



Smart policies, strong utilities, sustainable services

THE DANUBE WATER PROGRAM

Smart policies, strong utilities, sustainable services

www.danube-water-program.org

Elisabeth Gruber
Director, International
Financial Institutions,
Austrian Federal
Ministry of Finance

“For the Austrian Government the Danube Water Program is an excellent opportunity to further deepen the collaboration with a region that is traditionally close to us. Analytical studies, data sharing and the exchange of know-how contribute to the sustainable development of a sector that is at the core of Austria’s multilateral development cooperation. Partnering with the World Bank and IAWD allows the Austrian Federal Ministry of Finance to support key stakeholders of the water sector, ranging from utility managers to local governments, regulators and policy makers. Thereby the sector’s challenges can be tackled in an efficient and effective way. Due to its success we continue to support the Danube Water Program and are looking forward to developing it into a sustainable initiative under IAWD and the World Bank’s leadership.”

THE DANUBE WATER 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 International Association of Water Supply Companies in the Danube River Catchment Area (IAWD) and the World Bank have partnered to launch the Danube Water Program, with a 9.5M Euro, two-phased financing from the Government of Austria. The Program supports smart policies, strong utilities, and sustainable 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 utilities and institutions.

The Danube Water Program was formally launched in May 2013 in partnership with line ministries, regulators, national water utility associations, and local government representatives of a dozen countries in Southeast Europe. Since the launch of the Program, knowledge exchanges among more than 600 sector professionals and policy makers in the region and beyond, seven capacity building programs benefiting over 135 utilities, and local initiatives worth close to € 1,000,000 have been supported. The Program has cooperated with a variety of organizations such as the Open Regional Funds, the European Benchmarking Cooperation, and national water utility associations, and leveraged over € 3.6 million of funding from beneficiaries and other donors, including Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and Swiss Cooperation.

The first phase, which ended in 2015, saw the successful completion of more than 40 individual knowledge sharing, capacity building and analytical work activities, demonstrating a strong demand for the Program supported activities. The second phase, scheduled to end in December 2018, has focused on the establishment of the annual Danube Water Conference as the prime networking event of sector professionals in the region, the further development of the DANUBIS.org website into a lively platform of information exchange and benchmarking for the whole region and the consolidation of capacity building activities under the Danube Learning Partnership, a sustainable learning partnership of national and regional water utility associations. A few of these activities are expected to be supported under a potential third phase of the Program.

For more information, please check the Program website www.danube-water-program.org.

ABOUT THE PROGRAM

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 services, while catching up to the environmental requirements of the European Union *acquis communautaire*. Much work remains to be done to provide sustainable water and wastewater services for everyone in the Danube region, in particular among recent, candidate and future EU members.

Over 20 million people in the region do not have in-house piped water or a flush toilet, with the poor, rural populations, and minorities overrepresented. Some service providers still struggle to provide continuous, potable water to their clients. Low tariffs and inefficient utility practices create challenges for the proper



**International Association
of Water Supply Companies
in the Danube River
Catchment Area**

IAWD is an association of water and wastewater utilities in the Danube river catchment area. It was established in 1993 by utilities from 10 countries with the objective of promoting joint national and international efforts to avoid and reduce risks to water supply, such as pollution and other types of harm to the condition of the Danube, its tributaries, and related groundwater resources. IAWD is headquartered in Vienna, Austria, and hosted by one of its founding members, Vienna Waterworks. IAWD is taking advantage of the Danube Water Program to strengthen its position and develop its leadership among partners in the region, as manifested for example through initiating the Danube Learning Partnership (D-LeaP) together with national associations. This is part of a strategy to facilitate the sustainability of the initiatives beyond the Program.

operation and maintenance of the existing infrastructure. At the same time, to satisfy the *acquis communautaire*, the Water Framework Directive is being transposed into the legal and institutional frameworks of the countries of the region. Large investments for the upgrading or development of water and wastewater assets are being made, which create a further technical and financial burden on service providers. Governments in the region are therefore revisiting the way services are being delivered and financed and embarking on significant reform efforts.

To address these challenges, new skills and knowledge are required to ensure high-quality, cost-efficient delivery of water and wastewater services, mobilize additional sources of funding for investments, and provide incentives for better performance. National governments and regulators need to define and implement policies on topics such as reforming utility management, targeting subsidies to low-income groups, restructuring tariffs, and improving regulation, while local governments and utility companies need to develop their managerial capacity to improve the coverage, quality, efficiency, and sustainability of the water and wastewater services they provide. The IAWD and the World Bank seek to use the Program resources to facilitate these processes.

The Program is run jointly by IAWD and the World Bank.



WORLD BANK GROUP
Water

The World Bank is a long-standing financial and technical partner of the water and wastewater services sector in the Danube region. It currently has more than 10 active projects and programs in 8 of the 11 countries targeted by the Program, totaling more than € 1 billion of lending. It also engages in an active dialogue with national and international institutions on challenges such as European integration, utility benchmarking, institutional reforms, and regulation.

MAP 1: COUNTRIES PARTICIPATING IN THE DANUBE WATER PROGRAM



Representatives from both institutions manage the activities supported by the Program on a day-to-day basis, in close coordination with IAWD partners and World Bank staff in the region. The Program works with regional, national, and local stakeholders to:

- ▶ Foster a common understanding of the situation of the WSS sector throughout the region
- ▶ Promote an informed policy dialogue around the core challenges the sector is facing
- ▶ Strengthen the technical and managerial capacity of the sector's utilities and institutions.

The Danube Water Program supports regional and national activities in the following countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, FYR Macedonia, Moldova, Montenegro, Romania, Ser-

bia, and Ukraine. Other countries in the region, such as Austria, Czech Republic, Hungary, Slovakia and Slovenia, are also participating in different ways, but do not benefit directly from Program funding (Map 1).

FINANCING

The Program is financed through a multi-donor trust fund managed by the World Bank, with a contribution of € 9.5 million provided by the government of Austria in two tranches to date. Activities supported by the Program have leveraged an additional € 3.6 million, including € 900,000 from the Open Regional Funds (ORF) for Southeast Europe (GIZ and Swiss Cooperation) and close to € 900,000 from direct beneficiaries, and discussions to engage more funding sources including a potential third phase of the Program are on-going.

PARTNERS

All activities under the Program are carried out with regional, national, and local partners:

- ▶ **Policy makers and ministerial staff**—for example, to discuss sector status after a comprehensive water sector diagnostic in Romania
- ▶ **Regulators**—for example, to improve the collection of data on the performance of utilities in Kosovo
- ▶ **National water utility associations**—for example, to train managers, chief engineers and specialists in the efficient operation of Water Supply and Sanitation (WSS) systems in Moldova
- ▶ **Utilities**—for example, to improve energy efficiency in utilities in Bulgaria, BiH, Serbia, and Ukraine
- ▶ **Local government associations and officials**—for example, to involve them in discussions

