faculty of Technical Sciences, Knjaza Milosa 7			
	Presentation of SWARM project	Jelena Djokic, UPKM	
12:00-13:50	EU Water Policy — Water Framework Directive	Jelena Djokic, UPKM	
	Introducing EU best practices in the water sector	Jelena Djokic, UPKM	
13:50-14:40	General discussion: Implementation of EU Water Framework Directive in the water sector in Kosovo*		
14:40-15:00	Final remarks and closing the event	Jelena Djokic, UPKM	







2.5 University of Montenegro (UoM)

As a part of the WP 6 Dissemination and exploitation, A6.4 Roundtables with non-academic sector, Faculty of Civil Engineering Podgorica has organized a session with representatives of local industries and companies from water sector, from Montenegro. The roundtable was organized on 28 June 2021 and lasted from 10:00 h to 14:00h.

The participants of the roundtable were representatives of 8 companies from Montenegro: Waterworks Company from Kotor and Nikšić, Public company for Energy Supply, Podgorica Municipality, five private company and UoM representatives.

At the meeting, participants were introduced with the main objectives of SWARM project and new UoM study programme. Goran Sekulić and Ivana Ćipranić explained to participants the structure and the learning outcomes of the new study programme.

Participants expressed the interest for new study programme and concluded that future specialist will have opportunity to work on water quality programme. Namely, the Municipality of Podgorica are in the process of building wastewater treatment plant, and it would we be a great opportunity for UoM graduate students of a new study programme to learn practical work and look for potential employment.

The final remarks were regarding the possible cooperation with present companies and UoM for potential internship programmes for UoM students and other projects concerning water quality treatment where our students and potentials of our Institution could be utilized.

Monday, 28 June 2021			
Fa	Faculty of Civil Engineering, UoM Podgorcia, Cetinjski put b.b. Podgorica		
10:00-10:10	SWARM roundtable participants regis	stration	
	First Sessio	n -	
10:10-10:20	Welcome speeches	Goran Sekulić	
10:20-12:00	Introduction to SWARM project objectives	Ivana Ćipranić	
12:00-12:20	Coffee break		
	Second Sessi	on -	
12:20-12:40	Presentation of UoM new study programme	Goran Sekulić	
12:40-13:10	Suggestions from non-academic representatives regarding the cooperation	Non-academic representatives	
13:10-13:40	General discussion	All participants	
13:40-14:00	Final remarks and closure of the meeting	Ivana Ćipranić	











2.6 University of Sarajevo (UNSA)

As a part of the WP 6 Dissemination and exploitation, A6.4 Roundtables with non-academic sector, University of Sarajevo (UNSA) has organized a session with representatives of local companies. The roundtable was organized on 1st July 2021 and lasted from 10 h to 13 h in line with the previously prepared roundtable agenda.

The participants of the roundtable were representatives of several institutions: Federal Administration of Civil Protection, Caritas BiH, Municipality of Vogošća, Municipality of Ilidža, Canton Sarajevo Administration of Civil Protection, Sava River Basin District Agency, University of Sarajevo - Faculty of Civil Engineering, Ministry of Education, Science and Youth of Sarajevo Canton.

At the meeting, participants were introduced with the main objectives of the SWARM project and modernized courses at the Department of Hidrotechnics UNSA FCE developed under the SWARM project. Emina Hadžić explained to participants the structure and the learning outcomes of the modernized study programmes.

After that, Emina Hadžić, Suvada Šuvalija, Hata Milišić, Suada Sulejmanović, Ammar Šarić talked about water management and adaptation to climate change. Emina Hadžić introduced the EU Water



Policy under the Water Framework Directive, while Hata Milišić presented EU best practices in the water sector. The topic of general discussion was implementation of EU Water Framework Directive in the water sector in Bosnia and Herzegovina.

Participants expressed the interest for modernized master programme and concluded that future graduated students will have opportunity to work on water quality programme and in general in the civil engineering sector. The final remarks were regarding the possible cooperation with present companies and UNSA.

The roundtable finished at 13:00.

