

THE IMPORTANCE OF WATER SECTOR DATA IN THE DIGITAL AGE

2020 DANUBE WATER FORUM

Report, December 2020

CONTENTS

I. Agenda Outline	3
II. The Organizers	4
1. World Bank / IAWD Danube Water Program	4
III. The Participants	5
IV. Session overview	7
1. Opening and Keynote: The relevance of data for water management and sustainable service provision.....	7
2. The bigger picture: Water data in the intersectoral context.....	13
3. Data counts: Sound data for smart policies.....	17
4. Data transparency: The value of performance indicators for municipal governments and the general public.....	20
5. Utility strengthening: Improving performance through data collection.....	23
6. Closing Session: Wrap-up and reflections on key messages.....	26
V. Survey Results	31
VI. Forum Supporters	34

I. AGENDA OUTLINE

Tuesday, October 27th	
13:30–14:45	Opening and Keynote: The relevance of data for water management and sustainable service provision
14:45-15:00	<i>Break</i>
15:00-16:15	The bigger picture: Water data in the intersectoral context
Wednesday, October 28th	
13:30–14:45	Data counts: Sound data for smart policies
14:45-15:00	<i>Break</i>
15:00-16:15	Data transparency: the value of performance indicators for municipal governments and the general public
16:15-16:30	<i>Break</i>
16:30-17:00	The Danube Water Forum Lounge
Thursday, October 29th	
13:30–14:45	Utility strengthening: Improving performance through data collection
14:45-15:00	<i>Break</i>
15:00-16:15	Closing: Wrap-up and reflections on key messages

II. THE ORGANIZERS

1. World Bank / IAWD 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.

Why this Program?

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 to launch 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 700 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](#)) and is a flagship product of the Danube Water Program. The report provides an analysis of the region's progress and challenges in providing sustainable water and wastewater services for all and aims to document and inform water services policies and their outcomes in 16 countries of the Danube region. Three additional analytical pieces exploring status and trends in wastewater management, rural water supply and sanitation and agglomeration of utilities have been published. 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.

What is coming now?

Under the Danube Water Program's third phase, the program focuses on the flagship activities developed in the previous phases. The key "legacy" initiatives include the continuation of the Danube Water Conference as the prime gathering of sector professionals in the region; the development and update of key regional analytical and advisory activities, the further development of the benchmarking activities for the whole region; and the implementation of capacity building activities under the Danube Learning Partnership (D-LeaP), a sustainable learning partnership of national and regional water utility associations. In addition, DWP implementation experience of the past seven years has evidenced the need to expand the scope of the program to include water security aspects to remain relevant for the region's countries' challenges.

www.iawd.at
www.worldbank.org/en/topic/water
www.danube-water-program.org

III. THE PARTICIPANTS

The 2020 Danube Water Forum on “The Importance of Water Sector Data in the Digital Age” was held on November 27-29, 2020 and, given the unpredictability of the COVID-19 pandemic situation, the event was held virtually, holding its premiere edition as a three-day series of webinars. By introducing the Danube Water Forum, IAWD and the World Bank continue to organize a yearly exchange amongst the water community in the frame of the Danube Water Program, alternating with the now biennial Danube Water Conferences. Detailed information on the Danube Water Forum including session summaries and recordings can be found on the [DWF website](#).

This year’s Forum brought together around 150 participants from national and local governments, regulatory agencies, water utilities, international financing institutions and professional associations as well as academia, coming from more than 30 countries around the globe.

Figures 1 and 2 show this year’s distribution of participants by institution typology and by country/region.

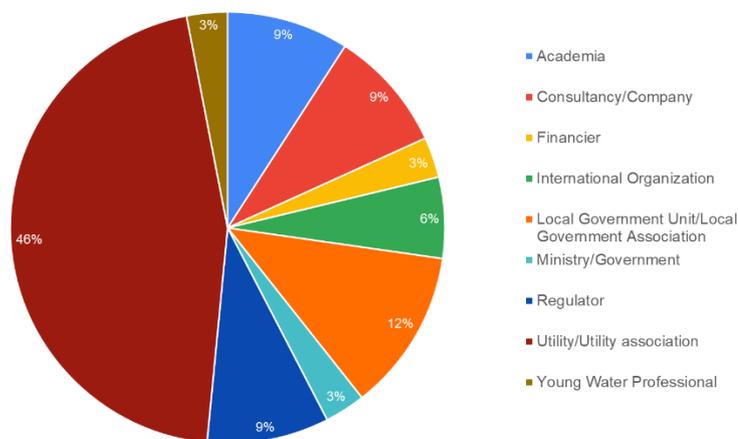


Figure 1 Distribution of 2020 DWF participants by institution typology based on the survey results.

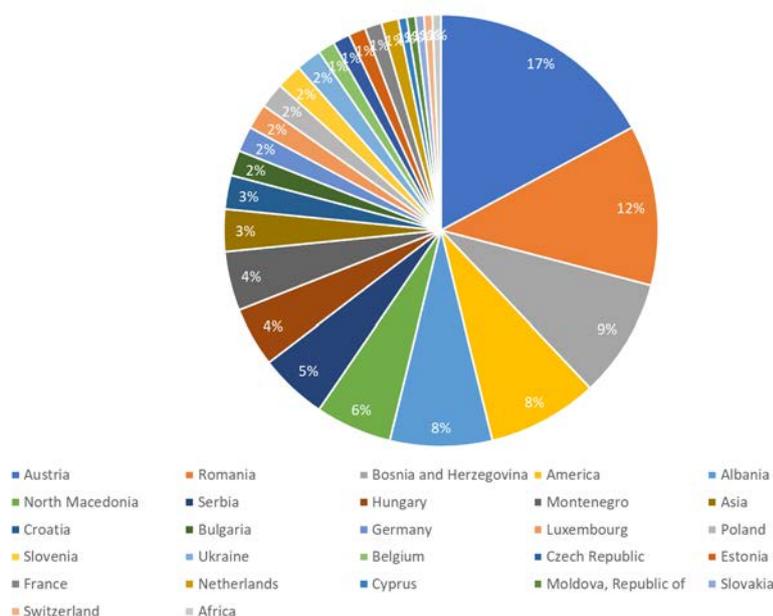


Figure 2 Distribution of 2020 DWF participants by country/region based on the DWF registration

Figure 4 shows the level of continued interest and on-going engagement with DWP knowledge sharing and capacity building events/workshops. However, the event did draw in new participants as well, with 27% of survey respondents answering this was their first DWP event.

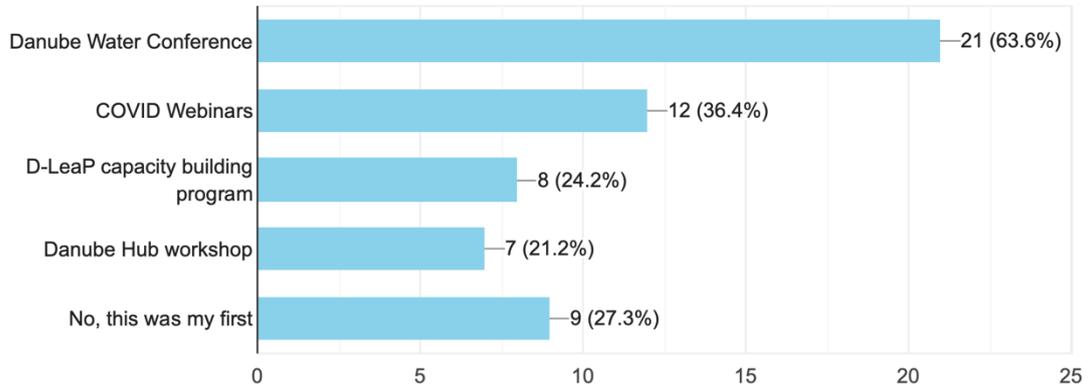


Figure 4 Previous engagement with DWP Workshops and Events

IV. SESSION OVERVIEW

1. Opening and Keynote: The relevance of data for water management and sustainable service provision

Date: Tuesday, October 27th

Time: 13:30 to 14:45

Chairs: Mr. Raimund Mair, World Bank and Mr. Philip Weller, IAWD

Context and objective

The opening and keynote session featured welcoming words from senior representatives of the various institutions organizing, hosting and supporting the 2020 Danube Water Forum and provided an overview of the event's structure. It was followed by a keynote speech and a panel discussion on the subject.

