



# **BEYOND UTILITY REACH?**

## **HOW TO CLOSE THE RURAL ACCESS GAP TO WASTEWATER TREATMENT AND SANITATION SERVICES**

**RURAL WASTEWATER  
TREATMENT WORKSHOP**  
**JANUARY 19-20, 2021**

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## II. SESSION OVERVIEW

<b>Tuesday, 19 January</b>	
13:30	<b>Start of Day 1 - Welcome and introduction</b>
13:40	<p><b>Session 1: Setting the scene – policy context and regional analytical work in field of rural wastewater management</b></p> <p>Presentation of status overview, existing EU framework and requirements, findings and recommendations from advisory and analytical works on the topic of rural wastewater</p>
15:00	<i>Break</i>
15:15	<p><b>Session 2: The enabling environment - approaches to wastewater management at national level (legal, financial, regulatory)</b></p> <p>Presentation of rural wastewater management experiences from individual countries, including policy and regulatory-related challenges</p>
16:30	<i>End of Day 1</i>

<b>Wednesday, 20 January</b>	
13:30	<b>Start of Day 2</b>
13:30	<p><b>Session 3: Good practices at municipal level</b></p> <p>Showcasing examples of good practices in the development of rural wastewater projects/systems at municipal level from different countries</p>
14:45	<i>Break</i>
15:00	<p><b>Session 4: Technical solutions and developments in rural wastewater management</b></p> <p>Review of experience in the implementation of different technical solutions, including small scale, compact, low-cost and nature-based technologies</p>
16:15	<p><b>Session 5: Wrap-up and closing</b></p> <p>Key take-away messages from the event</p>
16:45	<i>End of Day 2</i>

## III. THE ORGANIZERS

### 1. World Bank Danube Water Program

The World Bank / IAWD Danube Water Program supports **smart policies, strong utilities and sustainable water and wastewater services** in the Danube region by partnering with regional, national and local stakeholders, promoting an informed policy dialogue around the sector's challenges and strengthening the technical and managerial capacity of the sector's utilities and institutions.

Governments and water professionals in the Danube region face a double challenge of meeting their citizens' demand for universal, good quality, efficient, and financially sound or - in one word - sustainable water and wastewater services, while catching up to the environmental requirements of the European Union *acquis communautaire*. To address this double challenge, the World Bank and the International Association of Water Service Companies in the Danube River Catchment Area (IAWD) have partnered in the frame of the Danube Water Program, with a 13 million Euro, three-phased financing from the Government of Austria.

#### What has the Program achieved?

The Danube Water Program was formally launched in May 2013 in partnership with line ministries, regulators, waterworks associations, and local government representatives of a dozen countries in South-East Europe. Since the launch of the Program, knowledge exchanges among more than a thousand sector professionals and policy makers in the region and beyond has taken place. In 2015 a State of the Sector report was launched (SoS 2015), and updated in 2018 (SoS 2018), which are flagship products of the Danube Water Program, next to additional analytical pieces exploring status and trends in wastewater management, rural water supply and sanitation and agglomeration of utilities. Capacity building programs benefiting over 170 utilities have been undertaken under the region wide Danube Learning Partnership (D-LeaP) involving cooperation with all the national water utility associations. Numerous local initiatives worth more than € 1,000,000 through competitive grants have been supported.

[www.danube-water-program.org](http://www.danube-water-program.org)

[www.iawd.at](http://www.iawd.at)

### 2. International Commission for the Protection of the Danube River (ICPDR)

The International Commission for the Protection of the Danube River (ICPDR) works to ensure the sustainable and equitable use of waters in the Danube River Basin. The work of the ICPDR is based on the Danube River Protection Convention (DRPC), the major legal instrument for cooperation and transboundary water management in the Danube River Basin.

The ICPDR addresses the entire Danube River Basin, comprising 19 countries, making it the most international river basin in the world. Including more than 300 tributaries and connected groundwater resources too, this makes the ICPDR one of the largest and most active international river basin management commissions in the world.

