

Twinning excellence on organic soil amendments effect on nutrient and contaminant dynamics in the subsurface

## **WORKSHOP ANNOUNCEMENT**

The TwinSubDyn project consortium is pleased to announce  
**first international workshop!**

# **Organic soil amendments impact on soil organic matter and nutrient characteristics and dynamics**

26-29 September 2023  
University of Novi Sad, Dr Zorana Đinđića 1  
Novi Sad, Republic of Serbia (and online)

## Workshop background

Current agricultural practices result in harmful environmental effects, including three key problems. Two major issues need to be addressed: deterioration of soil as a key non-renewable resource in our lifetime, groundwater pollution. Additionally, globally valuable resources are continuously lost through waste streams. Therein, organic-based wastes such as biomass residues and biosolids can emit substantial amounts of greenhouse gases if landfilled or burned off. Thus, strategies to utilize these resources following concepts of circular economy are urgently needed. Nowadays, all this waste streams can be used as soil organic amendments. To support further development and a safe and useful application of organic amendments, the TwinSubDyn consortium has developed a project to study the impact of organic soil amendments quality on the soil and the environment. To share knowledge on this topic with a broader scientific community, the project partners are organizing workshop that will focus on the effects of organic soil amendments on soil organic matter and nutrient dynamics. We invite you to view the agenda of the workshop on the following pages and to join us in person or online.

University of Novi Sad Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental protection



University of Vienna, Centre for Microbiology and Environmental Systems Science



universität wien

Forschungszentrum Jülich, The Institute of Bio- and Geosciences Agrosphere (IBG-3)



JÜLICH  
Forschungszentrum

Martin-Luther-Universität Halle-Wittenberg, Soil Biogeochemistry



MARTIN-LUTHER-UNIVERSITÄT  
HALLE-WITTENBERG

Spanish National Research Council - Instituto de Recursos Naturales y Agrobiología de Sevilla



Instituto de Recursos Naturales y Agrobiología de Sevilla



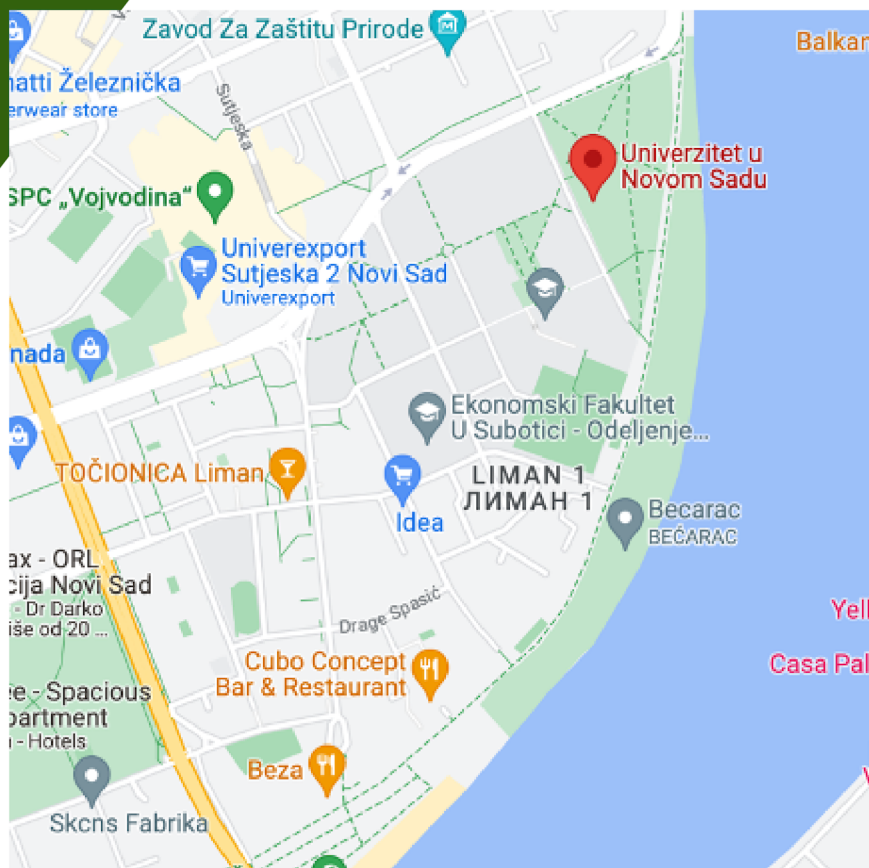
CSIC  
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

## AIMS OF THE WORKSHOP

1. To develop a common understanding of soil organic carbon and his sequestration, as well as gain better understanding of nutrient cycling and transport through the soil and their impact on soil and water quality.
2. To develop new knowledge about organic soil amendments and their impact on soil hydrology and soil organic matter.
3. To review international and Western Balkans region status of nutrients, soil organic carbon and soil organic amendments to identify possible gaps and opportunities for harmonization.
4. To discuss and consider molecular markers and stabile isotope techniques for organic matter or pyrolysis for organic soil amendments analysis.