Session structure (recording can be found [here](#))

Time		Content	Speaker
13:30	5'	Introduction	Mr. Raimund Mair , Senior Water Resource Management Specialist, DWP Program Leader, World Bank, Austria and Mr. Philip Weller , Head of Technical Secretariat, IAWD, Austria
13:35	8'	Welcome words by the Hosts	Mr. Milan Gavric , Deputy Minister of Agriculture, Forestry and Water Management of Republic of Srpska, Bosnia and Herzegovina and Mr. Igor Radojicic , Mayor of the City of Banja Luka, Bosnia and Herzegovina
13:43	4'	Welcome words by the Austrian Ministry of Finance	Ms. Elisabeth Gruber , Director for International Financial Institutions, Austrian Federal Ministry of Finance, Austria
13:47	3'	Welcome words by IAWD	Mr. Walter Kling , President, IAWD
13:50	20'	Keynote: The relevance of data for water management and sustainable service provision	Mr. Joachim D'Eugenio , Senior Expert, Directorate General for the Environment, European Commission, EU

14:10	35'	Framing the debate	<p>Moderated by Mr. Raimund Mair, Senior Water Resource Management Specialist, DWP Program Leader, World Bank, Austria and Mr. Philip Weller, Head of Technical Secretariat, IAWD, Austria</p> <ul style="list-style-type: none"> - Ms. Maja Medenica, Head of Asset Management Center, Belgrade Waterworks and Sewerage, Serbia - Mr. Dragan Zeljko, Secretary, International Sava River Basin Commission (ISRBC), Croatia
14:45		End of session	

Speakers' biographies

- ▶ **Mr. Milan Gavric** has been performing the duty of the Deputy Minister since June 2019. Before joining the Ministry of Agriculture, Forestry and Water Management of Republika Srpska, he worked for the governmental organization "Waters of Republika Srpska", as head of flood defense in the area of Central Posavina. He monitored and managed diverse projects in the region. His professional experience is mostly focused on Water Management and Flood Risk Management. Skilled in GIS Application, AutoCAD, HEC-RAS, Earthworks, and Computer-Aided Design (CAD), Mr. Gavric holds a Master degree in Civil Engineering, from the Faculty for Architecture, Civil Engineering and Geodesy of University of Banja Luka.
- ▶ **Mr. Igor Radojicic** is the Mayor of Banja Luka. He holds a master's degree in electrical engineering. As an author and co-author, Radojicic published one book and presented fourteen scientific papers in the field of automation bio-medicine, signal processing and chaos theory at international conferences in Serbia, Montenegro, Croatia, Italy, Austria, the Netherlands and the Czech Republic. He was elected as a member of the Republic of Srpska National Assembly for the first time in the 1998-2000 term, and then again in 2002. He was elected the speaker of the RS National Assembly for the first time in the February of 2006, and again in the November of 2006 and in 2010. He was elected the Mayor of Banja Luka in 2016.
- ▶ **Ms. Elisabeth Gruber** is Director of the Department of International Financial Institutions at the Austrian Ministry of Finance in Vienna since 2017. Previously, she was Senior Advisor at the same department responsible for the World Bank Group portfolio and working on issues related to multilateral development finance. From 2008 to 2010 she served as Alternate Executive Director at the Inter-American Development Bank in Washington, DC. Prior to this, she was dealing with policy issues of the Asian and the Inter-American Development Bank and was responsible for multilateral debt relief at the Ministry of Finance in Vienna. Before joining the Ministry of Finance, she worked for nine years as University Assistant at the Department of Economic Development at the University of Economics in Vienna. She graduated in Business Administration and holds a Doctoral Degree in Development Economics from the University of Economics in Vienna. She also earned a Diploma of International Relations from the Johns Hopkins University in Bologna, Italy.
- ▶ **Mr. Walter Kling** works for the City of Vienna, at Vienna Waterworks. In 2011 he was appointed as Deputy Managing Director of Vienna Waterworks, a position which he still stays on. He serves as IAWD Secretary General since 1993 and currently also as IAWD president since 2017. Walter Kling joined the work of the Austrian Water Association and in 1993, when he was delegated to represent Vienna within IWSA. Since the launch of IWA in 2000, Walter Kling supported the development of the new association in the region of Eastern Europe by organizing a number of events. Maintaining an excellent network of contacts, he applied to organize the IWA – World Water Congress 2008 in Vienna. Starting from 2003, the Congress President Walter Kling served with great commitment to secure best circumstances for IWA, IAWD and the City of Vienna to run a successful conference. In September 2010 he was elected IWA – Vice-President, re-elected in Busan 2012 and served in this position until 2014. In 2010 he

initiated the development of the Danube Water Program, which was launched jointly by the World Bank and IAWD in 2012.

- ▶ **Mr. Joachim D'Eugenio** is an environmental engineer by training and started working in the German Federal Environment Agency (UBA) in Berlin. In 1999, he moved to the European Commission where he was involved in the negotiations and the implementation of the Water Framework Directive until 2007. After a few years in the Commission's Secretariat General, he became Deputy Head of Unit in 2011 working on marine and water industry policy. From 2015 to 2020, he joined the Unit on Compliance & Better Regulation of DG Environment where he was leading the Fitness Check on Environmental Reporting and led the agenda on "digitalization and the environment". Since 16 January 2020, he is working as Policy Assistant and Senior Expert for Veronica Manfredi, the Director for "Quality of Life" in DG Environment focusing on the input to all Green Deal initiatives and coordinating the work on the ["Zero Pollution Ambition"](#).
- ▶ **Ms. Maja Medenica** has been employed with the PUC Belgrade Waterworks and Sewerage (BWS) since 2000 and her current position is the Head of Asset Management Centre. She has large experience as a Coordinator of International project in BWS, cooperating with IFIs and the international consulting companies. During the last fourteen years, she specialized in Integrated Infrastructure Asset Management as team member on several international projects: „Institutional Support Project in Serbian Utilities" (KfW Bank); "Establishment and Operation of an IAWD Asset Management Regional Services Hub"(IAWD and World Bank), "Asset Management Advisory Service to Water Utilities in South East Europe –SEEAM" (Supported by the German Development Cooperation). Since 2015 she is a member of the Association for Water Technology and Sanitary Engineering's (UTVSI) Steering Committee. In the COVID-19 period, she was also engaged as a facilitator in the on-line training „Introduction to Asset Management in the Water Sector" (NALAS). She is a graduate in Civil Engineering, Department of Hydraulic Engineering, from the University of Belgrade and the owner of a degree from the "Post-graduate Specialization Course in Management of Water Resources and Services" – Water Utilities, Turin, Italy.
- ▶ **Mr. Dragan Zeljko** has been the Secretary of the International Sava River Basin Commission (ISRBC) since 2017. Prior to his current position, he served as Deputy Secretary in charge of River Basin Management and Water Planning from the very beginning of the functioning of the ISRBC Secretariat back in 2006. In that position, he coordinated joint activities of the Sava countries in water management, but also in the development of information systems of the ISRBC. Before joining the Commission, Mr. Zeljko worked for 15 years at Agency for watershed of the Adriatic Sea in Mostar (BiH), first as Chief Engineer and then as Technical Director. He started his professional career in a small water management company in Čapljina (BiH). Mr. Zeljko holds a diploma in civil engineering, with major in water management.
- ▶ **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. Philip Weller** has since July 2013 served as the Danube Water Program Coordinator for the International Association of Water Supply Companies in the Danube River Catchment Area (IAWD) administering and managing a joint project together with the World Bank aimed at improving and supporting the efficiency of Danube region water supply and wastewater companies. Mr. Weller previously served for 10 years as the Executive Secretary of the (ICPDR) International Commission for the Protection of the Danube River. Mr. Weller also worked for the World Wildlife Fund for Nature (WWF) as Danube Carpathian Program Director and has also managed successful consulting businesses in both Canada and Austria and has done numerous assignments for governments and international organizations. Philip Weller is an environmental planner by training.

Session Summary

A warm welcome to cyberspace

The Forum theme was “The Importance of Water Sector Data in the Digital Age.” Host Raimund Mair of the Danube Water Program took up the microphone to introduce the event’s supporters who took the stage with their welcome addresses.

Mr. Milan Gavric, Deputy Minister of Agriculture, Forestry and Water Management of Republic of Srpska, Bosnia and Herzegovina reminded the audience that data in itself means very little, but data shared, exchanged and used for the common good can make a huge difference.

Mr. Igor Radojicic, Mayor of the City of Banja Luka treated the audience to a compact presentation on Banja Luka in general and specifically the challenges and ongoing improvements of the communal water supply.

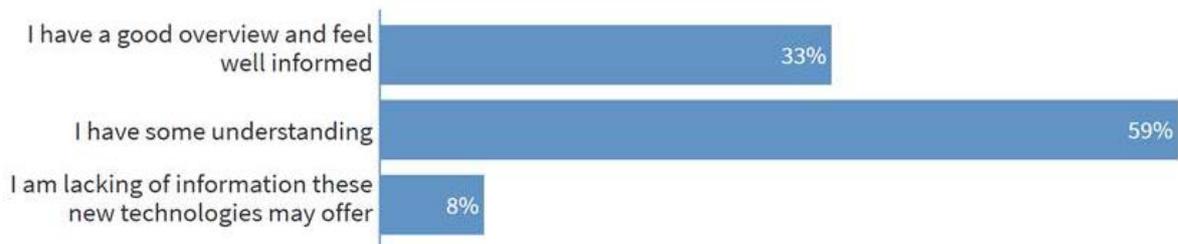
Ms. Elisabeth Gruber, representing the Austrian Federal Ministry of Finance, key donor and a steadfast supporter of the Danube Water Program, remarked in her address that the Forum’s data-related theme could not possibly come timelier, and cited the Danube Water Program’s COVID crisis response webinars and the recent discussions on tracking COVID in wastewater as examples for the value of data.

IAWD President Walter Kling wrapped up the welcome round, expressing regret that the Forum’s original intention to go out into the region needed to be postponed, but also noting with some satisfaction that the water sector has quickly learned to make good use of the digital tools at hand.