In 2000, the ICPDR contracting parties nominated the ICPDR as the platform for the implementation of all transboundary aspects of the EU Water Framework Directive (WFD) and development of the International Danube River Basin Management Plans.

#### The goals of the ICPDR

Three key elements of the ICPDR's management plans provide the three pillars of action that are needed for the Danube to achieve: i) a Cleaner Danube – this means reducing pollution from settlements, industry and agriculture; ii) a Healthier Danube – this means protecting rivers as ecosystems that provide a living environment for aquatic animals and plants, as well as services for people such as drinking water and recreation; and iii) a Safer Danube – this means a safer environment for people to live without the fear of major flood damage.

[www.icpdr.org](http://www.icpdr.org)

## IV. TUESDAY, JANUARY 19<sup>TH</sup>

### 1. Setting the Scene – Policy context and regional analytical work in the field of rural wastewater management

**Date:** Tuesday, January 19<sup>th</sup>  
**Time:** 13:30 to 15:00  
**Location:** [https://zoom.us/webinar/register/WN\\_k4i7LijCS2yFDgRUVsoAwQ](https://zoom.us/webinar/register/WN_k4i7LijCS2yFDgRUVsoAwQ)  
**Chairs:** Mr. Raimund Mair, World Bank and Mr. Adam Kovacs, ICPDR

#### Context and objective

For most of the countries in the Danube region, managing wastewater remains an important challenge to reach water resources protection targets, especially in the context of EU accession and harmonization processes. Analytical work shows that approximately 22 million people remain without flush toilet access in the region. However, Goal 6 of the Sustainable Development Goals (SDGs) underlines the countries' commitment to achieving universal access to water services for all by 2030. In that context, the issue of providing adequate wastewater collection, treatment and disposal in rural areas is often a neglected topic, being overshadowed by wastewater management and compliance requirements of much larger agglomerations in urban areas. The objective of the session is to provide an overview on the policy context, existing frameworks, challenges and first insights into possible approaches and solutions for wastewater management in small agglomerations and rural settlements.

#### Session structure

Time		Content	Speaker
13:30	10'	<b>Welcome</b> and introduction to the event	<b>Raimund Mair</b> , Senior Water Resource Management Specialist, World Bank, Austria, and <b>Adam Kovacs</b> , Technical Expert on Pollution Control, ICPDR
13:40	15'	<b>Overview</b> of existing framework, status and analytic review on rural wastewater management in the Danube region	<b>Günter Langergraber</b> , Institute for Sanitary Engineering and Water Pollution Control, University of Natural Resources and Life Sciences, Vienna
13:55	15'	<b>EU wastewater legislation</b> and relevance for wastewater management in rural areas	<b>Michel Sponar</b> , Deputy Head of Unit, Marine Environment and Water Industry, European Commission, DG Environment
14:10	15'	<b>Regional overview</b> on water quality and wastewater situation in the Danube River Basin	<b>Elena Tuchiu</b> , Director of Department, National Administration Romanian Waters and Chairperson of ICPDR Pressures and Measures Expert Group
14:25	15'	<b>Approaches and lessons on sanitation service provision</b> in rural areas – in the Danube and beyond	<b>Susanna Smets</b> , Senior Water Supply and Sanitation Specialist, World Bank, Washington DC
14:40	20'	<b>Q&amp;A</b>	Moderated by <b>Raimund Mair</b> and <b>Adam Kovacs</b>

## Speakers' biographies



- ▶ **Dr. Günter Langergraber** is Head of the Department of Water, Atmosphere and Environment at the University of Natural Resources and Life Sciences, Vienna (BOKU). His research focusses on nature-based solutions and resources-oriented sanitation systems. The optimisation of treatment wetlands for wastewater treatment is investigated with focus on how process-based dynamic models can help to develop better design models. He is currently Chair of the COST Action Circular City that researches the use of nature-based solutions to create circular economy in urban settings. Additionally, Dr Langergraber is the responsible person for the training courses for operators of small wastewater treatment plants (i.e. less than 50 persons connected) organised by ÖWAV in Austria.