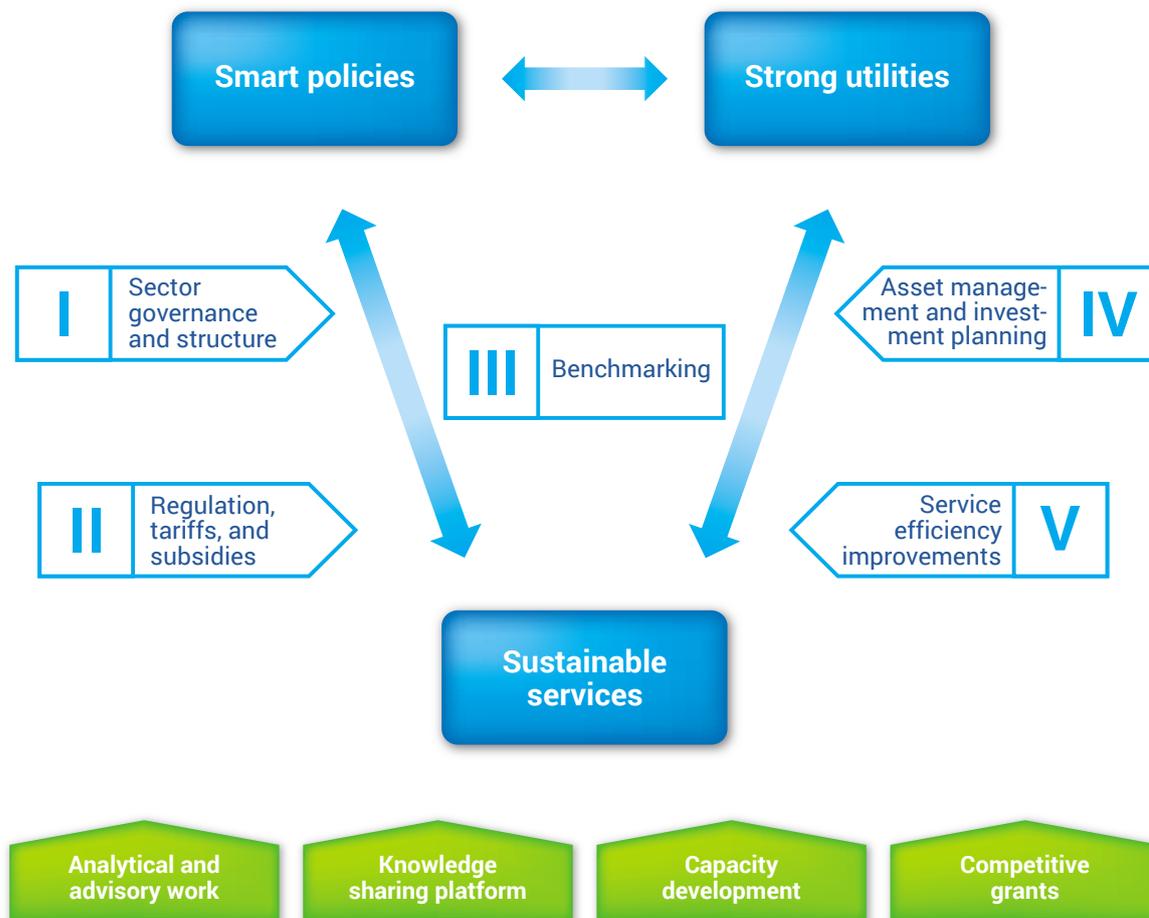
on sector and utility governance, through organizations such as the Standing Conference of Towns and Municipalities in Serbia and the regional Association of Municipal Associations (NALAS)

Whenever possible, activities supported by the Program have been developed in partnership with other regional actors and donors such as the Swiss Cooperation, universities and research centers such as the Jaroslav Cerni Institute in Belgrade, and professional associations such as the International Water Association. The annual Danube Water Conference, for instance, has been partially supported by the Open Regional Funds of GIZ and Swiss Cooperation. The benchmarking activities are being developed with strong technical support from the International Benchmarking Network (IB-Net) and the European Benchmarking Cooperation (EBC). Also, professionals from the region and beyond are sharing their experience through events and conferences financed under the Program.

Elisabeta Poci
Deputy Executive Director,
Water Supply and
Sewerage Association of
Albania (SHUKALB)

“The combined effect of an aging workforce in the water sector, with relatively unattractive compensation packages versus the private sector, has made attracting and retaining capable personnel a serious challenge. This situation demands a more vigorous recruiting and motivation strategy that speaks to a career and not just a job. For this reason, capacity building of the people, who are in or entering the water sector, based on a professional career path, is crucial to filling today’s needs and to forming a foundation for a strong water supply and wastewater sector in the Danube Catchment countries. The philosophy of IAWD/ DWP to work through the national water associations, to bring some of these capacity building programs to water utilities in our countries is a great way of ensuring a sustainable and long lasting after impact. Stronger water associations make for stronger water utilities!”

FIGURE 1: FRAMEWORK OF THE DANUBE WATER PROGRAM



APPROACH

IAWD and the World Bank have designed the Program to achieve smart policies, strong utilities, and sustainable services (Figure 1). To realize this goal, the Program supports activities in five areas of work:

- ▶ sector governance and structure (pillar I)
- ▶ regulation, tariffs, and subsidies (pillar II)
- ▶ benchmarking (pillar III)
- ▶ asset management and investment planning (pillar IV)
- ▶ service efficiency improvement (pillar V)

All pillars are considered to be related, and many activities cut through various pillars to connect stakeholders who should, but typically do not, work together.

The activities supported by the Program fall under four broad categories (Tables 1 and 2): *analytical and advisory work*, which is the development of new research or consolidation of existing material in order to improve the overall understanding of the situation and challenges of the sector in the region, and its use to inform policies in the region; *knowledge sharing platform*, where the focus is on exchanging and sharing experiences and lessons among countries, institutions and utility companies; *capacity development activities* targeting improved water and wastewater services at all levels, from utility companies and their management, to local government representatives, regulatory agencies and ministries; and a *competitive grant window* to finance local initiatives. The Work Plan, available on the Program website, outlines each activity, including its main audience, objectives, and current status.

TABLE 1: MAIN REGIONAL ACTIVITIES OF THE DANUBE WATER PROGRAM

Focus	Activity
Analytical and advisory work	<ul style="list-style-type: none"> ▶ State of the Sector study ▶ Review of aggregation experience of water and wastewater utilities ▶ Services beyond the public utility service areas ▶ Wastewater management in Danube region
Capacity development	<ul style="list-style-type: none"> ▶ WSS association Strengthening & Support ▶ IAWD Strengthening Support ▶ D-LeaP Danube Learning Partnership for Sustainable WSS services <p>Pillar I Sector governance and structure</p> <ul style="list-style-type: none"> ▶ Regional support for WSS sector policies and governance ▶ Regional EU accession cross-support in water sector <p>Pillar II: Regulation, tariffs and subsidies</p> <ul style="list-style-type: none"> ▶ Regional support on WSS sector regulation <p>Pillar III: Benchmarking</p> <ul style="list-style-type: none"> ▶ Regional PI System initiative (DANUBIS.org) ▶ Benchmarking for utility improvement (EBC/Danube) ▶ IAWD Benchmarking for Leading Utilities <p>Pillar IV: Asset management and investment</p> <ul style="list-style-type: none"> ▶ D-LeaP Asset Management program ▶ D-LeaP Utility Access to Financing program <p>Pillar V: Service efficiency improvement</p> <ul style="list-style-type: none"> ▶ D-LeaP Energy Efficiency program ▶ D-LeaP Commercial Practices program ▶ D-LeaP Risk Management and Business Continuity program ▶ D-LeaP Non-Revenue Water Management program ▶ D-LeaP Performance-Based Contracting and Outsourcing program ▶ D-LeaP Management training program
Knowledge sharing platform	<ul style="list-style-type: none"> ▶ Annual regional event - Danube Water Conference ▶ DWP Outreach and Communication ▶ DANUBIS.org water platform development

TABLE 2: OVERVIEW OF THE COUNTRY ACTIVITIES OF THE DANUBE WATER PROGRAM

	Analytical and advisory work	Benchmarking	Competitive Grants
Sub-regional activities		<ul style="list-style-type: none"> ▶ Support to regional EBC/ Danube Hub for BiH, Hr, Ma, Me and Se ▶ Support to regional EBC/ Danube Hub for Albania and Kosovo 	<ul style="list-style-type: none"> ▶ BiH, Me and Se Strengthening Capacity of Water Utilities with Benchmarking
Albania	<ul style="list-style-type: none"> ▶ Water Supply and Sanitation Sector Support 		<ul style="list-style-type: none"> ▶ Western Balkans Training Center - Framework & Business Model ▶ Training Course for Business Planning for Water Utility Associations ▶ Developing a Utility Management Training Program Curricula ▶ Improving Service Quality and Efficiency in Korce regionalized service area
Bosnia and Herzegovina	<ul style="list-style-type: none"> ▶ BiH policy support: Water Sector Institutional Review 	<ul style="list-style-type: none"> ▶ Support to Benchmarking Activities 	<ul style="list-style-type: none"> ▶ Editing DVGW Technical rules/guidelines in Bosnia language ▶ WSS network GIS for efficiency improvement in East Sarajevo ▶ Center for monitoring and reduction of losses in Banja Luka Utility ▶ Active Control of Losses in WSS of East Sarajevo