Wednesday, 1 st July 2021			
On-line	On-line (Zoom platform), Face-to-face (University of Sarajevo, Faculty of Civil Engineering)		
10:00-10:15	Presentation of SWARM project	Emina Hadžić, University of Sarajevo	
10:15-10:45	Water management and adaptation to climate change	Emina Hadžić, Suvada Šuvalija, Hata Milišić, Suada Sulejmanović, Ammar Šarić, University of Sarajevo	
10:45-11:15	EU Water Policy – Water Framework Directive	Emina Hadžić, University of Sarajevo	
11:15-11:45	Introducing EU best practices in the water sector	Hata Milišić, University of Sarajevo	
11:45-12:30	General discussion: Implementation of EU Water Framework Directive in the water sector in Serbia		
12:30-13:00	Final remarks and closing the event	Emina Hadžić, University of Sarajevo	











2.7 University of Novi Sad (UNS)

As a part of the WP6 Dissemination and exploitation, A6.4 Roundtables with non-academic sector, University of Novi Sad (UNS) has organized a session with representatives of the Public Water Management Company Vode Vojvodine, Novi Sad. The roundtable was organized on 13th October 2021. The round table was held in line with the previously prepared roundtable agenda.

The round table was organised in 4 sessions. During the first session, Dr. Maja Petrović presented the main objectives of the SWARM project as well as the Project deliverables. The second session contained the information about the modernized study program at UNS with detailed description of learning outcomes and new competences. EU best practices and innovations in the water sector were presented within the third session while fourth session was organised as a discussion with non-academic sector about the status of EU Water Framework Directive implementation process in Serbia.

During the final conclusions the participants discussed the possibilities for future cooperation within national and international project calls and UNS internship.

The roundtable finished at 12:00.



Wednesday, 13 th October 2021				
Face	Face-to-face (Public Water Management Company Vode Vojvodine, conference room)			
09:00-09:30	Presentation of SWARM project	Maja Petrović, University of Novi Sad		
09:30-10:00	Presentation of the modernized study program at UNS	Maja Petrović, University of Novi Sad		
10:00-10:45	Presentation of EU best practices and innovations in the water sector	Maja Petrović, University of Novi Sad		
10:45-11:30	General discussion: Implementation of EU Water Framework Directive in the water sector in Serbia			
11:30-12:00	Final remarks and closing the event	Maja Petrović, University of Novi Sad		















3 Statistics of organized roundtables in the WB region

This section aims to present some statistical data for the organised roundtables in the WB region. In total, seven roundtables were organised by the WB partner HEIs. During the trainings, 124 participants took part in roundtables, i.e. UNI-31, UNS-6, UNSA-11, UNMO-32, UPKM-14, AASKM-11 and UOM-19.

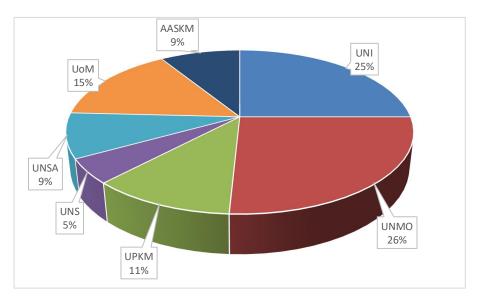


Figure 1. Percentage of participants per each roundtable

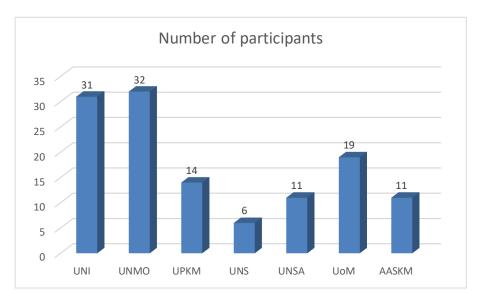


Figure 2. Number of participants at each roundtable per WB partner HEI

Representatives from 39 non-academic institutions took part in roundtables, i.e. UNI-6, UNMO-6, UPKM-5, UNSA-6, UOM-8, AASKM-7.

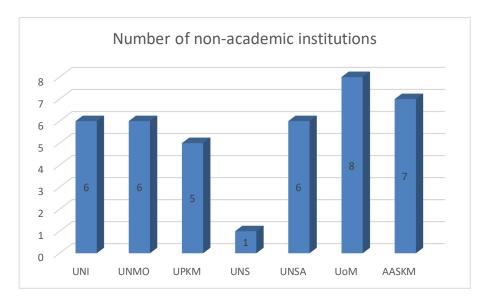


Figure 3. Number of non-academic institutions per each roundtable

Out of 124 participants, 77 participants were from the non-academic sector i.e. 62% and 47 participants or 38% were from the academic sector.