- ▶ **Mr. Michel Sponar** is working, since December 2015, as Deputy Head of Unit at the European Commission, Directorate General for the Environment. He is co-leading a team of 22 persons dealing with Marine Environment and Water Industry. His team is involved in several files such as the revision of the Drinking Water Directive, the review of the Urban Waste Water Treatment Directive and of the Bathing Water directive but also the implementation of the Marine Strategy Framework Directive. He was directly involved in the cooperation with OECD on the assessment of the investment needs and the financing opportunities in the EU water sector. Before joining the water Unit, he was responsible for the preparation of the package on Circular Economy with a focus on the review of the target of the Landfill, the Packaging and the Waste Framework Directives. Prior appointments include ('02-'07) preparation, adoption and follow up of the Thematic Strategy on Air Pollution; Deputy Head of the Minister' Cabinet for the Environment at the Brussels Region – in charge of municipal waste management, waste water management, air and climate, environmental permitting and inspection ('91-02); and 3 years in the Seychelles and Madagascar in development projects related with rural development and environment. His academic background is Bio Engineer (Scientific education) with a complement in Business Management.



- ▶ **Ms. Elena Tuchiu**, being a chemist with a PhD, started her career as researcher in the wastewater treatment department of the National Institute for Environmental Protection. Since 2001, she has worked for the national water management authority (NA "Romanian Waters") participating to the implementation of the EU water related legislation in Romania. At present she has the tasks and responsibilities of the Integrated Water Resources Management Department director, coordinating the activities for elaboration and updating the National Management Plan and the River Basin Management Plans, issuing water management permits and licenses, quality protection and monitoring of water resources and quantitative management and hydrology and hydrogeology network activities. At the Danube River Basin level, she is the Romanian member of the River Basin Management Expert Group and the Pressures and Measures EG chairperson, contributing to all related activities and reports and to the Danube RBMP elaboration and updating. Mrs. Tuchiu is involved in the activities of the EU Water Framework Directive Common Implementation Strategy process.



- ▶ **Ms. Susanna Smets** is a Sr. Water and Sanitation Specialist with the Europe and Central Asia Global Water Practice. She now leads several rural water supply and sanitation investment programs as well as technical assistance to support sector reform, such as in Moldova, Kyrgyz Republic and Tajikistan, with previous experience in East-Asia and Pacific and India. She coordinates the Bank's Community of Practice on Rural Water Supply, Sanitation and Hygiene globally. Susanna has over 20 years of professional experience in water supply, sanitation and water resources management. Prior to joining the World Bank in 2011, she worked in the Middle East and Asia for GiZ, DFID, private sector and a Dutch water utility. She holds a Masters in Water Resources Management from Wageningen University in The Netherlands and a Masters of Business Administration from the Open University in the UK.



- ▶ **Mr. Raimund Mair** joined the World Bank Group Water Global Practice in January 2019. In his position as Senior Water Resource Management Specialist he is involved in addressing aspects related to Water Security in the Europe and Central Asia region, as well as leading the 3rd Phase of the Danube Water Program. In his previous occupations at the European Commission and the International Commission for the Protection of the Danube River, he was working on the implementation of the EU Water Framework Directive and transboundary cooperation. Mr. Mair holds diplomas in Engineering from the University of Natural Resources and Life Sciences, Vienna and Water Policy from Cranfield University, United Kingdom.



- ▶ **Mr. Adam Kovacs** is a civil engineer with specialization in water quality management. He graduated from the Budapest University of Technology and Economics. He received a PhD in water resources management from the Vienna University of Technology. He worked in the academic sector as professor and research assistant for 12 years focusing on water quality modelling and management. Since 2013 he has been working as the Technical Expert on Pollution Control at the Permanent Secretariat of the International Commission for the Protection of the Danube River. He coordinates the technical work of the Pressures and Measures Expert Group, Accident Prevention and Control Expert Group and Nutrients Task Group.