	Analytical and advisory work	Benchmarking	Competitive Grants
Bulgaria		<ul style="list-style-type: none"> ▶ Formalizing a Self-Financing Utility Benchmarking Program 	<ul style="list-style-type: none"> ▶ Utility Benchmarking ▶ Design of DMAs for the city of Stara Zagora ▶ Improvement of the Asset Management in Sofiyska Voda utility
Croatia	<ul style="list-style-type: none"> ▶ Support to Croatia's utility aggregation process 		<ul style="list-style-type: none"> ▶ Leak Detection Competition
Kosovo	<ul style="list-style-type: none"> ▶ Review of PPP policy framework 	<ul style="list-style-type: none"> ▶ Support to Benchmarking Activities 	<ul style="list-style-type: none"> ▶ Development of Young Water Professionals Network ▶ Commercial Efficiency Improvements in Hidrodrini Peja
FYR Macedonia	<ul style="list-style-type: none"> ▶ Water Utility Sector Support 	<ul style="list-style-type: none"> ▶ Coordination of Benchmarking and Policy Support Activities 	<ul style="list-style-type: none"> ▶ Capacity Development for Utilities: Regulation, Efficiency and Quality ▶ Reduction of NRW in PUC ▶ Capacity Development for Business Planning
Moldova	<ul style="list-style-type: none"> ▶ Support to Moldova RWSS engagement 		<ul style="list-style-type: none"> ▶ AMAC members retraining on operation of WSS systems
Montenegro	<ul style="list-style-type: none"> ▶ Montenegro policy support 	<ul style="list-style-type: none"> ▶ Support to Benchmarking Activities 	<ul style="list-style-type: none"> ▶ Preparation for Implementation of reforms in the area of utility services
Romania	<ul style="list-style-type: none"> ▶ Romania policy support: Water Sector Diagnostic 		<ul style="list-style-type: none"> ▶ Strengthening capacity of the Water Training Center and water utilities
Serbia	<ul style="list-style-type: none"> ▶ Support for EU accession process in the WSS sector 	<ul style="list-style-type: none"> ▶ Support to Benchmarking Activities 	<ul style="list-style-type: none"> ▶ Performance improvement of the water utilities in South Serbia ▶ DVGW technical rules Training of Trainers ▶ Introduction of technical safety management in serbian water utilities
Ukraine	<ul style="list-style-type: none"> ▶ Support regulatory capacity building 	<ul style="list-style-type: none"> ▶ Support to national EBC/ Danube Hub for Ukraine 	<ul style="list-style-type: none"> ▶ Improvement of Customer Service Level in Ivano-Frankivsk Utiliy

ACTIVITIES AND RESULTS

All the activities and related presentations and photos are documented on the DWP website and can be found at www.danube-water-program.org under Program Activities or Events.

ANALYTICAL AND ADVISORY WORK

In 2015, the World Bank undertook a State of the Sector review of water and wastewater services in the Danube region (available at <http://sos.danubis.org>), which became the analytical flagship of the World Bank under the Program. The report provided a country by country sustainability assessment and showed where in the region improvement opportunities exist in terms of access, quality, efficiency and financing of water and sanitation services.

In addition, the report also identified areas that require further study to better inform policy dialogue in the region and some of these have been addressed through new analytical work financed under the ongoing second phase of the Danube Water Program.

The 2015 State of the Sector report highlighted that most of those without access to piped water and flushed toilets live in rural areas, which are often serviced by informal service providers or through self-supply solutions (of which not much is understood at the national or regional levels). To address such knowledge gap, the Danube Water Program launched in the second phase of the program a regional rural WSS study in seven countries with a wide range of rural water outcomes, different challenges, and sector reform contexts. The results, through primary and secondary data collection, shed light, among others, on the different management models that exist in these countries, the enabling legal, regulatory and institutional environment (or lack of) in which these

operate, the service levels that households receive and the performance levels of service providers in these areas.

Also, responding to a gap in knowledge identified in the State of the Sector report, the Danube Water Program carried out a study to better understand the challenges of wastewater management and the results of the implementation of the Urban Wastewater Treatment Directive in the Danube region, considering environmental, economic, sustainability and affordability aspects.

Finally, under the second phase, the Danube Water Program supported a global study on utility aggregation, which included key case studies from the region (Hungary and Romania). The report provides an overview of policy outcomes that can be expected from a successful aggregation, such as improved performance, lower costs, or solidarity between user categories. It underlines the trade-offs between those potential improvements. It also lays emphasis on the context, in which aggregation purposes are most likely to be achieved, and how the purpose and the context must be taken into consideration, when designing aggregations

In addition, regional and national advisory activities support specific policy dialogue and advice to WSS institutions about how to modernize the sector, often in parallel with existing World Bank engagements. The Danube Water Program continues close policy dialogue through country visits in several countries, including Albania, Bosnia and Herzegovina, Romania, Macedonia, Moldova and Montenegro.

2015 State of the Sector Review and 2018 Update

The 2015 State of the Sector review consists of a regional report and 16 country notes and analyzes the access to, organization, performance and financing of the water and sanitation services in Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Kosovo, FYR Macedonia, Moldova, Montenegro, Romania, Serbia, Slovakia, Slovenia and Ukraine.

The report finds that many countries in the Danube region face a double challenge of meeting the high standards of the European environmental acquis while extending sustainable water services to all citizens, leaving 22.5 million people with no access to piped water and 28 million without flush toilets.

Despite improvements in the last 15 years, countries across the Danube region still show very different levels of progress in providing sustainable services for all their citizens. Many long-standing EU members have benefited from a generally stable policy environment and a steady stream of EU funding. Access, in particular, to wastewater services has increased, the performance of their utility companies has reached international standards, and the financing of their services is sound. In contrast, more recent EU members, candidate countries and non-EU countries of the Danube region continue to suffer from important public services gaps, especially among the most vulnerable, and from struggling service providers. This leaves millions of people without access, services underfunded, and water sector governance incomplete or unclear.

FIGURE 2: WHERE ARE THOSE WITHOUT PIPED WATER OR FLUSH TOILETS IN THE DANUBE REGION?
 (SOURCE: AUTHOR'S ELABORATION FROM SOS DATA COLLECTION)

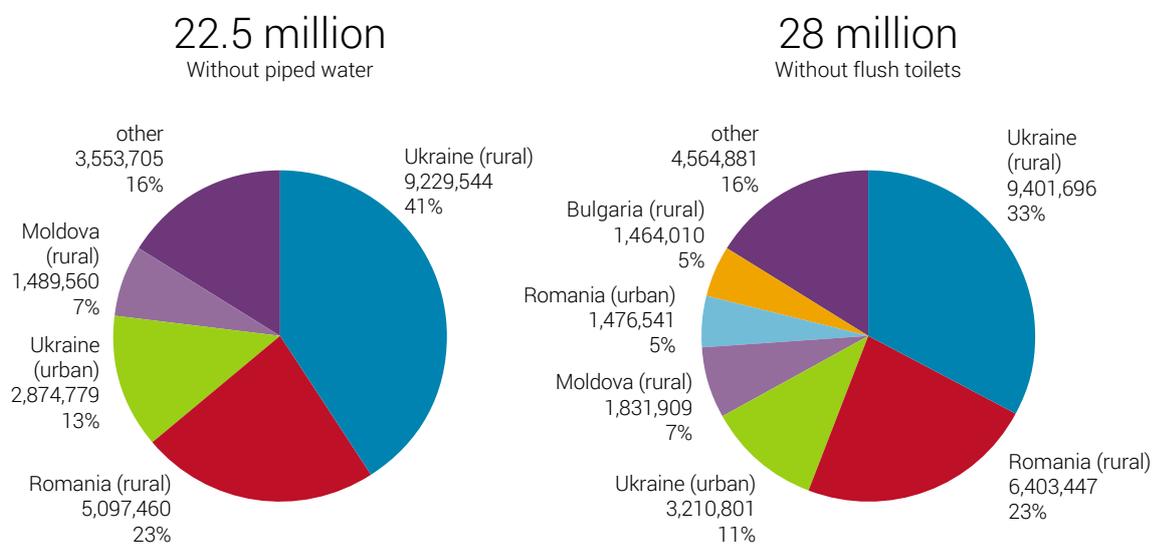
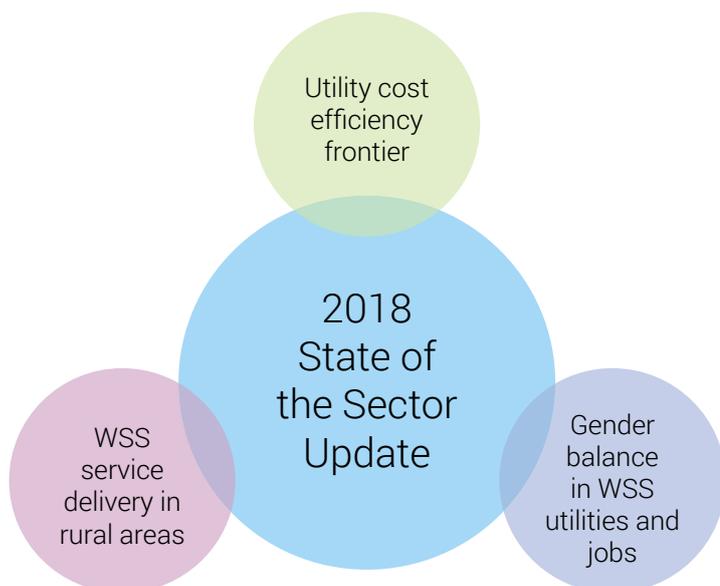