<b>DAY 1.</b>		<b>26.09.2023. <i>Organic Soil Amendments General Aspects</i></b>	
9:30–10:00	Registration		
	Welcome		
10:00–10:15	Introduction to the workshop objectives and TwinSubDyn project		Snežana Maletić
10:15–10:45	Soil carbon importance and benefits		Heike Knicker
10:45–11:15	General overview of soil organic carbon status in WBC		Snežana Maletić
11:15–11:45	Coffee break		
11:45–12:15	Organic soil amendments for soil carbon management		Roland Bol
12:15–13:00	Soil organic carbon sequestration: importance and State-of-the-Science, Terra Preta phenomenon		Bruno Glaser
13:00–14:00	Networking Lunch		
14:00–14:45	Impact of organic soil amendments on soil hydrology		Lutz Weihermuller
14:45–15:30	Overview of organic soil amendments in WBC		Marijana Kragulj Isakovski
15:30–16:00	Q&A session		
<b>DAY 2.</b>		<b>27.09.2023. <i>Dynamic and Structure of the Soil Organic Matter</i></b>	
10:00 – 10:15	Agenda overview		
10:15–11:00	Assessment of dynamic and structure of the soil organic matter by solid-state NMR data		Heike Knicker
11:00–11:30	Coffee break		
11:30–12:10	Functional analysis of soil organic matter using molecular markers and stabile isotope techniques		Bruno Glaser
12:10–12:50	Composition of the soil and organic soil amendment analysis using pyrolysis techniques (Py-GC/MS)		José A. González-Pérez
12:50 – 13:00	Q&A session		
13:00–14:00	Networking Lunch		
14:00–14:45	Large-scale field experiments for assessment of the impact of organic soil amendment		Arthur Gross
14:45–15:30	Example – Effects of the soil organic amendments on the soil organic matter		Tamara Apostolović
15:30-16:00	Q&A session		

<b>DAY 3. 28.09.2023. <i>Element and Nutrient Dynamics in Soil</i></b>		
10:00 – 10:15	Agenda overview	
10:15 – 10:45	Isotope signatures of biogeochemical processes and nutrient cycling in soil	Roland Bol
10:45 – 11:15	Coffee break	
11:15 –12:00	Modelling of pollutants and nutrient cycling	Lutz Weihermüller
12:00 – 12:45	Turnover and transport of phosphorus in soil aggregates - From macroaggregates to nanoparticles	Jens Kruse and Nina Siebers
12:45 – 13:00	Q&A session	
13:00–14:00	Networking Lunch	
14:00 –14:30	Impact of the fertilization on nitrogen oxides emission	Roland Bol
14:30 –15:00	Water quality and nutrients (Nitrate directive)	Srđan Rončević
15:00 – 15:30	General overview of nutrient status in WBC	Jelena Beljin
15:30 – 16:00	Q&A session	
<b>DAY 4. 29.09.2023. <i>Experimental Examples for Organic Soil Amendments Impact on Soil Assessment</i></b>		
10:00 – 10:15	Agenda overview	
10:15 – 11:30	Demo experiment – Lysimeter experiment	Lutz Weihermüller and Slaven Tenodi
11:30-12:00	Coffee break	
12:00-12:45	Large-scale field experiments for assessment of the impact of organic soil amendment	Marko Šolić
12:45-13:00	Final discussion	
13:00-14:00	Networking Lunch	



## LOCATION

University of Novi Sad  
Dr Zorana Đinđića 1  
21 000 Novi Sad  
Republic of Serbia

**The workshops will be organized in a hybrid format in English. The number of participants is limited, so please let us know as soon as possible if you would like to attend. A registration fee is not required.**

**Link for online participation (MS Teams): will be provided after registration.**

## CONTACT INFORMATION AND REGISTRATION

Reserve your spot: <https://forms.gle/YPQY69ruzwSPfPBc6>

Be sure to mark your calendars! A confirmation mail from TwinSubDyn about your registration will be send to you before event - so be sure to look out for it!

If you have any suggestions for our agenda topic or require further information, please do not hesitate to contact us on our email address:

[twinsubdyn@pmf.uns.ac.rs](mailto:twinsubdyn@pmf.uns.ac.rs)

More information about the event and TwinSubDyn project are available at:

<https://twinsubdyn.pmf.uns.ac.rs/> and our social networks