## 2. The enabling environment: approaches to wastewater management at national level (legal, financial, regulatory)

**Date:** Tuesday, January 19<sup>th</sup>  
**Time:** 15:15 – 16:30  
**Location:** [https://zoom.us/webinar/register/WN\\_k4i7LijCS2yFDqRUVsoAwQ](https://zoom.us/webinar/register/WN_k4i7LijCS2yFDqRUVsoAwQ)  
**Chair:** Mr. Adam Kovacs

### Context and objective

The EU Urban Wastewater Treatment Directive (UWWTD) obliges EU Member States to construct sewer systems and introduce at least secondary (biological) treatment at all agglomerations bigger than 2,000 Population Equivalents (PE) and also at those below 2,000 PE where sewer systems are already in place. Complying with these ambitious requirements brings on one hand positive impacts on water quality and the environment, on the other hand it has substantial financial, administrative and regulatory implications. While investment priorities are usually set to mid-sized and large agglomerations, construction projects and service provision are often lagging behind in small agglomerations and rural communities below 2,000 PE where lack of management and technical capacity and affordability issues may further hinder measure implementation and where decentralized systems and nature-based solutions may offer an alternative to be considered. The UWWTD also states that individual and other appropriate systems (IAS) as exceptions shall be used if constructing wastewater collection system is economically not feasible or would not result in environmental benefit. However, it remained ambiguous how the provision of IAS becomes justified. In many countries an appropriate legal, administrative and regulatory framework for service provision at small agglomerations and for applying IAS is still missing.

By inviting high-level government representatives from three Danube countries, the session will focus on the policy-making aspects of wastewater management in small (rural) agglomerations and individual treatment systems. Legislative background, measure implementation, financing possibilities and regulatory challenges will be presented and discussed.

### Session structure

Time		Content	Speaker
15:15	5'	<b>Introduction</b>	<b>Adam Kovacs</b>
15:20	10'	<b>Austrian</b> experience in rural wastewater management	<b>Heide Müller-Rechberger</b> , Head of Department, Directorate-General I – Water Management, Federal Ministry of Agriculture, Regions and Tourism, Austria
15:30	10'	Wastewater solutions for settlements under 2000 PE in <b>Hungary</b>	<b>Gabriella Krempels Muranyine</b> , Head of Department, Directorate of River Basin Management, Ministry of Interior, Hungary
15:40	10'	Challenges and solutions for rural wastewater management in <b>Romania</b>	<b>Gheorghe Constantin</b> , Director, Directorate for Water Resources Management, Ministry of Environment, Waters and Forests, Romania
15:50	30'	<b>Discussion</b>	Moderated by <b>Adam Kovacs</b>
16:20	10'	<b>Summary of event day 1</b>	
16:30		<b>End of day 1</b>	

## Speakers' biographies



- ▶ **Ms. Heide Müller-Rechberger** is head of the Directorate “Plant-related Water Management” at the Austrian Federal Ministry for Agriculture, Regions and Tourism. Her Directorate is responsible for the Urban Wastewater Treatment Directive, all water-related aspects of the Industrial Emissions Directive, as well as for the Austrian Federal Ordinances on Wastewater Emissions. In the first 15 years of her professional career, Heide has followed a professional career in the private sector. As consulting engineer and project manager in plant engineering and construction, she has designed and supervised the construction of wastewater plants in both Europe and Northern Africa.



- ▶ **Ms. Gabriella Krempels Muranyine** is the Head of the Department for Water Management, Ministry of Interior, Hungary (since 2010). Prior appointments include: Deputy Head of Department for Water Management (2003); Government official, responsible for public utilities in Hungary (2000); and designer and senior designer, specialized in wastewater collection and treatment ('83-'00). She holds a MSc in Civil Engineering from the Technical University of Budapest. She has also served as a lecturer on Water Management at the Technical University of Budapest and the Technical University of Karlsruhe ('95-'05).



- ▶ **Mr. Gheorghe Constantin** is director for water resources management within the Ministry of Environment, Waters and Forests. In this position he is in charge with the coordination of implementation of the EU water and marine directives in Romania, particularly, Urban Waste Water Directive, Nitrate Directive, Water Framework Directive and Marine Strategy Directive. For more than 25 years he is involved in the cooperation developed within the International Commission for the Protection of the Danube River and Black Sea Commission. Starting from 2007, he was the chair of the Eastern European, Caucasus and Central Asia component of the European Union Water Initiative. Within the European Union Strategy for the Danube Region he is co-coordinator of the Priority Area 5 –Management of the Environmental Risks.