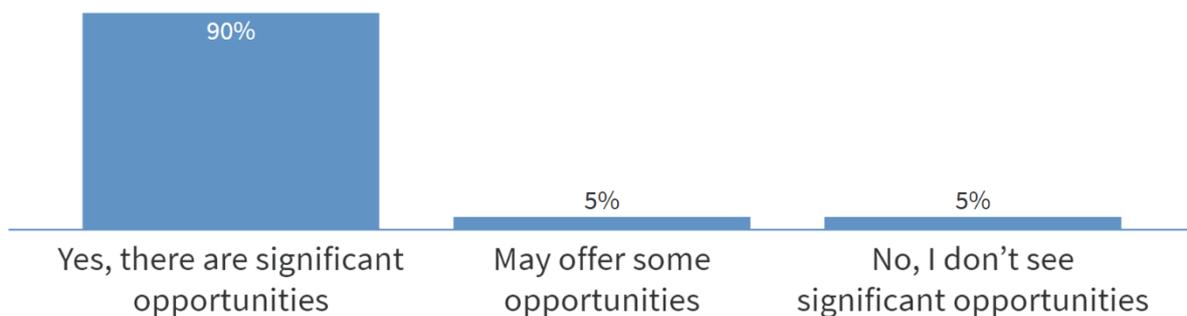
PollEv results

The subsequent round of PollEv questions, an online tool allowing for live polling, paved the way for the keynote presentation:

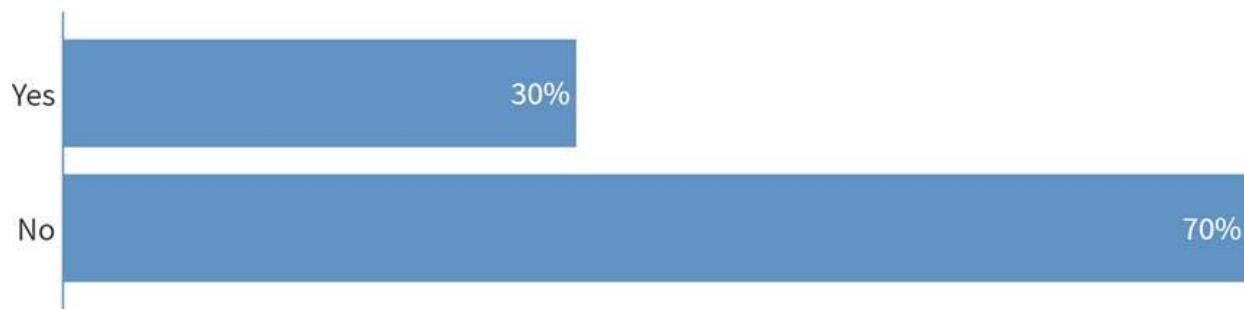
How well are you informed about new developments and opportunities stemming from data management and digitalization?



Do you think that data management and digitalization can offer opportunities for your work?



Have you heard about the European Data Strategy?



The European Perspectives

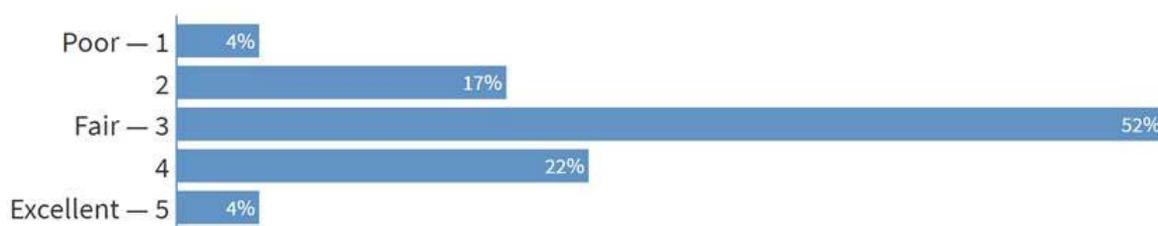
The opening day's first keynote speaker was Joachim d'Eugenio, Senior Expert in the Directorate for 'Quality of Life' (ENV C) at the European Commission's Directorate General Environment. He gave insights into the current reorientation process that the EU is undergoing, reinventing itself as a "Next Generation EU" and building a world where digital technologies help to build a healthier, greener society. The European Green Deal, a long-term visionary agenda to transform Europe and prepare for the pending climate, resource, pollution and biodiversity crises, indeed puts data at the heart of the current European debate and at the center of practically all economic developments. The vision is a Common European Data Space, a single market for data where data are made widely available across sectors according to fair, practical and clear rules for data access and use, to all those who create and innovate.

Adding the municipal and the regional perspectives to the big European picture, Maja Medenica of the Belgrade Waterworks and Sewerage Management and Mr. Dragan Zeljko of the Sava Commission then took the stage. Ms. Medenica, whose Belgrade Waterworks have spent the last 15 years in a step-by-step approach to an exemplary asset management program covering all available water and sewage data, commented: "I'm happy that we now have a Europe-wide vision. Let's get on board. The benefits will be huge." For those who doubt the merits of in-depth data gathering and processing, Ms. Medenica offers anecdotal evidence: "20 years ago, we estimated that Belgrade's water system counts some 2.500 kilometres of pipeline. After analyzing the data, we now know that it is rather 4.000 kilometres, and we can plan repair and maintenance capacities accordingly."

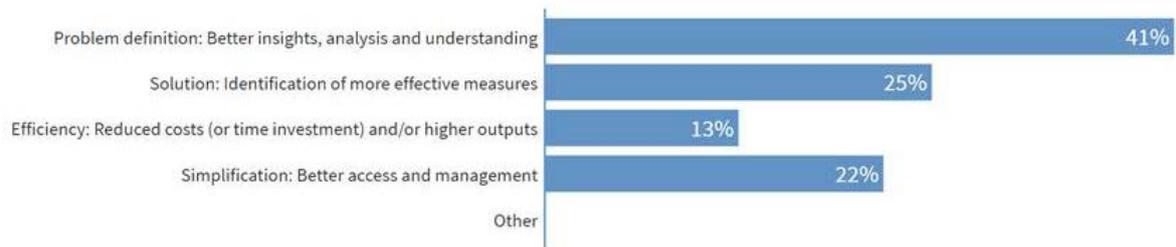
Adding a regional angle to the earlier presented municipal and continent-wide perspectives, Mr. Dragan Zeljko of the Sava Commission looked back on the last 15 years during which the Commission has been in charge of internationally coordinating the Sava River Basin water resources, including sustainable water management. Charged with the coordination of establishing integrated information systems, the Commission watched over the setting up of principal standards and formats to integrate 15 different data systems into one quite elegant and, more importantly, reliably working solution. Looking ahead, Mr. Zeljko welcomed the developments towards a European data strategy with all its challenges and opportunities, closing the day's first session on an optimistic note.

PollEv results

How would you rate data management and digitalization in your area of work in a scale of 1 (poor, not at all up to new standards and technologies) to 5 (excellent, at the forefront of technology)?



From your perspective, what benefits might there be in investing in data and digitalization in your work?



2. The bigger picture: Water data in the intersectoral context

Date: Tuesday, October 27th

Time: 15:00 – 16:15

Chair: Mr. Raimund Mair, World Bank and Ms. Kathia Havens, World Bank

Context and objective

Building a water secure future for the people, the economy and the environment is increasingly becoming topical in the light of global, regional and local changes. This requires planning, developing, and managing water resources, in terms of both water quantity and quality, across all water uses. The process includes institutions, infrastructure and information systems that support and guide water management.

To strengthen approaches, there is a need to build capacity, adaptability, and resilience for the future planning and management of water in order to harness productive benefits, promote human well-being, livelihoods, and economic development while ensuring environmental sustainability. Reliable data and shared information, across sectors, are crucial to addressing these challenges. This to enable policy dialogue and addressing impacts of sector policies and water management choices on mid- to longer-term development goals.

The session allowed for discussions on water security challenges and the relevance of data for communication and decision making in the water services sector and beyond. The aim was to generate awareness on the importance of water data in the intersectoral context, inform about new technological innovations, and to discuss real-world challenges at regional, national and local level. Following a set of presentations, the audience was invited to raise questions and join the discussion with the presenters on key issues for the Danube region.

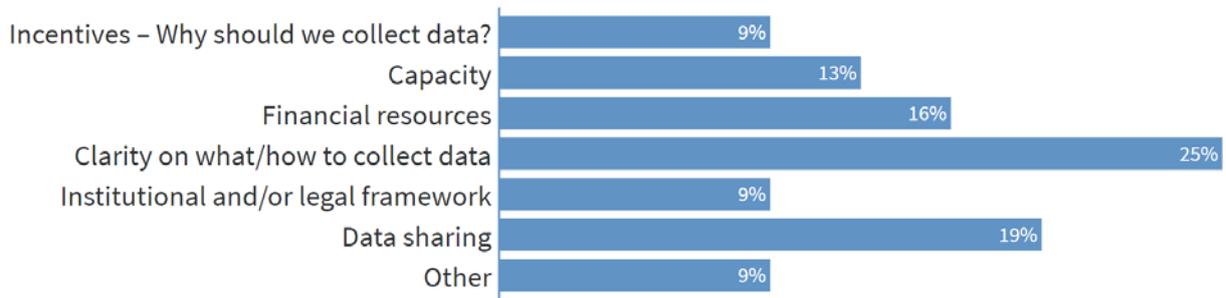
Session structure (recording can be found [here](#))

Time		Content	Speaker
15:00	5'	Introduction	Mr. Raimund Mair , Senior Water Resource Management Specialist, DWP Program Leader, World Bank, Austria
15:05	10'	Disruptive technology innovations for water management	Mr. Nagaraja Rao Harshadeep , Lead Environmental Specialist, World Bank, USA
15:15	10'	GWP experience in using data for integrated water resource management and water security	Mr. Konstantin Ivanov , Regional Coordinator, Global Water Partnership (GWP) Central and Eastern Europe, Slovakia
15:25	10'	Managing data for water management in Austria	Ms. Gabriele Vincze , Deputy Head of the Expert Team Groundwater, Umweltbundesamt, Austria
15:35	40'	Q&A Exchange with the Audience	Moderated by Mr. Raimund Mair , Senior Water Resource Management Specialist, World Bank, Austria and Ms. Kathia Havens , Program Analyst, World Bank, Austria
16:15		End of session	