FIGURE 3: 2018 STATE OF THE SECTOR UPDATE



The 2015 State of the Sector report has been distributed and well received among relevant institutions in and outside the region and presented at several events. Responding to the demand from counterparts in the region, the report and several country notes have also been translated into various local languages, available at <http://sos.danubis.org/>.

The State of the Sector report is being updated in 2018 with the latest data since its first edition. It will:

- ▶ Generate new analysis of identified trends in the last three years on different dimensions, and specifically on utility performance and cost efficiency
- ▶ Incorporate new available evidence in other key areas identified as knowledge gaps in the previous State of the Sector edition, on which the authors endeavored to undertaking further work under the Danube Water Program (status of the services in rural areas usually beyond public utility reach, wastewater management, and long-term sustainability) and evidence/trends from other ongoing relevant regional initiatives (including gender and age considerations for a modern utility workforce)
- ▶ Identify key risks and knowledge gaps in the area of climate change, in anticipation of a next edition of the State of the Sector under a potential third phase of the Danube Water Program, which will look at broader water security aspects.

Wastewater Management in the Danube Region: Opportunities and Challenges of EU Accession

The Urban Wastewater Treatment Directive (UWWTD) is a key driver of urban wastewater sector transformation in the Danube region, with large amounts of funds being committed in an unprecedented wastewater infrastructure investment cycle. This has prompted preparation of this study with the following objectives: (i) assess the results of the UWWTD implementation in the Danube region, considering environmental, economic, sustainability and affordability aspects, and (ii) contribute to the ongoing discussion initiated as part of the European Commission's review of the UWWTD, by identifying challenges and actions that countries can take to improve wastewater management.

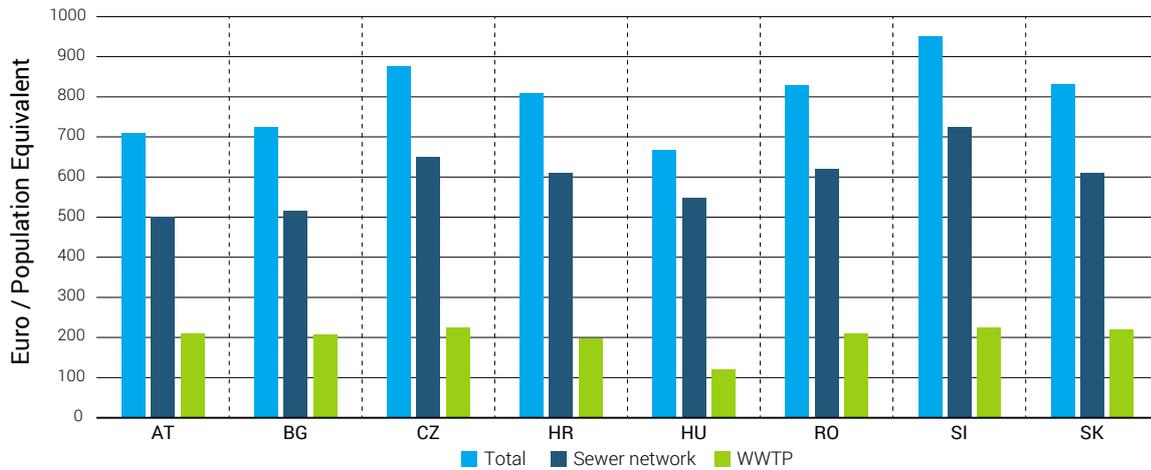
The study focuses geographically in the Danube region on countries that joined the European Union between 2004 and 2013, namely Bulgaria, Croatia, Czech Republic, Hungary, Romania, Slovakia, Slovenia as well as Austria.

Around EUR 60 billion need to be invested to achieve full compliance with the UWWTD, of which EUR 44 billion have already been invested, but significant additional resources including reinvestment for older infrastructure needing renewal, estimated at EUR 56 billion, will still be needed for continued compliance until 2040.

The review shows that although all countries have managed to decrease load emissions (mostly for BOD/COD rather than for Nitrogen and Phosphorus), most of them are experiencing delays towards full UWWTD implementation, given ambitious implementation planning targets, which most countries have found challenging to achieve.

The report raises the issue that operation and maintenance costs for the sustainability of these investments will be a challenge in the future, as wastewater treatment pricing policies currently only partially support full cost recovery of water services in the eight countries, with depreciation usually only partially included in the current tariffs. This means that robust annual tariff increases will be required to achieve total cost recovery.

FIGURE 4: SPECIFIC INVESTMENT COSTS OF UWWTD COMPLIANCE IN EUR/PE

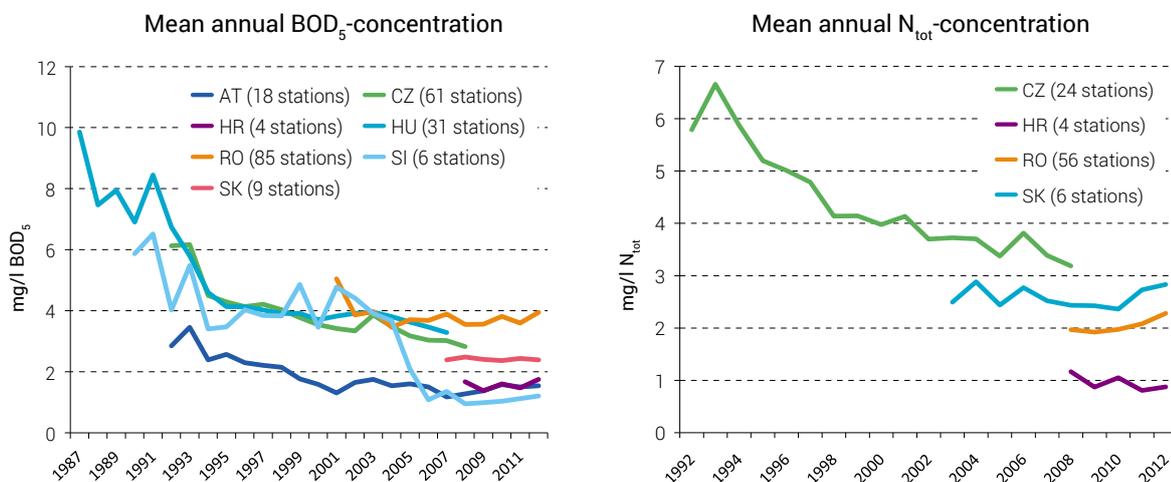


The study was informed by the discussion undertaken under the International Workshop on Wastewater Management in the Danube river basin that took place in Bucharest on 28-29 November (Co-organized by the ICPDR, IAWD, WB and the Joint Research Center of the European Commission. Finally, the report's results and recommendations were presented to the European Commission during the World Bank – European Commission Water Day in Brussels on January 23, 2018. The full report on this study is available upon request and a concise think piece will be published in the Danube Water Program website.