- ▶ **Mr. Adam Kovacs** is a civil engineer with specialization in water quality management. He graduated from the Budapest University of Technology and Economics. He received a PhD in water resources management from the Vienna University of Technology. He worked in the academic sector as professor and research assistant for 12 years focusing on water quality modelling and management. Since 2013 he has been working as the Technical Expert on Pollution Control at the Permanent Secretariat of the International Commission for the Protection of the Danube River. He coordinates the technical work of the Pressures and Measures Expert Group, Accident Prevention and Control Expert Group and Nutrients Task Group.

## V. WEDNESDAY, JANUARY 20<sup>TH</sup>

### 3. Good practices at the municipal level

**Date:** Wednesday, January 20<sup>th</sup>  
**Time:** 13:30 to 14:45  
**Location:** [https://zoom.us/webinar/register/WN\\_k4i7LijCS2yFDqRUVsoAwQ](https://zoom.us/webinar/register/WN_k4i7LijCS2yFDqRUVsoAwQ)  
**Chair:** Mr. Stjepan Gabric

#### Context and objective

While institutional and national requirements for wastewater management usually define expected effluent standards and compliance periods, rural wastewater management approaches chosen by individual local government units and responsible service providers to achieve given requirements vary significantly depending on the combination of economic, social and technical possibilities. A particular challenge remains in the need to cover the costs of operation of rural wastewater systems, while keeping tariffs at the relatively low, and maintaining service affordability for the local population with income that is commonly, at average lower than in urban areas.

The objective of this session is to showcase different examples of good practices in the development of rural wastewater projects/systems at municipal level from countries of the region and EU. During the session representatives from managing institutions will present their experience in the development and operation of rural wastewater management systems.

#### Session structure

Time		Content	Speaker
13:30	5'	<b>Introduction</b>	<b>Stjepan Gabric</b> , Senior Water Supply and Sanitation Specialist, World Bank
13:35	15'	Rural wastewater management in Serbia	<b>Prvoslav Marjanovic</b> , Advisor to Director, Institute for Water Resources Development `Jaroslav Cerni`, Beograd, Serbia
13:50	15'	Rural wastewater treatment provided by a water cooperative in Upper Austria	<b>Wolfgang Aichseder</b> , General Manager, OÖ WASSER Genossenschaftsverband, Linz, Austria
14:05	15'	Organization and costs of wastewater treatment in low density area of Portugal	<b>Nuno Broco</b> , Executive Vice President of Águas de Portugal Serviços Ambientais, Lisbon, Portugal
14:20	25'	<b>Discussion</b>	
14:45		<b>End of Session 3</b>	

## Speakers' biographies



- ▶ **Mr. Prvoslav Marjanovic** has extensive teaching and research experience stemming more than 25 years of teaching at Universities in Europe, North America and Africa, and held the Chair of Environmental Engineering at WITS University in Johannesburg for 15 years before retiring from Academia. For last 10 years he has been Principal researcher and Advisor to Director general of the Jaroslav Černi Water Institute in Belgrade, Serbia.



- ▶ **Mr. Wolfgang Aichlseder** is the general manager of OOE Wasser ([www.ooewasser.at](http://www.ooewasser.at)) umbrella organisation of nearly 2000 water cooperatives (for watersupply, wastewater treatment, flood control, drainage, irrigation and small hydro power plants) and rural communities in Upper Austria. His work focusses to develop, implement and operate support- and service activities to the members with further education tools, platform for procurement, insurance cover, information- and stakeholder-networking in water management. Wolfgang Aichlseder holds diplomas in Engineering from the University of Natural Resources and Life Sciences, Vienna, Austria and Water Management from Hannover University, Germany.