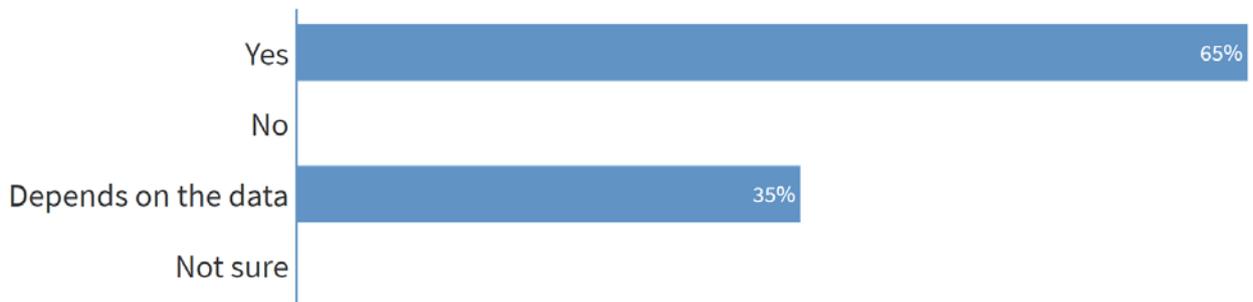
Speakers' biographies

- ▶ **Mr. Nagaraja Rao Harshadeep** is the Global Lead on Disruptive Technology of the Environment, Natural Resources & Blue Economy Global Practice of the World Bank. In over 24 years at the Bank, he has led and supported several environmental, water, and natural resources operations and analytical support around the world. This includes work on transboundary watersheds, integrated basin planning and management, environment, and climate resilience, monitoring systems, public-domain data access, modern earth observation, analytical/decision support tools, and other emerging technologies. He has also been a Global Lead for Watersheds and co-leads the Bank's HydroInformatics focal area. He also leads a Disruptive KIDS (Knowledge, Information & Data Services) Helpdesk to provide support on emerging technology to operational teams. Earlier, he worked with other international organizations, academia, and the private sector on water analytics and water conflicts. He holds a Bachelor of Technology in Civil Engineering from the Indian Institute of Technology (IIT-Madras), a Masters in Environmental and Resource Engineering from Syracuse, and a PhD in Water Resources and Environmental Systems Engineering from Harvard University.
- ▶ **Mr. Konstantin Ivanov** is the Regional Coordinator of Global Water Partnership Central and Eastern Europe. He has extensive experience in nature conservation, including freshwater restoration and climate change adaptation projects, as well as managerial, fundraising, advocacy and campaigning work. He has also executed multiple successful projects of regional importance in cooperation with the private sector. For example, a major project to restore vital wetlands along the River Danube and its tributaries in Hungary, Croatia, Serbia, Romania and Bulgaria has created a regional movement to protect these important habitats.
- ▶ **Ms. Gabriele Vincze** is a specialist in water management, data management and reporting. She joined the Umweltbundesamt Austria in 1993 and worked mainly in the implementation of the EU Water Framework Directive and the EU Flood Directive as GIS and reporting expert. She is member of international working groups regarding data and information sharing at the European Commission and the International Commission for the Protection of the Danube River and is responsible for the technical implementation of the national reporting to the Water Information System Europe. Furthermore, she has international experience in the field of water and data management as well as project management (Twinning projects, IWRM Kosovo, EUWI+ 4 EaP). Mrs. Vincze holds diplomas in Biology/Limnology from the Karl Franzens University, Graz and Aquatic Resource Management from King's College London, United Kingdom.
- ▶ **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.
- ▶ **Ms. Kathia Havens** joined the World Bank Danube Water Program in October 2019, supporting the roll out of Water Security analytical and advisory activities and overall program administration. Prior to joining the program, Ms. Havens served as a technical specialist to the Global Water Partnership (GWP, 2018-2019) and the World Bank Water Global Practice (2015-2018). At GWP, Ms. Havens supported the transboundary water program: working on regional capacity building workshops on international water law and governance; a Massive Open Online Course on Governance for Transboundary Water Security; and the development of the organizations' programmatic approach to transboundary water management. Prior experience at the World Bank includes technical and programmatic support in the fields of transboundary water management, global water security, nature-based solutions, and agricultural water productivity. Ms. Havens holds a Masters in International Environmental Policy from the Fletcher School of Law in Diplomacy, and a dual degree in International Relations and Spanish Language from American University.

What do you see as the main challenges for data management and digitalization?



Do you think water sector data should be widely shared and openly accessible?



What are some obstacles for data sharing and exchange in your country?



3. Data counts: Sound data for smart policies

Date: Wednesday, October 28th

Time: 13:30 to 14:45

Chair: Mr. Stjepan Gabric, World Bank and Ms. Emilija Milunovic, IAWD

Context and objective

The objective of the session was to showcase how water sector policy and regulation could benefit from water service data collection and analysis, jointly contributing to the development of more sustainable water service delivery. Water sector policies and service regulation are in most cases mostly developed based on existing policy trends and international experiences, and the proposed concept could help in optimization.

While water service data collection and analysis are usually done in most of the countries, they are not commonly used to develop or optimize national water policies and service regulations, essentially making interaction a one-way street. This session explored and presented possibilities to use data for the benefit of development of optimal service policy and regulation and showed a possibility for mutual and dynamic interaction between policy/regulation development and data collection/analysis. The session also showcased examples of most recent experiences in using wastewater monitoring and data collection in defining public health policies during the COVID-19 pandemic.

Session structure (recording can be found [here](#))

Time		Content	Speaker
13:30	5'	Introduction	Mr. Stjepan Gabric , Senior Water Supply and Sanitation Specialist, World Bank, Croatia and Ms. Emilija Milunovic , Program Assistant, IAWD, Austria
13:35	10'	Hungarian experience in application of data management for policy development	Mr. Gabor Kisvardai, PhD , Head of the Secretariat of the Vice President for Public Utilities, Hungarian Energy and Public Utility Regulatory Authority, Hungary
13:45	10'	Montenegro experience in application of data management for policy development	Ms. Milica Petrovic , Head of Water Department of Energy and Water Regulatory Agency of Montenegro, Montenegro
13:55	10'	NL experience in application of data analysis for policy development	Mr. Peter van Thienen, PhD , Chief Information Officer, KWR Water Institute, The Netherlands
14:05	10'	COVID-19 monitoring and public health policy actions	Prof. Heribert Insam, PhD , Director, Institute of Microbiology, University of Innsbruck, Austria
14:15	30'	Q&A Exchange with the Audience	Moderated by Mr. Stjepan Gabric , Senior Water Supply and Sanitation Specialist, World Bank, Croatia and Ms. Emilija Milunovic , Program Assistant, IAWD, Austria
14:45		End of session	

Speakers' biographies

- ▶ **Mr. Gabor Kisvardai, PhD** is a recognized water professional. He is a lawyer by profession and an expert in international relations. He also has a master's degree in public policy and management. When the newly established water regulator was set up in 2012 in Hungary, he participated in the review of water operators and issued the first operational licenses to the companies. It was his responsibility to help to establish the professional supervision of the water and wastewater sector in Hungary. Performing this important task, he built strategic cooperation with the representatives of water and wastewater sector, furthermore with other responsible agencies and institutions. He became an advisor for the vice-president in 2015 and later the head of secretariat of the office of the vice-president for public utilities. Currently, he is the leader of the team reforming the water regulator's data collection process and strategy. Most recently he is focused on international issues and the cooperation of water regulators. He is also conducting researches regarding the independence of regulatory agencies. He has been elected as one of the members of WAREG Secretariat in 2015.
- ▶ **Ms. Milica Petrovic** is economist with more than 10 years of experience in the water sector. She is working with the Regulatory Agency for Energy and Regulated Utility Activities of Montenegro, where she works on tariffs, benchmarking and licenses of water services providers. Previously, Milica worked in Vodacom, in a water utility project implementation unit for 5 municipalities which are located at the Montenegrin Coast. She holds a Master Degree in Entrepreneurship and a Bachelor degree in Finance and Banking. From July 2016 up to June 2017, she attended the Huber Humphrey Fellowship Program in the USA, with study of water management and infrastructure financing at Cornell University.
- ▶ **Mr. Peter van Thienen, PhD** is a senior researcher and Chief Information Officer at KWR and has been with this institute for 11 years. He works with a number of colleagues on improving the management, design and operation of drinking water distribution networks, using quantitative methods, numerical modelling and optimization. Example topics include Non-Revenue Water, numerical optimization of pipe and sensor networks, and inspection robotics. In his CIO role, Peter is working on strengthening KWR's profile as a Hydroinformatics research institute. Peter holds a master's degree in geochemistry and a PhD in geophysics, both at Utrecht University, the Netherlands.
- ▶ **Prof. Heribert Insam** is Full Professor and Head of the Department of Microbiology at the University of Innsbruck, Austria. He has been working in environmental microbiology in Austria, Germany and Canada for 30 years. Major areas of interest are general environmental biotechnology, ranging from composting and anaerobic digestion to wastewater treatment, and soil microbiology. Since March 2020 Insam is engaged in the Austrian Coron-A consortium for Covid-19 wastewater analytics. He is author of more than 200 scientific papers, Editor of 4 books and is serving as co- Editor-in Chief for Applied Soil Ecology. His Working Group Microbial Resource Management counts, among other staff, 4 Postdocs and 6 PhD students. Insam is also co-founder of the company BioTreaT GmbH, Innsbruck.
- ▶ **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.
- ▶ **Ms. Emilija Milunovic** joined the IAWD team in April 2020 supporting activities in capacity building for water supply and wastewater in the Danube Region. Prior to joining IAWD, Ms. Milunovic interned with GIZ, supporting two projects on rural development in the Western Balkans, based in Skopje and Belgrade (2016 – 2017). She also worked with for Kommunalkredit Public Consulting, in Vienna, providing technical assistance to the development of grants for environmental projects in Austria (2012-2015). Originally from Belgrade, Serbia, Ms. Milunovic is living and working in Vienna and holds a BSc in Environment and Bio-Resources Management, from the University of Natural Resources and Life Sciences, Vienna.