Beyond Utility Reach? How to Close the Urban - Rural Access Gap - A Review of Rural Water and Sanitation Services in Seven Countries of the Danube Region

Given that significant access gaps are a major barrier to fulfilling the Sustainable Development Goals, this study was launched to increase awareness and knowledge on how rural service provision is organized, to understand whether and how the aggregation through regional water utilities has effectively reached rural areas, and to present lessons and recommendations for expanding and improving the provision of services for rural populations. Seven countries—Albania, Bosnia and Herzegovina, Croatia, Kosovo, Moldova, Romania, and Ukraine—were selected, because they represent a wide range of rural water outcomes, different challenges, and sector reform contexts. The analysis was

FIGURE 5: MEAN ANNUAL CONCENTRATIONS OF BOD₅ AND TOTAL NITROGEN



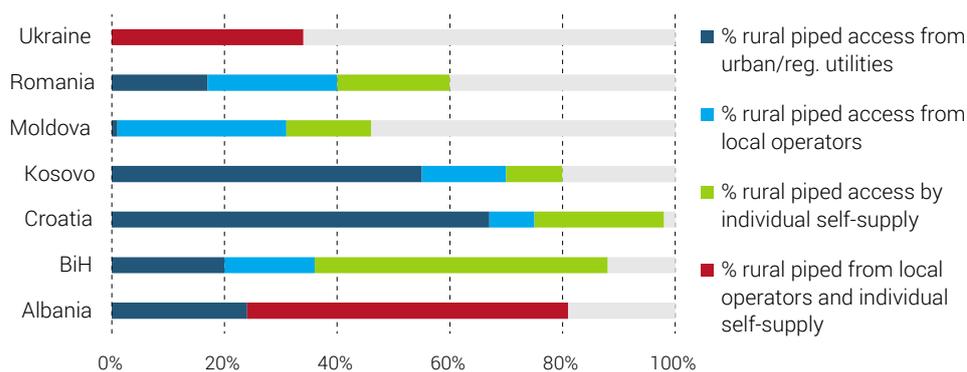


FIGURE 6:
 ESTIMATED
 STRUCTURE
 OF SERVICES
 DELIVERY FOR
 PIPED ACCESS
 FOR POPULATION
 IN RURAL AREAS
 (SOURCE: WORLD BANK
 2018).

based on secondary data sources, documents, and existing datasets, combined with primary data collection in selected rural localities in the seven countries. Over 4,100 connected households and over 1,200 self-supply households were interviewed, 178 interviews were conducted with service providers, and 162 interviews were conducted with members of local governments.

The report highlights that while utilities are the typical service provider in urban areas, a much more diverse range of management models is found in rural areas. These are broadly categorized as local service providers, or as urban and regional utilities that have expanded their networks to rural areas and, in some cases, manage stand-alone rural systems. A third distinct service delivery model is individual self-supply, i.e., households using point sources such as private wells and springs. The report analyses and presents findings related to the enabling environment, in which service provision takes place along the axis of institutional capacity, financing and affordability of services, asset management and monitoring and regulatory oversight. In addition, based on the study's primary data collection it presents findings on service levels, satisfaction and operator practices. It then presents recommendations for (i) enhancing the enabling environment and reaching the poor with rural services; (ii) improving different service delivery models and (iii) improving rural sanitation. The report also draws from global examples to show how other countries have dealt with the challenges identified in the study countries.

A few of the main recommendations that the report highlights as a path towards achieving the SDGs are presented below:

- ▶ Most countries will need a portfolio approach that adopts different service delivery models for reaching different rural population groups. The enabling policies, legislative framework, and financing measures need to recognize the different service delivery models required to address all rural water supply needs.

- ▶ Countries are encouraged to implement targeted social support initiatives to address connection barriers for poor and disadvantaged populations, potentially also for self-supply support.
- ▶ Expanding access should be an explicit objective of regionalization of utilities with time-bound accountability and strong incentives.
- ▶ Support functions and capacity building programs for local operators and local governments should be institutionalized and funded to ensure sustainability.
- ▶ To reach universal access, a supported self-supply model will need to be a part of the solution as is the case in many Western countries with dispersed rural populations.
- ▶ Rural sanitation strategies need to be developed based on guiding criteria to adopt appropriate individual systems as opposed to only sewerage solutions for agglomerations with a population below 10,000 people.

The full regional report including country overviews and more extensive country reports can be found in the Danube Water Program Website (www.danube-water-program.org). The report was disseminated at the 2018 Danube Water Conference and also through specific workshops in-country.

Joining Forces for Better Services? When, Why, and How Water and Sanitation Utilities can benefit from working together - Global Study on WSS Utility Aggregation Country Activities

This study, which was initiated under the Danube Water Program second phase and then merged into a global study, aims to provide evidence-based guidance to policy makers and practitioners regarding when, why, and how water and sanitation utilities can

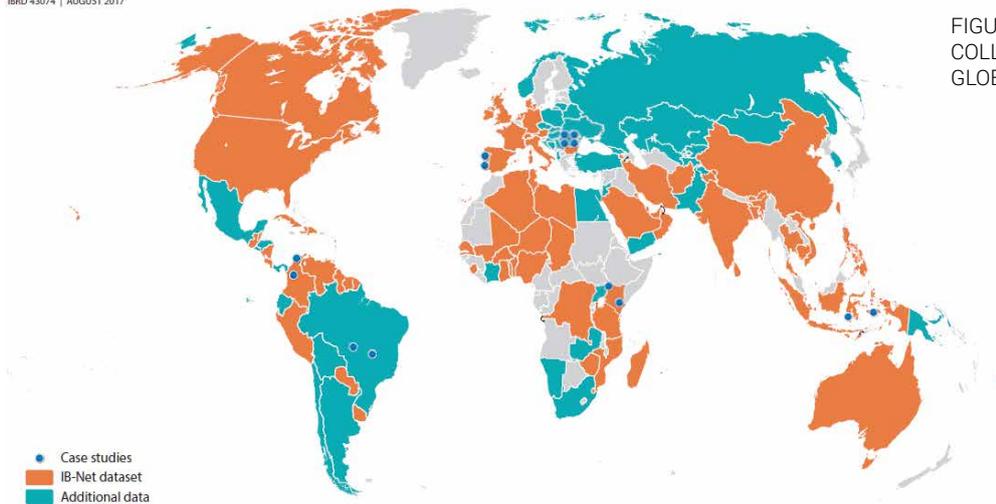


FIGURE 7: DATA COLLECTED FOR THE GLOBAL STUDY

work together (“aggregate”) to successfully deliver specific policy outcomes, such as better services or lower costs. A statistical analysis based on IB-Net data, which cover 1,306 utilities from more than 140 countries, was conducted to understand in greater detail the potential gains from aggregation. Comprehensive time-series data for 79 actual aggregation cases identified in the data set were used to understand the effect of aggregations on disaggregated performance measures as well as differences in the cost structure. To complement the hard data analysis, the study also

investigated in greater detail a set of 14 case studies in seven countries, centering on the stakeholders involved, the decisions made, the roles of sector actors and their incentives, and the perceived outcomes with a view to bringing forward the essence of each case experience. The seven countries were Brazil, Colombia, Hungary, Indonesia, Mozambique, Portugal, and Romania.

The report is highly relevant for countries in the region, especially for the Western Balkan countries, as most

FIGURE 8: TOOLKIT ON THE AGGREGATION OF WATER SUPPLY AND SANITATION UTILITIES

JUMP TO TOOLKIT

- 
AGGREGATION: PURPOSE, CONTEXT AND DESIGN
 Explore the [basic concepts of WSS utility aggregations](#)
- 
SUCCESSFUL AGGREGATION GUIDANCE
 View road map to a [successful aggregation](#)
- 
AGGREGATION GLOBAL TRENDS: INTERACTIVE MAP
 Interact with the [aggregation global trends: interactive map and glossary](#)
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CASE STUDIES
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ABOUT THE GLOBAL STUDY & TOOLKIT
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WATER GLOBAL PRACTICE

Joining Forces for Better Services?