- ▶ **Mr. Nuno Brôco** has more than 20 years of experience in private and public companies management, both in the Water Supply and Wastewater Sector in Portugal and Multinational context. Currently he's the Executive Vice President of Águas de Portugal Serviços Ambientais, the AdP group company responsible to foster innovation, digital transition and circular economy and also performs as Team Leader of the AdP Group team responsible to support the Utilities of The Future initiative launched by the World Bank Global Water Practices. Previously he was the Head of the Engineering Department of Águas de Portugal Group shared Services Company, Board Member of the Portuguese largest wastewater treatment company and also responsible for the Corporate Innovation in AdP Group, promoting partnerships with academia, public utilities and private sector, applications to both national and international founding instruments and coordinating several R&D projects.



- ▶ **Mr. Stjepan Gabric** holds an MSc in wastewater engineering from IHE Delft, and BSc in water engineering from Civil Engineering Faculty in Zagreb. For nearly thirty years, out of which sixteen years in the World Bank, he has been involved in a design, implementation and planning of a wide range of water and wastewater projects, and analytical studies mainly in Eastern and South-Eastern Europe. He is core member of Danube Water Program World Bank team since 2014 and is currently involved in World Bank water operations in Belarus, Russian Federation and Western Balkan. He is also the main author of study on impact of UWWTD on wastewater management in Danube basin area.

## 4. Technical solutions and developments in rural wastewater management

**Date:** Wednesday, January 20<sup>th</sup>  
**Time:** 15:00 to 16:15  
**Location:** [https://zoom.us/webinar/register/WN\\_k4i7LijCS2yFDqRUVsoAwQ](https://zoom.us/webinar/register/WN_k4i7LijCS2yFDqRUVsoAwQ)  
**Chair:** Mr. Stjepan Gabric

### Context and objective

Rural, commonly small scale, wastewater management technology is often in shadow of large, urban wastewater management and treatment schemes. While some of the technological approaches taken mimic conventional, urban treatment technology reduced in scale, the recent period is characterized by the development of original, purposely developed rural wastewater systems. The trend that is particularly important is the development and application of compact, nature-based treatment processes, that are simple to operate and have low operation and maintenance costs, which is of key importance considering a lack of operation capacity for system management in rural communities. Further subgroups are technological solutions for wastewater treatment of individual households or objects in isolated areas, where challenges of rural wastewater treatment are further enhanced due to very small size, need to keep operation costs at low level without economy of scale, and lack of system operation capacity at the site.

The objective of this session is to present experience in the implementation of different technical solutions for rural wastewater collection and treatment, with a focus on small scale, compact, low-cost and nature-based technologies. The session will present which technical possibilities are available and how they work in practice.

### Session structure

Time		Content	Speaker
15:00	5'	<b>Introduction</b>	<b>Stjepan Gabric</b> , Senior Water Supply and Sanitation Specialist, World Bank
15:05	15'	Overview on small-scale/decentralized wastewater treatment technologies and their performance	<b>Günter Langergraber</b> , Institute for Sanitary Engineering and Water Pollution Control, University of Natural Resources and Life Sciences, Vienna, Austria
15:20	15'	VillageWaters – Sustainable Solutions for Small-Scale Wastewater Treatment in Baltic Sea Region	<b>Jari Heiskanen</b> , M.Sc in Chemical Engineering, SYKLI Environmental School of Finland, Helsinki, Finland
15:35	15'	Presentation of nature-based solutions, constructed wetlands in Slovenia	<b>Anja Potokar</b> , Engineer, Limnos Ltd., Company for applied ecology, Ljubljana, Slovenia
15:50	25'	<b>Discussion</b>	
16:15		<b>End of session</b>	

## Speakers' biographies



- ▶ **Dr. Günter Langergraber** is Head of the Department of Water, Atmosphere and Environment at the University of Natural Resources and Life Sciences, Vienna (BOKU). His research focusses on nature-based solutions and resources-oriented sanitation systems. The optimisation of treatment wetlands for wastewater treatment is investigated with focus on how process-based dynamic models can help to develop better design models. He is currently Chair of the COST Action Circular City that researches the use of nature-based solutions to create circular economy in urban settings. Additionally, Dr Langergraber is the responsible person for the training courses for operators of small wastewater treatment plants (i.e. less than 50 persons connected) organised by ÖWAV in Austria.