Session summary

Sound data for smart policies

World Bank's Senior Analyst Stjepan Gabric and IAWD's Emilija Milunovic hosted "Data Counts," the first session of day two, presenting approaches and perspectives from countries with widely different levels of development in their water sectors. First to take the podium was Gabor Kisvardai, Head of Secretariat, from the Hungarian Energy and Public Utility Regulatory Authority. He focused on the responsibility that comes with unrestricted access to data: "After eight years of collecting data, we diagnosed some serious problems in the ways, and also the volume, we collected. This resulted in a complete revision."

Gabor Kisvardai's team went back to the drawing board and asked the famous three questions: why, how, and what? At the end of a four-stage revision process, they had succeeded in eliminating a whopping 40 per cent of the data collection burden on the utilities in Hungary by simply removing parallel data collection and data that were gathered, but actually never really used. Now look forward to the official introduction of a modern data management platform – a smart investment, because, as Gabor Kisvardai quotes at the end of his presentation: "Without data, you are just another person with an opinion."

Next on the stage was Ms. Milica Petrovic, Communal Services Coordinator at the Energy and Water Regulatory Agency of Montenegro, which has recently extended its competences to include public water supply and communal wastewaters. The organisation's profile includes defining fair prices for services, ensuring the sustainability of operators and their conduct according to principles of objectivity, transparency and non-discrimination, and, last, not least, keeping the delicate balance of interests between users and operators. Therefore, the Agency invested the first three years of its operations in the water sector almost exclusively into data analysis and benchmarking: "Benchmarking determined our methodic approach to tariff setting", says Ms. Petrovic. "We are about to introduce first tariff regulations in 2021, based on 200 data sets we collect every month. Good regulation is not possible without good data", concluded Milica Petrovic at the end of her presentation.

A full two decades before Milica Petrovic's team started sorting through the available water data, operators on the other side of the continent had decided to enter a voluntary benchmarking process that earned them a proud 21 percent performance improvement, which in turn motivated their government to create a legal basis for performance benchmarking in 2007.

Dr. Peter van Thienen works as a Senior Researcher & Chief Information Officer at the water research institute KWR, an internationally connected facility with 11 water utilities as its financing background, 180 employees, and a wide range of research interests covering the whole water cycle. From data-driven improvement that started out as a sector initiative and then became a policy, Dr. van Thienen's presentation ventured to advanced measuring and modelling approaches in a variety of fields including non-revenue water and sustainability indicators in urban water management, mostly based on experience from Netherlands and western Europe.. "Whatever you do", says Dr. van Thienen at the end of his presentation, "it is important to know your system well!"

The session's final speaker covered a field of burning actuality: Professor Heribert Insam's team at the Institute of Microbiology at Universität Innsbruck runs a research project on COVID-19 Wastewater Epidemiology. Monitoring 27 wastewater treatment facilities all over Austria, Prof. Insam's study aims at a proof of concept for wastewater monitoring as an early warning system. His preliminary findings indicate that this can indeed be feasible, provided reliable standardisation of sampling and inter-laboratory comparability, improvement of the database by including more WWTPs and more frequent sampling, and improved prediction models.

Professor Insam's outlook on Covid 19 tracking in wastewater, based on experience his university has cautiously optimistic: The system he is developing with the team might indeed provide reliable decision-making support during the current crisis, and in post-corona wastewater epidemiology: "In the end, it comes down to money and infrastructure", he says. We can safely assume that, in the light of the pandemic experience, both will become available in generous quantities.

4. Data transparency: The value of performance indicators for municipal governments and the general public

Date: Wednesday, October 28th

Time: 15:00 to 16:15

Chair: Mr. Philip Weller, IAWD and Ms. Jelena Janevska, NALAS

Context and objective

The session focused on water services data being used by municipal government officials for making decisions and planning related to utility efficiency and improvement. Two case studies were presented, one of them from the host city of the event Banja Luka, which has been active in collecting performance indicator data from the utility. The utility is currently investigating the possibility of additional IFI lending to support the construction of a wastewater treatment plant to improve its services.

The second case study highlighted the data needs to both develop and finance the investment and the relations between the leadership of the utility and the municipality in the city of Sombor, Serbia. The final presentation was provided from the EBRD Green Cities Program which strives to build a better and more sustainable future for cities and their residents. The programme achieves this by identifying, prioritising and connecting cities' environmental challenges with sustainable infrastructure investments and policy measures.

Session structure (recording can be found [here](#))

Time		Content	Speaker
15:00	5'	Introduction	Mr. Philip Weller , Head of Technical Secretariat, IAWD, Austria and Ms. Jelena Janevska , Knowledge and Communications Manager, NALAS, North Macedonia
15:05	10'	Banja Luka Water Utility Commitment to Benchmarking and Data Collection	Mr. Miodrag Babic , Project Manager, Vodovod a.d. Gradiska, Bosnia and Herzegovina
15:15	10'	Water Utility Data for Local Governments and the Public	Mr. Antonio Ratkovic , Mayor of the City of Sombor, Serbia
15:25	10'	Data Collection as a foundation of the EBRD Green Cities Program	Mr. Damir Cengic , Principal Banker, EBRD, UK
15:35	40'	Q&A Exchange with the Audience	Moderated by Mr. Philip Weller , Head of Technical Secretariat, IAWD, Austria and Ms. Jelena Janevska , Knowledge and Communications Manager, NALAS, North Macedonia
16:15		End of session	

Speakers' biographies

- ▶ **Mr. Miodrag Babic** has recently joined Vodovod a.d. Gradiska as a Project Manager. Previously he has been employed as Development Department Manager at "Vodovod" a.d. Banja Luka. Mr. Babic is involved in the implementation of the water and sewage network extension projects on the territory of the city of Banja Luka. He also participates in the development projects related to the water supply network, such as establishing a Center for losses monitoring. In addition, he published several expert papers related to the water supply issues. Mr. Babic holds a Bachelor of Science in Civil Engineering.
- ▶ **Mr. Antonio Ratkovic** holds a Master Degree in Forestry and is a Forestry Engineer by vocation. His working experience ranges from Public Enterprise "Vojvodina sume" (Forests of Vojvodina) where he did his internship, followed by NELT Company in Sombor, NAVIP Winery in Belgrade and Public Utility Company "Prostor" in Sombor. Mr Ratkovic was elected Deputy Mayor in June 2016 and served a full four-year term. In 2020, he was elected Mayor of Sombor on the Constitutive session of the Sombor city Assembly.
- ▶ **Mr. Damir Cengic** joined the EBRD Resident Office in Sarajevo as Principal Banker in 2011, after spending four years in one of the big four audit companies. While working for EBRD in Bosnia and Herzegovina, Damir worked on over 30 projects for investments of over EUR 1 billion in the municipal environmental infrastructure, transport and the power and energy sectors. In 2020, Damir moved from the Resident Office in Sarajevo to the Sustainable Infrastructure Group – Infra Europe Team based in the EBRD HQ in London, focusing now entirely on the municipal environmental infrastructure and transport sectors.
- ▶ **Ms. Jelena Janevska** has over 18 years of professional experience in the development sector, focusing primarily on local development, democracy building, rule of law and civil society development. Ms. Janevska currently works as a Knowledge Manager of the Network of Associations of Local Authorities of South-East Europe (NALAS) and the Regional Capacity Development Network (RCDN) for Water and Sanitation Services. In the past she has worked for various international organizations, as well as universities, teaching Business Communication, Public Relations, Project Management, Fundraising and Crisis Communications. Ms. Janevska also has extensive consultant and training delivery experience, having designed and delivered over 800 trainings, workshops and Training of Trainers. Ms. Janevska holds a MSc degree in Local Development from the University of Trento, Italy, and a BA degree in Journalism and Communications from the University in Skopje.
- ▶ **Mr. Philip Weller** has since July 2013 served as the Danube Water Program Coordinator for the International Association of Water Supply Companies in the Danube River Catchment Area (IAWD) administering and managing a joint project together with the World Bank aimed at improving and supporting the efficiency of Danube region water supply and wastewater companies. Mr. Weller previously served for 10 years as the Executive Secretary of the (ICPDR) International Commission for the Protection of the Danube River. Mr. Weller also worked for the World Wildlife Fund for Nature (WWF) as Danube Carpathian Program Director and has also managed successful consulting businesses in both Canada and Austria and has done numerous assignments for governments and international organizations. Philip Weller is an environmental planner by training.

Session summary

Data and the city

The second session of the day was hosted by IAWD's Philip Weller and Jelena Janevska and covered benchmarking and data collection in municipalities, setting out from the Forum's intended host city Banja Luka, with Miodrag Babic presenting the city's benchmarking and data collection program, established in 2013 in cooperation with IAWD and the World Bank and supported by GIZ and SDC.

From 2014 on, data on the water supply and sewerage network were collected, analyzing and reporting a total of 550 technical and financial variables to form a centralized database. The effort resulted in a much clearer picture of performances and therefore better planning, and also better communication between authorities and water utilities. Mr. Babic reported measurable business improvement, easier decision-making on the management level, low data collection costs, and improved transparency as a safe basis for successful negotiations with investors and regulators.

Antonio Ratkovic, mayor of Sombor, Serbia, subsequently introduced the city's ambitious energy, water and wastewater infrastructure program striving at using renewable energy sources like solar and biogas to achieve full energy independence of the city's wastewater plant. The investment program includes the application of the latest information software in the municipal water supply systems to monitor performance.