When, Why, and How Water and Sanitation Utilities Can Benefit from Working Together

AUGUST 2017

WORLD BANK GROUP

of them are considering the aggregation of utilities as a policy option to address financing and capacity challenges resulting from the decentralization of the services and existing high number of service providers at national level. The final report can be found [here](#). In addition a series of [videos](#) with first-hand interviews, and [interactive map](#) highlighting global trends in utility aggregation [glossary of aggregation typology](#) and case study accounts: [Hungary](#), [Brazil](#), [Colombia](#), [Romania](#), [Portugal](#), [Mozambique](#), and [Indonesia](#)).

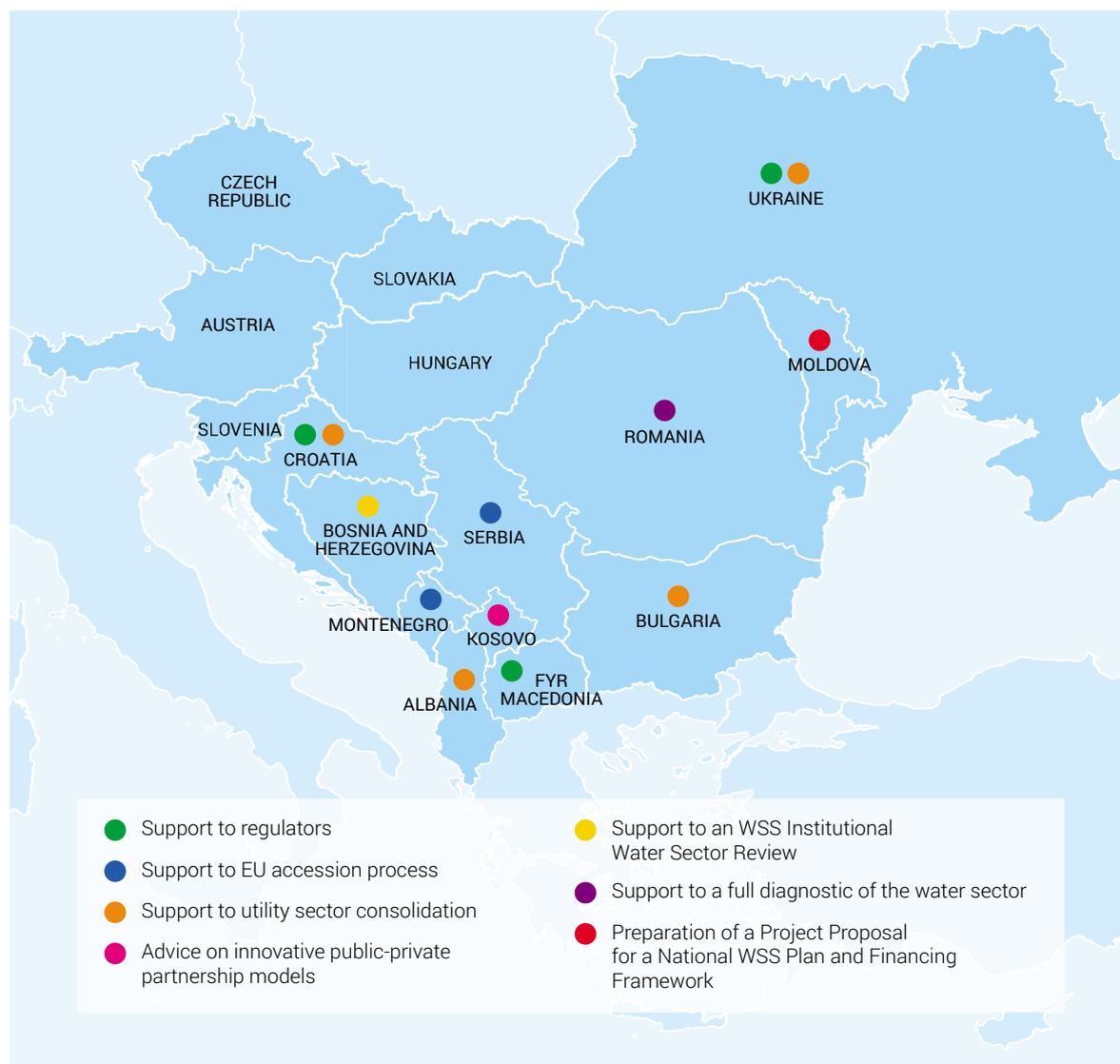
Country Activities

In addition, regional and national advisory activities support specific policy dialogue and advice to WSS institutions about how to modernize the sector, often in parallel with existing World Bank engagements.

For example, support has been provided to recently formed regulators in Croatia, Montenegro, and elsewhere in efforts to strengthen their country's regulatory mechanisms. The European accession process in Serbia and Montenegro has been informed by technical assistance and regional exchanges, among others. Utility sector consolidation is being considered in several countries, including Albania, Bulgaria, Croatia, and Ukraine, which are keen to continue learning from regional practices.

Kosovo under the first phase, received specific advice on innovative public-private partnership models to improve utility performance. Support for a comprehensive sector reform in Albania is on-going with support from the Program to update the sector financing strategy and prepare future scenarios.

MAP 2: OVERVIEW OF COUNTRY ACTIVITIES WITHIN THE ANALYTICAL AND ADVISORY WORK

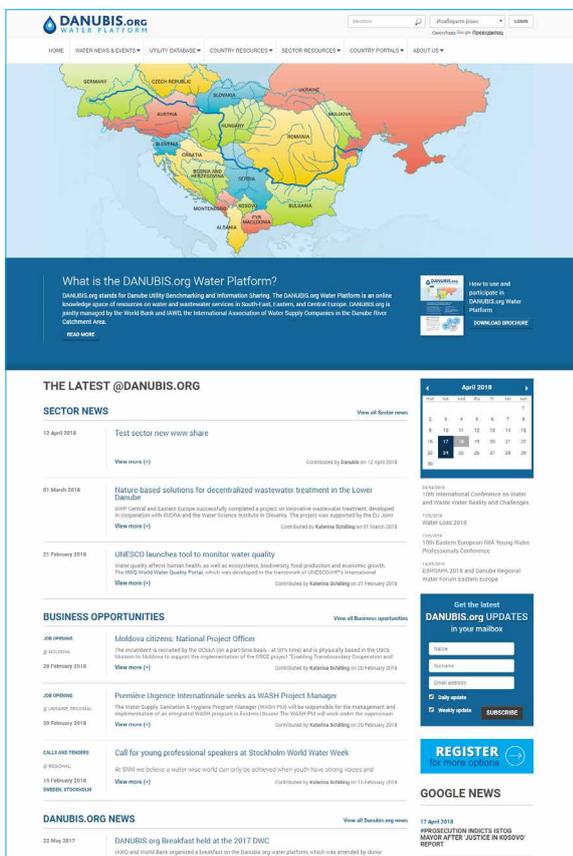


In Bosnia and Herzegovina, the DWP has supported a WSS Institutional Water Sector Review, and discussions on how to implement key recommendations are on-going. In Romania, the DWP has supported a full diagnostic of the water sector and key recommendations are being discussed with national counterparts. In addition, a workshop on performance-based contracting for reducing non-revenue water was organized in Bucharest on 12-13 February, 2018 with enthusiastic reception from the participants. In Moldova, the DWP has supported the development of detailed Terms of Reference for a National Water Supply and Sanitation Plan and Financing Strategy, and discussion on further support are on-going.

KNOWLEDGE SHARING PLATFORM

With funding from the Danube Water Program, IAWD and the World Bank create opportunities for water sector professionals to access and exchange information within and among countries in the region and beyond. A variety of mechanisms are being offered, including major annual conferences, technical workshops and study tours.

PICTURE 1: LANDING PAGE OF DANUBIS.ORG WATER PLATFORM



One key initiative was the launch of an online knowledge space called the DANUBIS.org Water Platform, which has become the largest and most complete repository of resources for and about water and wastewater services in the Danube region and attracts a growing number of users.

Recognizing that online platforms do not replace personal exchanges, the World Bank and IAWD have and will continue to create spaces for high-ranking professionals and stakeholders in the sector to learn from and exchange information with each other, first and foremost through the annual Danube Water Conference. The Conference is designed to ensure continuous interaction between different types of actors involved in water services (national governments and line ministries, regulators, utility associations, municipal associations, utilities, municipalities, international organizations and academia). The cross-sectoral and inter-country dialogue created by this annual conference has been instrumental in creating a sense of community and helping professionals in the sector to build relationships and to understand the needs and concerns of other sectors, as they relate to decisions in the water sector.