- ▶ **Mr. Jari Heiskanen**, M.Sc. in Chemical Engineering, has more than 20 years' experience in water treatment businesses in several water treatment sector: municipal, chemical industry and power plants, including project management, quality and environmental issues, sales and R&D. Nowadays Jari is a project manager and trainer at SYKLI Environmental School of Finland in Helsinki, and has managed several wastewater treatment projects, both in national and in EU-level. The latest Interreg Baltic Sea projects he has been involved are: Water emissions and their reduction in village communities – villages in Baltic Sea Region as pilots (VillageWaters) and Platform on Integrated Water Cooperation (BSR Water).



- ▶ **Ms. Anja Potokar** has a BSc's degree in water management and municipal engineering from Faculty of civil and geodetic engineering of University of Ljubljana. She is specialized in designing, developing, and implementing different nature-based solutions, such as constructed wetlands for wastewater treatment and reed beds for sludge mineralisation and stabilisation. In recent years she has been involved in different NBS design and feasibility tasks in Slovenia and other Western Balkan countries. She can recognise and design the process units and functions involved in the treatment chain to achieve the required water quality standards. She is certified from Slovenian Chamber of Engineers.



- ▶ **Mr. Stjepan Gabric** holds an MSc in wastewater engineering from IHE Delft, and BSc in water engineering from Civil Engineering Faculty in Zagreb. For nearly thirty years, out of which sixteen years in the World Bank, he has been involved in a design, implementation and planning of a wide range of water and wastewater projects, and analytical studies mainly in Eastern and South-Eastern Europe. He is core member of Danube Water Program World Bank team since 2014 and is currently involved in World Bank water operations in Belarus, Russian Federation and Western Balkan. He is also the main author of study on impact of UWWTD on wastewater management in Danube basin area.

## 5. Wrap up and Closing

**Date:** Wednesday, January 20<sup>th</sup>  
**Time:** 16:15 to 16:45  
**Location:** [https://zoom.us/webinar/register/WN\\_k4i7LijCS2yFDqRUVsoAwQ](https://zoom.us/webinar/register/WN_k4i7LijCS2yFDqRUVsoAwQ)  
**Chair:** Mr. Raimund Mair and Mr. Adam Kovacs

### Context and objective

This session will allow to summarize the key take home messages, draw conclusions, reflect on the lessons learned and identify potential future actions.

### Session structure

Time		Content	Speaker
16:15	15'	<b>Summary</b> , conclusions, lessons learned and potential future actions	<b>Günter Langergraber</b> , Institute for Sanitary Engineering and Water Pollution Control, University of Natural Resources and Life Sciences, Vienna
16:30	10'	<b>Q&amp;A</b>	
16:40	5'	<b>Closing words</b> by event coordinators	<b>Raimund Mair</b> and <b>Adam Kovacs</b>
16:45		<b>End of session</b>	

## VI. WORKSHOP SUPPORTERS

The organization of the 2021 Rural Wastewater Treatment Workshop has been made possible through institutional support from:

-  **Federal Ministry  
Republic of Austria  
Finance**

## VII. LOGISTICAL DETAILS

### Registration

Please register yourself to participate in the 2021 Rural Wastewater Treatment Workshop using the [Registration link](#). As soon as you have registered, you will receive a link via email to join the event.

### Zoom

The 2021 Rural Wastewater Treatment Workshop will be brought to you by the Zoom webinar tool. We recommend to download the Zoom App (for PC and mobile devices) [here](#).

### GDPR Disclaimer

The event will be fully recorded. We reserve the right to use the recording for publication on our websites (iawd.at, danube-water-program.org, d-leap.org, worldbank.org), and social media channels. By participating in the event, you agree to the disclaimer above.

For further information, please download the data privacy statement of IAWD on our website: [www.iawd.at](http://www.iawd.at)

### Contacts

In case of any questions with regard to logistics of your participation, please contact the organizers via email:

- ▶ World Bank: Kathia Havens: [khavens@worldbank.org](mailto:khavens@worldbank.org)