Damir Cengic, Principal Banker at the European Bank for Reconstruction and Development, then presented the bank's Green Cities program, a €1.5 billion framework to support cities to identify, benchmark, prioritize and invest in Green City measures to improve urban environmental performance through strategy and policy support, Green City infrastructure investments and building capacity of city administrators and key stakeholders. To date, the program covers 43 cities with populations over 100,000 who commit to a Green Action Plan and initiate "trigger" infrastructure projects, targeting a 20% reduction in greenhouse gas emissions, energy or resource consumption or pollution, or promise significant climate resilience benefits.

An exemplary project is Banja Luka Water Phase 1/Phase 2, with total investments of EUR 10m by EBRD and EUR 2m by the City, aiming at improved quality and reliability of the water supply, and extended sewage collection, and subsequent measures to improve the operational efficiency of the company – which lead the session content back to where it started: Banja Luka, the intended host city of the first Danube Water Forum.

5. Utility strengthening: Improving performance through data collection

Date: Thursday, October 29th

Time: 13:30 to 14:45

Chair: Mr. Christian Hasenleithner, Energie AG Bohemia and Ms. Elisabeta Poci, SHUKALB

Context and objective

Benchmarking, i.e. collecting performance indicators and then comparing performance among utilities of similar size and conditions, is a major tool to improve water utility performance. The Utility Benchmarking Program (UBP) assists utilities in identifying areas, where performance improvement is needed.

The intention of this session was to provide a stage to the representatives of three utilities participating in either a national or the regional Danube Hub operated under the Utility Benchmarking Program. They highlighted how data collection has helped them and the utility management to better understand and finally address the challenges they are facing.

Session structure (recording can be found [here](#))

Time		Content	Speaker
13:30	5'	Introduction	Mr. Christian Hasenleithner , CEO, ENERGIA AG Bohemia, Austria and Ms. Elisabeta Poci , Deputy Managing Director, SHUKALB, Albania
13:35	10'	The value of data as solid basis for asset management – the case of Pristina	Mr. Sokol Xhafa , Acting Director, Regional Water Company Pristina, Kosovo
13:45	10'	The use of performance indicator data as controlling tool – the case of Novi Sad	Ms. Sanda Nastic, PhD , Head of Business cooperation and International projects, PUC Novi Sad, Serbia
13:55	10'	Ensuring reliable data to inform sound management decisions – the case of Sofia Water	Mr. Lyubomir Filipov , Strategic partnerships and projects Director, Sofia Water, Bulgaria
14:05	40'	Q&A Exchange with the Audience	Moderated by Mr. Christian Hasenleithner , CEO, Energie AG Bohemia, Austria and Ms. Elisabeta Poci , Deputy Managing Director, SHUKALB, Albania
14:45		End of session	

Speakers' biographies

- ▶ **Ms. Sanda Nastic, PhD** is currently Head of Business cooperation and International projects in the Public Utility Company Waterworks and Sewage Novi Sad, Serbia, where she worked in different positions since 2006. She initiated and participated in realization of numerous projects on behalf of Novi Sad water utility, including cooperation projects with KfW, GIZ, WB, EU and other international organizations, and also represented the utility in several benchmarking projects in cooperation with IBNET, EBC, etc. Ms. Nastic holds a PhD in Business and International economy and she also lectures

at the University Business Academy in Novi Sad (FIMEK) on the topic of revision and controlling. Ms. Nastic is an author of numerous papers.

- ▶ **Mr. Sokol Xhafa** has joined RWC Pristina in December 2013 as an engineer for supervision of international projects. In March 2016, he has been promoted in a position of Technical Director and since April 2020 he holds the position of the Acting CEO. Since 2016 he has been working partially as a lecturer at the University of Business and Technology in Pristina. Sokol was chair of the YWP Group in Kosovo for three years. In 2006 he started his career as an engineer, working in private sector mainly as a contractor of international donors in Kosovo. In addition, he has been delivering many trainings with SHUKOS and SHUKALB including Water Safety Planning, Non-Revenue Water and energy Efficiency.
- ▶ **Mr. Lyubomir Filipov** is currently heading the “Strategic partnerships and projects Directorate” within Sofiyska voda JSC, part of Veolia. The main responsibilities of the directorate are related to the overall management and implementation of the Concession contract, the corporate legal affairs and coordination of the interactions with the company’s strategic partners and stakeholders, i.e. the municipality of Sofia, the regulator, other state institutions, International financial institutions (IFIs), etc. In addition, the unit is responsible for the preparation and the management of EU funded projects. Mr. Filipov has an in-depth knowledge in structuring and managing public-private partnerships and concession projects.
- ▶ **Mr. Christian Hasenleithner** studied Civil Engineering at the Vienna University of Technology. After 10 years of working as a project engineer in hydro power plant construction, he switched to the sector of water supply and wastewater treatment in 1995. Mr. Hasenleithner developed the business segment “Water” at Energie AG Oberoesterreich, a mainly public entity, located in Linz and is General Manager of Energie AG Wasser GmbH, which is active in Austria, the Czech Republic and Slovenia. Eight companies of the group supply about 1 Mio. Inhabitants with drinking water and collect and clean wastewater for 750.000 inhabitants.
- ▶ **Ms. Elisabeta Poci** is the Deputy Executive Director of the Water Supply and Sewerage Association of Albania (SHUKALB) since 2013. She has been working with SHUKALB for over fifteen years, playing a significant role in building up the professional image of SHUKALB among the stakeholders in the water sector in Albania and the region, as well as in the growth of SHUKALB as a sustainable organization. She has successfully led and delivered several projects in her areas of expertise (in Albania and the Western Balkans). Her most significant assignment with a considerable impact in the water sector in Albania was the successful implementation of the “Sustainable Water Sector Capacity Development in Albania” project as a result of which an institutional Test-Based Certification Program for the staff of water supply and wastewater utilities in Albania was formally established by the Government of Albania. Ms. Poci holds a Bachelor Degree in Environmental Engineering from the Polytechnic University of Tirana and a Master of Science Degree in Environmental and Water Resources Engineering from the University of Texas at Austin, USA, under a Fulbright Scholarship.

Session summary

Performance boosters

The initial session of day three focused on data collection as a way to improve performance. This session was hosted by Elisabeta Poci, SHUKALB, and Christian Hasenleithner, Energie AG Bohemia and presented representatives from three utilities reporting their experiences with data-driven performance improvement.

First to take the stage was Sokol Xhafa, Acting Director of RWC Pristina, Kosovo’s largest utility, giving impressive insights into the anatomy of the GIS-based asset management implementation program that his company entered in 2019. The project was about cleaning up, validating and reforming the company’s former data landscape, a maze of systems and databases in a wide variety of formats, partly located in the company and partly stored on the municipal level to create compatibility with the future EMDAS platform.

With an enormous amount of field work involved, this project stage is still under way, while project phase two, streamlining the company’s maintenance operations, has already been implemented. Maintenance

operations now use a call center as a free-of-charge customer interface, handling customer complaints in a defined, data-driven six stage process from alert to repair/maintenance completion.

Improved performance is the deserved reward for an enormous effort, as the next speaker pointed out with impressive examples: Sanda Nastic, PhD, Head of Business cooperation and International projects at PUC Novi Sad, Serbia's second largest city, presented her company's Key Performance Indicator system. Performance is reported monthly, and controlled on a monthly, quarterly, and annual basis, with KPIs and strategic goals making up a "control panel" as a basis for controlling. "Controllers must ensure a consistent, coordinated management system that includes KPIs and quality management with a system of continuous improvement," says Sanda Nastic, invoking the Japanese Kaizen management approach. Sanda Nastic mentions, in this context, that most KPIs are also included in the Utility benchmarking Program list and therefore available for comparison and discussion. "The exchange of best practices helps utilities to make smarter improvements and to plan more realistically" she says.

Sofia Water's Strategic partnerships and projects Director Lyubomir Filipov fully agrees that systematic data gathering is all-important, titling his presentation "From Opinion Driven to Data Driven Decisions." During the current five-year planning period, the company decided to bury its outdated communication, data handling, KPI monitoring and decision-making culture and digitalized its business processes. "Today, Sofiyska voda is the only Bulgarian water operator that has implemented all the registries and databases required by the State Regulator, using dedicated software: SCADA systems, GIS, CRM and ERP systems, real time online monitoring, monthly KPI monitoring – it's all there and up and running," reports Lyubomir Filipov with a hint of pride. In the same breath he warns that even the most generous investment cannot buy success: "Gathering and storing reliable data is a must, but definitely not sufficient. You need to know what you want to do with the data, and how to use it. Structure them to get insights into trends and tendencies. Keep them comparable, both within and outside the organization, according to concepts like the IAWD's Utility Benchmarking Program. Think ahead, and then think even farther ahead: AI and predictive analysis based on structured sets of data will be the next game-changers, also in the water sector."

6. Closing Session: Wrap-up and reflections on key messages

Date: Thursday, October 29th

Time: 15:00 – 16:15

Chairs: Mr. Raimund Mair, World Bank and Mr. Philip Weller, IAWD

Context and objective

This session summarized the key take home messages and reflected the lessons learned in a high-profile panel.