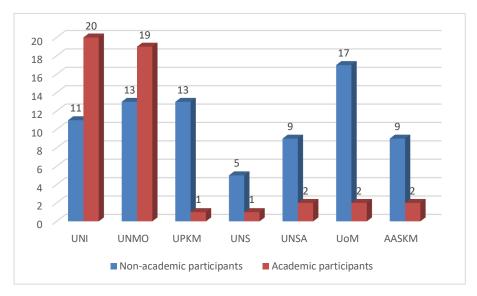


Figure 4. Number of academic and non-academic participants per each WB HEI

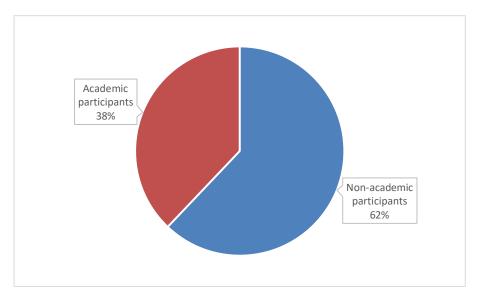
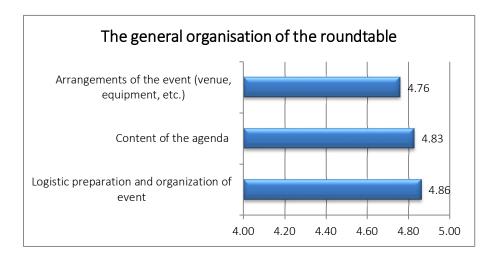


Figure 5. Percentage of academic and non-academic participants

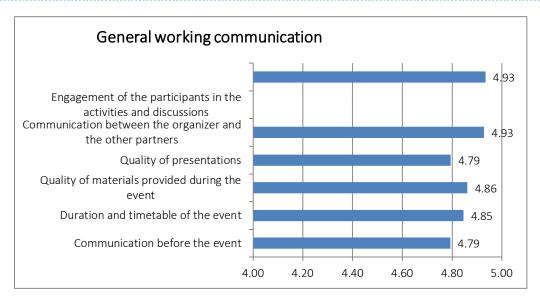
Evaluation details

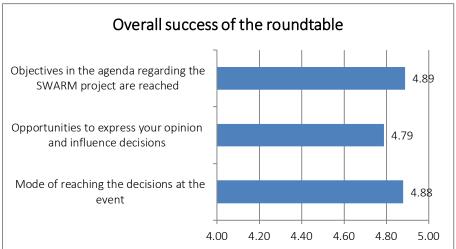
The following elements were evaluated:

- > general organisation of the event,
- general working communication,
- > overall success of the event.











4 Developed promotional material

For the promotion of developed training in the field of water resources management leaflet have been designed in English and Serbian.





Report on organized roundtables with the non-academic sector







Report on organized roundtables with the non-academic sector

ERAZMUS+ Projekat 👚 Razvoj master kurikuluma za upravljanje vodnim resursima u visokoškolskim institucijama na Zapadnom Balkanu



SESIJA 1: Upravljanje vodama i adaptacija na klimatske promene

SESIJA 2: Voda - deficitaran resurs

SESIJA 3: Upravljanje rizicima od poplava i suša

SESIJA 4: Upravljanje kvalitetom voda

SESIJA 5: Tretman otpadnih voda i ponovna upotreba tretiranih otpadnih voda

sesija 6: ∖IT alati u upravljanju vodnim resusrsima

SESIJA 7: Inovacije u sektoru vodoprivrede



KANALIZACIJA Retencija Vodotok

Zagađenje sliv
Prečišćavanje Suša Zagađenje

PROGRAM

TRENINGA:

Nedostatak vode podzemne v Izvor TANK nedostatak vode

drenaža Olujne vode prirodno voda za piće Hidrologija ISPUST ZA VODU RESURSI vodna zona

Navodnjavanje Hidraulika

OPIS TRENINGA:





CILJEVI TRENINGA:

SWARM projekat - posebni ciljevi:

- Unapređenje nivoa kompetencija i veština u visokoškolskim insititucijama Zapadnog Balkana
- Osmišljavanje i implementacija sedam novih i savremenih laboratorija
- Razvoj i implementacija kurseva celoživotnog obrazovanja u sektoru vodoprivrede

harmonizacija Bolonja veštine Inovativno

UNAPREĐENJE PROFESIONAL VEŠTINA

Moderan kurikulum

napredan laboratorija znanje



SWARM

Obučeni profesionalci spremni su da upravljaju vodnim resursima efikasno i održivo!