DANUBIS.org Water Platform

The DANUBIS.org (Danube Utility Benchmarking and Information Sharing) Water Platform is an online knowledge space of resources on water and wastewater services in South-East, Eastern, and Central Europe.

DANUBIS.org is jointly managed by IAWD and the World Bank and was officially launched at the Danube Water Conference in May 2014. It is guided by a steering group representing most of the countries in the Danube region and builds on the data and information of national institutions (regulators, line ministries, and utility associations), making the information comparable across countries.

On DANUBIS.org, water sector organizations can advertise their events and trainings as well as business opportunities, making the platform a hub for regional knowledge and information. Selected news articles related to water management and current affairs in the region complement the website.

The core piece of DANUBIS.org is a regional, public performance indicator database for water supply and sanitation utilities in the Danube region, in order to allow for country and utility performance data comparison.

Building on the main DANUBIS.org Water Platform, institutions in several countries, usually the national water utility associations, have also taken the initiative to develop a Country Portal available in national language, to highlight resources and information specifically related to their reality.

Improvements of the platform are continuous, taking into account comments by the Steering Committee, which meets every six months, and by users and developers. The latest update was released at the 2018 Danube Water Conference. In addition to a range of improvements concerning the user-friendliness of the interface, the Country Portals were upgraded to offer the full range of the main platform.

Danube Water Conference

The Danube Water Conference (DWC) is the Danube Water Program's flagship event, taking place in Vienna every May since 2013. Every year the focus is put on a different topic, ranging from "Smart Policies, Strong Utilities, Sustainable Services", over "From Challenges to Opportunities", and "The State of the Sector" to "Addressing the Double Challenge" and "Financing Water Services for Development". The 2018 Danube Water Conference is designed around "Achieving sustainable water and sanitation for all: progress, challenges and future actions in the Danube region".

Over the years, the conference has evolved into a must-attend event for key water and sanitation sector

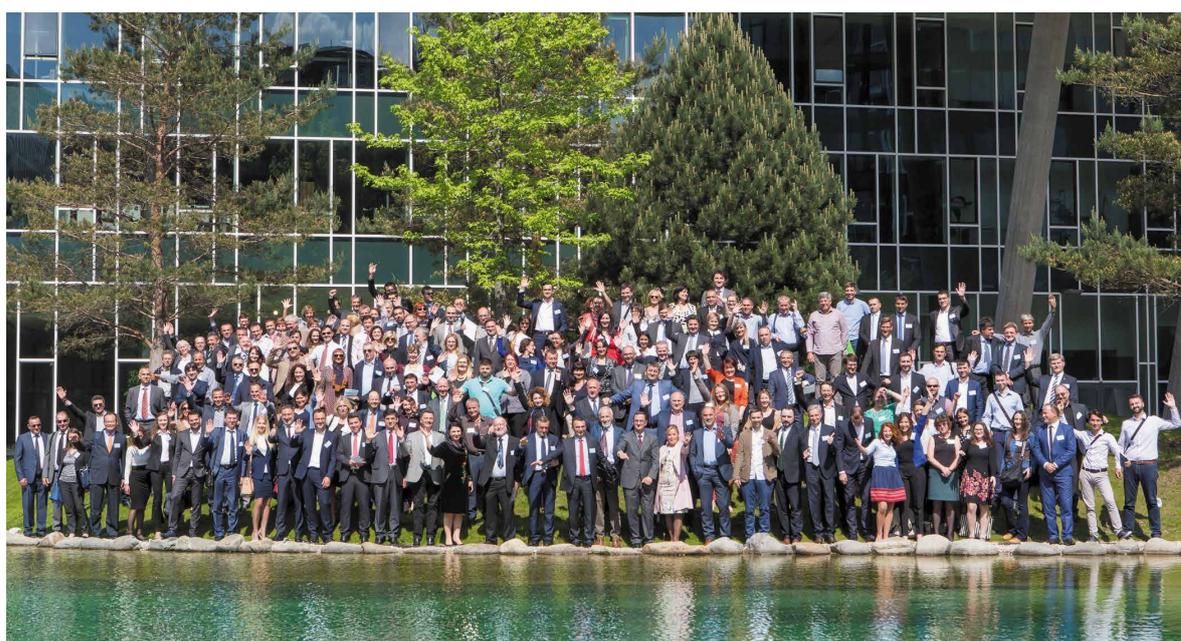
and municipal government representatives from the Danube region, to discuss challenges and opportunities in the sector and ways to jointly achieve smart policies, strong utilities, and sustainable water services.

Each edition gathers around 150 to 200 key sector representatives from entities such as national utility associations, the regional network of associations of local authorities, water and wastewater utilities, line ministries, regulatory authorities, the donor community, other international associations and academia to discuss progress made and challenges lying ahead in the water supply and sanitation sector of the Danube region.

The two-day conference offers a great number of plenary and smaller parallel sessions on more specific topics. The day before or after the conference is used to bring together different groups of stakeholders in a smaller setting, including regulators, the DANUBIS.org Steering Group or IAWD members, to discuss specific issues. These meetings together with the main event strengthen the cooperation between the stakeholders and facilitate knowledge exchange between the parties.

The Danube Water Conference continues to take place annually with support of other financiers such as GIZ and the Swiss Cooperation. In order to make the conference a self-financed event, financial contributions to participants have started to be gradually reduced to ensure the sustainability beyond the duration of the DWP.

PICTURE 2: PARTICIPANTS OF THE 2017 DANUBE WATER CONFERENCE



Evis Gebreja
 Deputy General Director,
 Tirana Water and
 Wastewater Utility,
 Albania

“The Danube Water Conference has made a real difference for Tirana Water and Wastewater Utility in creating a familiar environment with other utilities in the region through increasing networking among professionals, sharing experiences and building concrete partnerships. The outstanding program of Utility Benchmarking represents a significant facilitation tool to expand the network among utilities in the region and improve performance through comparing and learning from each other.”

CAPACITY DEVELOPMENT

135 utilities have taken part in one or more of the on-the-job capacity building programs developed under the first phase of the Program and offered by IAWD and partners under DWP and ORF/GIZ financing, including Energy Efficiency, Asset Management, Commercial Efficiency and Utility Benchmarking. Those programs resulted in concrete results, such as the identification of € 10 million of energy efficiency investments yielding 35% energy savings, the preparation of business plans for 19 utility companies, and the establishment of 17 utility asset registers.

The focus of those initial programs was to test various approaches and demand from utilities, and a program fee was requested from all participants to evaluate willingness to pay, although the amount (€ 1000 for large utilities and € 500 for small ones) was not set at cost recovery level.

The Danube Learning Partnership (D-LeaP)

The first phase of the Program showed that there was an unmet demand for high-quality, on-the-job capacity building. A survey on Capacity Building Programs conducted by IAWD in November 2015 found that only around 50% of respondents were satisfied with the capacity building options available in their country. The other half acknowledged the benefits of international and interregional cooperation to increase the quality of capacity building, e.g. by knowledge exchange and networking.

Therefore, the focus under the second phase was on the development of the Danube Learning Partnership (D-LeaP), which is designed as regional, integrated and sustainable capacity building initiative of national water utility associations and IAWD based on the pilot experiences of the last years and through extensive consultation with key partners.