Session structure (recording can be found [here](#))

Time		Content	Speaker
15:00	5'	Introduction	Mr. Raimund Mair , Senior Water Resource Management Specialist, DWP Program Leader, World Bank, Austria and Mr. Philip Weller , Head of Technical Secretariat, IAWD, Austria
15:05	20'	Wrap-up and reflections on key messages	Ms. Monika Weber-Fahr , Senior Advisor, World Bank, Austria
15:25	40'	Panel discussion on lessons learned and how to proceed	Moderated by Ms. Monika Weber-Fahr , Senior Advisor, World Bank, Austria <ul style="list-style-type: none"> - Mr. Teodor Popa, Financial Director, APA Brasov, Romania - Ms. Lindita Sotiri, Director of Development Programs on Water Supply and Sanitation, Ministry of Infrastructure and Energy, Albania
16:05	10'	Closing of the Danube Water Forum	Mr. David Michaud , Practice Manager of Water Global Practice for Europe and Central Asia, World Bank, USA
16:15		End of session	

Speakers' biographies

- ▶ **Ms. Monika Weber-Fahr** is Senior Advisor at the World Bank. Monika supports the World Bank's Water Global Solutions Group in building and sustaining partnerships and alliances and learning from results. Previously, Monika served as CEO & Executive Secretary of the Global Water Partnership (GWP), a globally operating multi-stakeholder partnership and action network that supports countries in managing their water resources equitably and sustainably. Prior to that, Monika was Chief Operating Officer at Sustainable Energy for All, an international multi-stakeholder partnership that promotes access to clean, affordable, and modern energy. With an academic background as an economist, Monika has worked for over 25 years in development finance and business advisory, including with the World Bank where she built communities and partnerships around knowledge and collaboration across multiple roles related to sustainable development and education. For the International Finance Corporation (IFC), Monika built the Global Business Line for Sustainable Business Advisory, working with the private sector to pursue "people-planet-profit" opportunities, including on water efficiency

and new clean water technologies. Monika holds a PhD in Business Economics, an MSc in Economics, a Diploma in International Relations, and a Diploma in Corporate Governance.

- ▶ **Mr. Teodor Popa** is Financial Manager at the Brasov Water Company in Romania since 2001, President of the Romanian Water Association (RWA) Specialist Group on Economics, Vice-president of the International Water Association (IWA) Specialist Group on Statistics and Economics and IWA Fellow since 2016. Mr. Popa has been involved since 1995 in projects financed by EU and other international donors, has participated in the Romanian water sector reform: the company regionalization and restructuring process: institutional transformation, tariff strategy and concession contract implementation. In addition, he is author of various papers presented across the globe and expert for European Bank for Reconstruction and Development (EBRD) and World Bank international projects regarding water sector reform, tariff policy, utility management and utilities aggregation etc. Mr. Popa holds a MSc. Degrees in engineering (1991) and economics (1997).
- ▶ **Ms. Lindita Sotiri** is Director on the Development Programs on Water Supply and Sewerage and Solid Waste in MIE in Albania. She has been working in the water and waste sector since 2010 and has led policies in water and solid waste focusing especially in regulations, standards and instruments in infrastructure and focusing on building up performance systems and instruments to incentives the municipalities to a better performance and services.
- ▶ **Mr. David Michaud** is the Practice Manager for Water in Europe and Central Asia at the World Bank's Water Global Practice. At the World Bank, Mr. Michaud has worked mostly in Europe and Latin America, gradually moving the focus of his activities from infrastructure and project development to utility efficiency and sector reform programs. He also led analytical work and policy advice to national governments on issues, such as sector financing, utility governance and sector performance monitoring. Prior to joining the Bank, Mr. Michaud worked as a water engineer and project manager in the private and non-profit sectors. He has a M.Sc. in Environmental and Sanitary Engineering from the Ecole Polytechnique Federale de Lausanne in Switzerland and a M.Sc. in Engineering and Management from the Massachusetts Institute of Technology.
- ▶ **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. Philip Weller** has since July 2013 served as the Danube Water Program Coordinator for the International Association of Water Supply Companies in the Danube River Catchment Area (IAWD) administering and managing a joint project together with the World Bank aimed at improving and supporting the efficiency of Danube region water supply and wastewater companies. Mr. Weller previously served for 10 years as the Executive Secretary of the (ICPDR) International Commission for the Protection of the Danube River. Mr. Weller also worked for the World Wildlife Fund for Nature (WWF) as Danube Carpathian Program Director and has also managed successful consulting businesses in both Canada and Austria and has done numerous assignments for governments and international organizations. Philip Weller is an environmental planner by training.

Session summary

The great final wrap-up

The last and final session of the first Danube Water Forum saw a refreshing and entertaining format change: moderator Monika Weber-Fahr, Senior Advisor Results and Partnerships at the World Bank, led a discussion that involved two highly qualified panelists and audience participation via the PollEv tool. For a warmup, she first summed up the findings of all previous sessions and then put a number of questions up on PollEv, finding that the majority of those who answered are: not yet able to share data due to a lack of appropriate systems; see a potential for change within a horizon of five years; and that financial and capacity hurdles are the greatest challenges in this respect. Yet, there seems to be considerable motivation,

with expected effects of data-driven management ranging from improved energy efficiency, leak detection and drinking water quality to improved productivity, a qualified background for discussions with governments and donors, and also efficient fraud fighting.

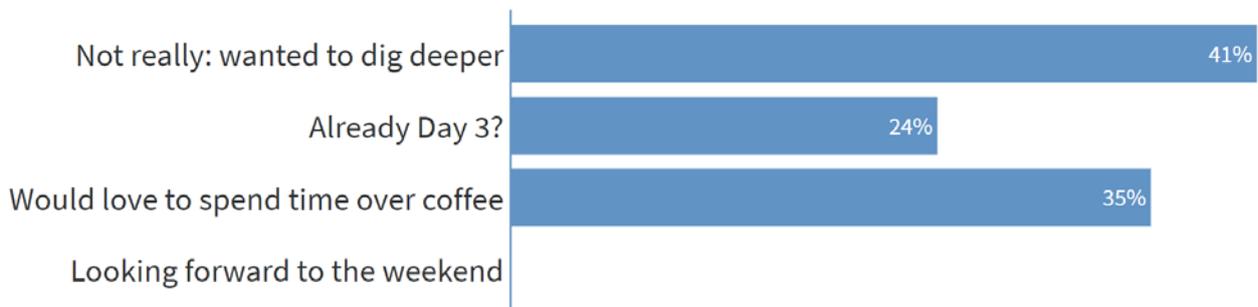
Panelists were Lindita Sotiri, Director of European Integration at the Albanian Ministry of Transport and Roads Infrastructure, and water sector veteran Teodor Popa, IWA fellow, expert for the European Bank for Reconstruction and Development and for the World Bank, and long-time Financial Manager of the water utility company APA Brasov in Romania. Expertly led through the dialogue by moderator Ms. Weber-Fahr, both reflected on PollEv survey results and answered questions from the audience.

Generally, when reviewing the challenges companies face during their migrations to data-driven operations, the panelists found that “people problems” often outweigh hurdles like financial or organizational constrictions. A great amount of energy is spent convincing decision-makers, management and staff. “You have to convince people that transparency has benefits for everybody, that you do not gather data to punish people, on the contrary, you help them improve, and you have to make decision-makers understand that investments in data infrastructure are at least as productive as the next hundred meters of pipe,” commented Teodor Popa. “I wish all our companies could be like Google, knowing what you want to do, almost before you yourself realize it,” he quipped.

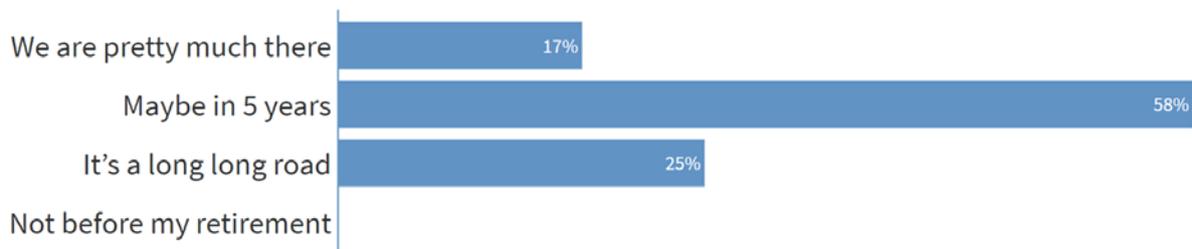
Eventually winding the lively exchange down, the panel made room for one of the founders of the Danube Water Program, David Michaud, Practice Manager of the Water Global Practice for Europe and Central Asia at the World Bank, who stated his appreciation of the incredible journey the DWP has had over the last seven years: “Here at the Forum I have seen a whole new quality of conversation. Seven years ago, we wondered if we *would* and really *should*... Now we are discussing *how* we do it. We have reached a really nice point. Let us be grateful and thank all our supporters, all the speakers and panelists, and also the huge team that works in the background. Thank you – and congratulations!”

PollEv results

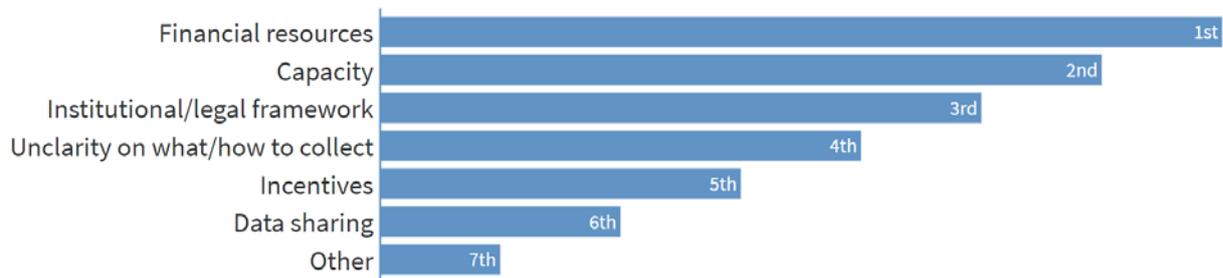
Day 3 of the Danube Water Forum: Ready for conclusions?



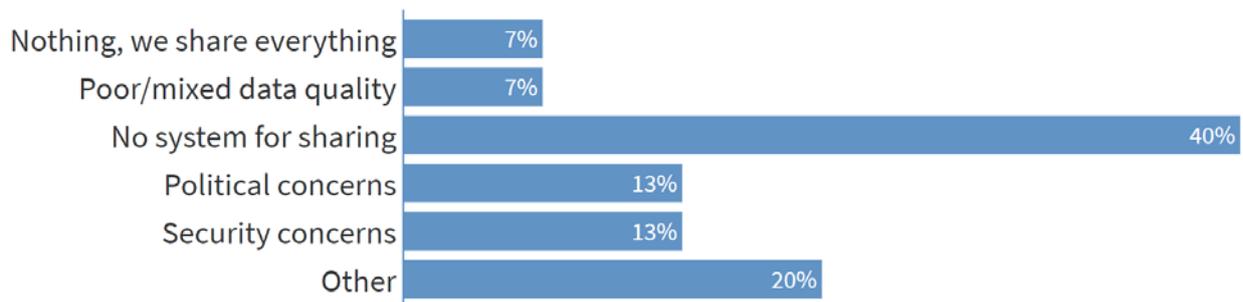
How far are you away from getting to the point when you use data really well, in your utility, authority, association?



Sort by order of priority: What are the main challenges for good data collection, management, use and sharing?



What stops you from sharing data effectively in your utility, authority, association?



In your organization – do you have examples when you saw improvements, based on the use of data?

“Energy efficiency”

“Optimisation of el. Energy consumption”

“Non Revenue water”

“Fight against NRW”

“Based on the data of financial capacities of water utility companies, the local authorities succeeded to stop the initiative of the centralization of water supply delivery systems.”

“Improving the control of drinking water quality”

“Asset management”

“Usage of programing languages (R, python,...), leaving raw data as it is and generating data-piplines for processes and analysis that have to be done regularly.”

“Improved energy efficiency”

“Especially in the current situation due to the pandemic when a lot of people work from home it really important to keep everyone in the loop by sharing data.”

“Leakage reduction”

“Reducing NRW, better understanding the process of leaks detection.”

“If data is shared among the right people than the productivity is improved due to better understanding of the situation by the people involved along the chain.”

“Better discussions with Gov and donors”

“Sharing data among stakeholders build trust and change your company image on the market.”

“Fraud fighting”

“Of course. Hundreds of examples. Two of them: 1. matching electricity consumption with volumes of water produced by pumping group; 2. Segmentation of customers by level of consumption”

V. SURVEY RESULTS

In total, one keynote, 14 presentations, 2 panel and 4 plenary discussions took place in six sessions. This conference report comprehensively summarizes the content of each of the sessions.

Like previous years, the organizers requested feedback from the participants at the end of the conference via an online survey. In total, 33 evaluation forms were received and analyzed.

In general, all sessions were highly rated by participants, with the highest being two sessions with exactly the same scoring, which are "The bigger picture: water data in the intersectoral context" and "Utility strengthening: Improving performance through data collection" (both 4.22 out of 5 points). Participants believed that the presentations were informative and well prepared (4.32 out of 5 points) and that the topics were relevant to their organizations (4.26 out of 5 points). Slightly less highly rated were how the sessions deepened one's understanding of the topic (4.04 out of 5 points) and how conducive the sessions' methodology and structure were to participant's learning (4.02 out of 5 points). These results show average ratings for all the sessions. See below how individual sessions were rated and how the panel discussions and Q&A were useful to create an active debate (4.01 out of 5 points).

Figure 3 shows the ratings per session for each individual aspect that were evaluated.

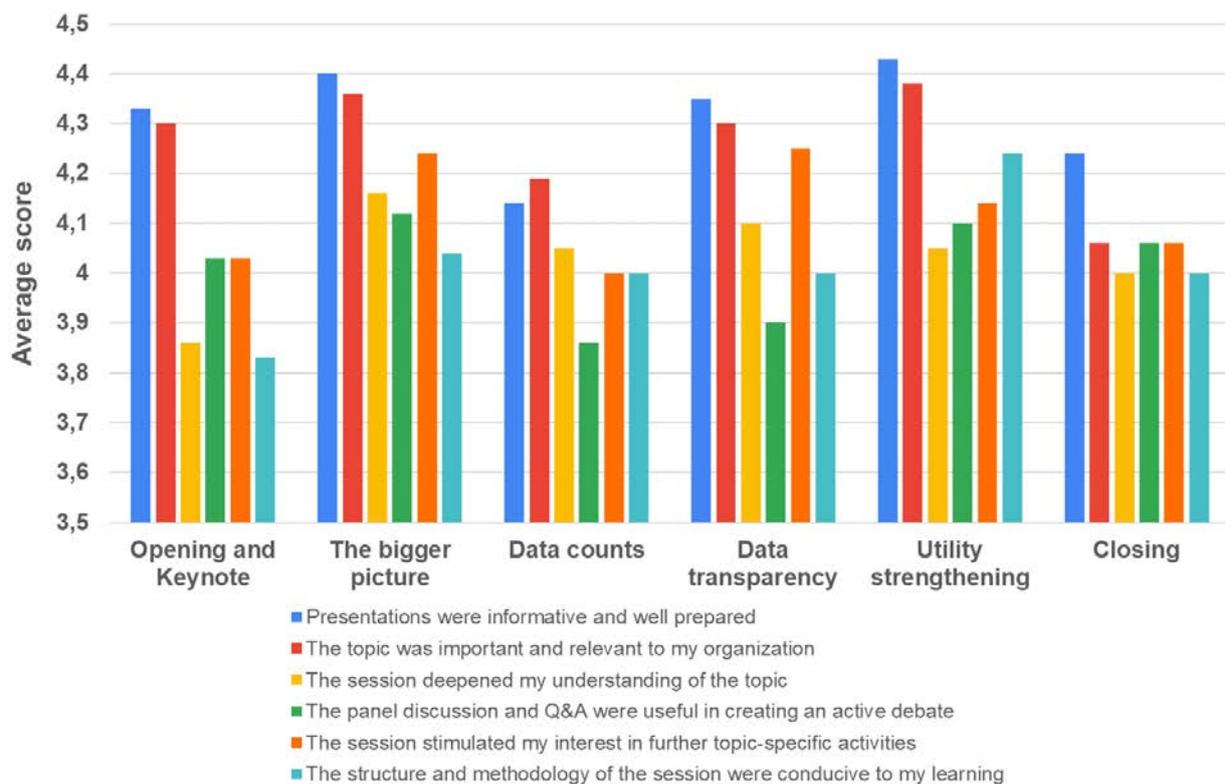


Figure 3 Average scores of all sessions of the DWF

A third of the respondents would be willing to pay for participation in future online events depending on the financial support of their organization. 25% believe that online events should be free of charge and some respondents (15%) would be willing to pay a fraction of the fee typically charged for an in-person event (see Figure 5).

Almost half of the respondents would appreciate a virtual component as an add-on feature to future physical events and almost 30% would value an online live stream with the option to comment. Only 3% thought that a virtual component would not be a good idea.



Figure 4 Willingness to pay for future virtual events

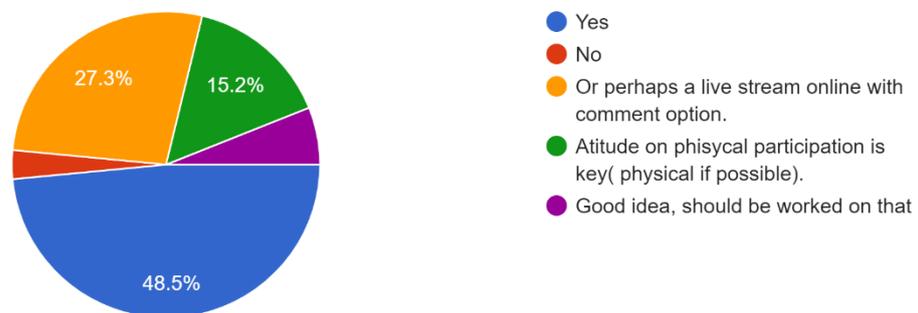


Figure 5 Virtual component as add-on to future physical events

The main cited benefit of the 2020 Danube Water Forum was networking and sharing of experiences across the Danube region, but also from around the world. Emphasis was also put on the good opportunity to learn about data collection, the state of the water sector, and new projects happening in other countries. This year's topic of the Danube Water Forum was chosen before the COVID-19 pandemic occurred and it turned out to be a crucial subject in the time of crisis.

Regarding format, the majority of survey respondents stated that they liked having two sessions per day and spreading the event over multiple days. In addition, more than 70% of the respondents would like to see virtual networking incorporated in future virtual events and more than 90% see benefits in organizing working/break-out groups to allow for more targeted discussions.

According to survey respondents, these are the key benefits of the Danube Water Forum:

- ▶ Experience exchange
- ▶ Acquiring knowledge
- ▶ High-level water data discussion
- ▶ Look at best practices and expert's experiences
- ▶ Virtual events are a good alternative for in-person events
- ▶ Learning about the entire Danube basin and meeting new professionals
- ▶ Update information on development and subjects
- ▶ Staying in contact and learning about development across the region in this complicated period

- ▶ Information
- ▶ Know-how exchange
- ▶ Importance of data
- ▶ We continued the work of the water sector in the Danube region
- ▶ Best cases practice as a beacon of hope
- ▶ First-time experience, well done
- ▶ Learning about neighbouring country's issues on data gathering

VI. FORUM SUPPORTERS

The organization of the 2020 Danube Water Forum has been made possible through financial and institutional support from:

 **Federal Ministry
Republic of Austria
Finance**

Additional support has been received from our host partners:



GRAD BANJA LUKA
CITY OF BANJA LUKA