FIGURE 9: NUMBER OF UTILITIES PER COUNTRY PARTICIPATING IN ONE OR MORE CAPACITY BUILDING PROGRAMS DEVELOPED UNDER THE PROGRAM (PHASE 1 AND 2)

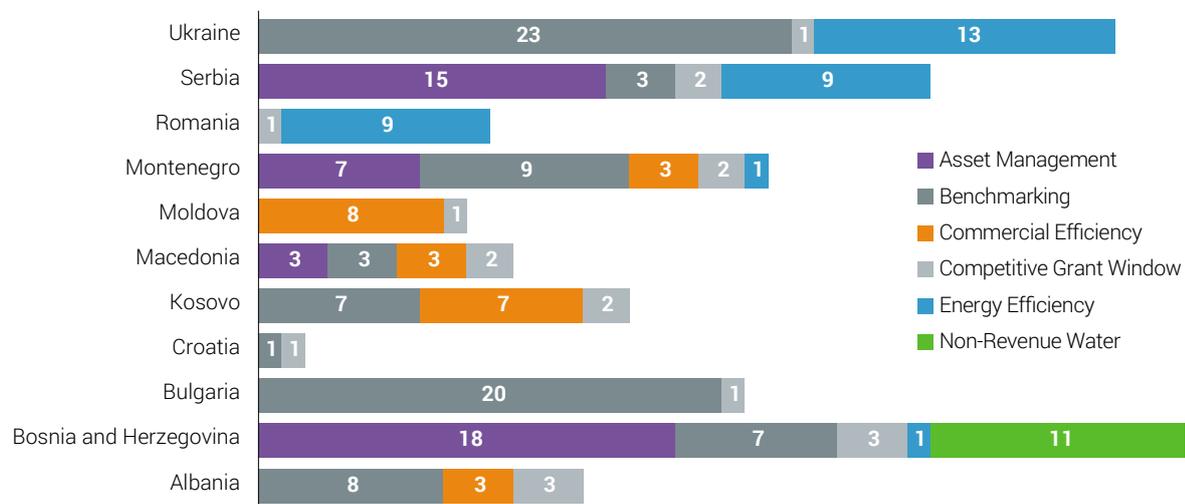
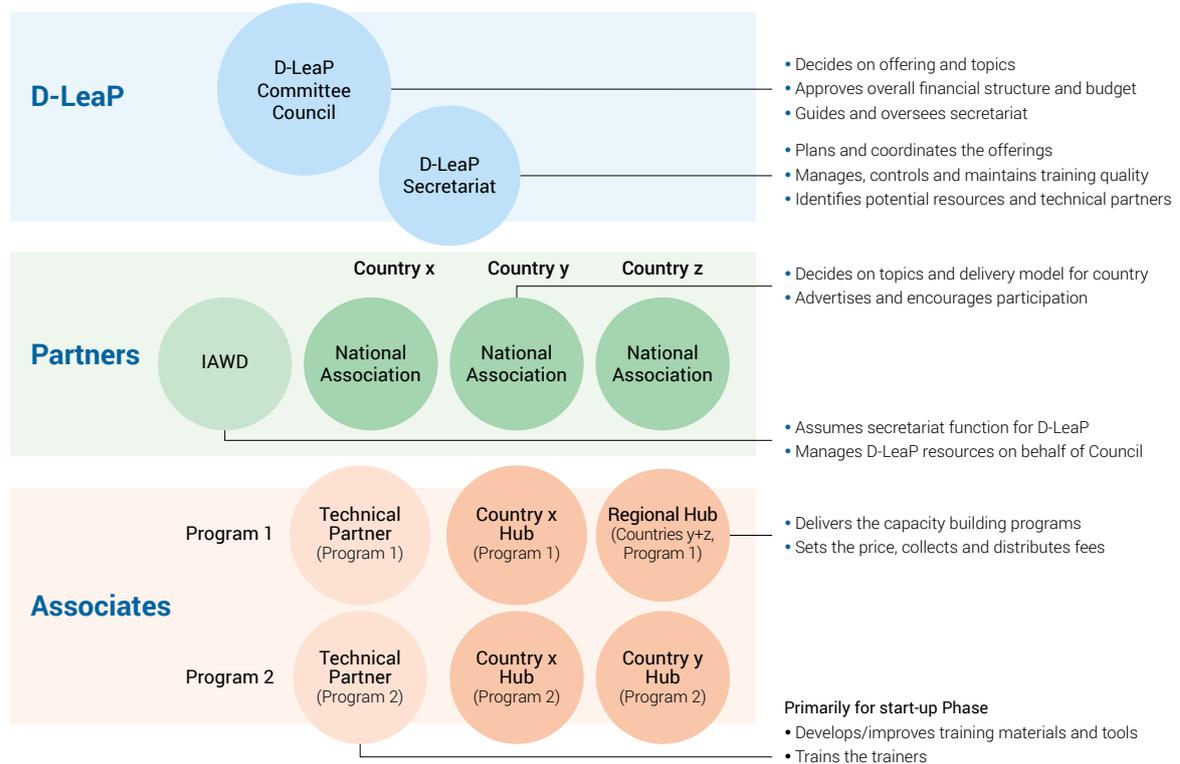


FIGURE 10: D-LEAP OPERATING MODEL



The primary target audience of D-LeaP programs consists of the water and wastewater utility companies of the countries in the Danube region and their management and technical staff. Out of the 17 countries that are covered by D-LeaP, utilities in 12

countries are expected to have a particular interest in D-LeaP programs based on the level of development of their utility sector: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Kosovo, Moldova, FYR Macedonia, Montenegro, Romania, Serbia, and Ukraine.

MAP 3: HUBS OFFERING CAPACITY BUILDING PROGRAMS DEVELOPED UNDER THE PROGRAM (PHASE 1 AND 2)



FIGURE 11: OVERVIEW OF D-LEAP PROGRAMS



D-LeaP is legally formed as a committee of IAWD with governance from national water utility associations and provides a comprehensive curriculum to the staff of water and wastewater utilities located in the Danube region.

D-LeaP delivers to participating utilities and professional staff three main types of capacity building programs as part of a virtuous cycle of Check – Plan – Do performance improvements:

- ▶ Foundation Program Offering: Foundation programs are the entry point into a continuous improvement cycle and help participating utilities

and staff to establish their own diagnostic of high-impact issues affecting the performance of their utility companies. These programs rely on the power of benchmarking utility performance against other similar companies and international benchmarks and facilitating dialogue among practitioners on good practices.

- ▶ Technical Program Offering: Once utilities and staff have identified the main issues affecting their performance, they can choose from a range of technical programs covering the main utility management topics. These programs do not

Sandi Zulic
Chair of the D-LeaP Committee Council, BiH

“D-LeaP, the partnership between IAWD and national water utility associations, allows the national associations to provide regionally developed and approved capacity building programs to the utilities in their respective countries.”

FIGURE 12: FACTS AND FIGURES ON D-LEAP (APRIL 2018)



only provide training on the solutions to those challenges, but also help utility staff to prepare concrete action or investment plans to address those challenges.

- ▶ **Implementation Program Offering:** A combination of lack of financing as well as insufficient operating and contractual capacity is often the reason for the inability of utilities to implement the solutions they have developed. The implementation programs help utilities to develop a set of implementation tools.

All programs are delivered on country level in national language (or in groups of countries with similar language) by the Hubs.

To date, Training of Trainers (ToT) events for six programs have already been delivered. Twelve Hubs in 11 countries have been established so far with four additional in preparation and the delivery of the programs Asset Management, Non-Revenue Water, Commercial Efficiency and Utility Benchmarking Program is already ongoing.

The D-LeaP Website has been launched at the 2017 Danube Water Conference including Hub Portals administered by the Hubs in local language for promotional activities. The D-LeaP Academy, also available in all languages spoken in the region, has been established as platform for the Hubs to administer the programs as well as providing e-learning content.

For further information on the governance, the partners, the programs as well as the Hubs, please consult the D-LeaP brochure and visit the D-LeaP website www.d-leap.org!

PICTURE 3: D-LEAP WEBSITE



Benchmarking activities

Benchmarking, collecting performance indicators and then comparing performance among utilities of similar size and conditions, is a valuable tool for monitoring and organizing utility improvement and ensuring the quality of water services.

The Danube Water Program has supported collection and availability of basic information about utility performance throughout the region using a variety of tools and through a variety of projects in Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro and Serbia.

In addition, the Danube Water Program has developed several tools to establish sustainable benchmarking routines in the Danube region.

FIGURE 13: TOOLS DEVELOPED BY THE DANUBE WATER PROGRAM TO SUPPORT BENCHMARKING IN THE DANUBE REGION

Activity	Tool	Technical partner	User
Uniform PI data collection	DANUBIS DCM		Regulator and national association
Utility Benchmarking Program	Regional Danube Hub		Utility
	National/subregional Hubs		Utility
Regional public PI database			Public

The DANUBIS.org Water Platform includes a publicly available utility database for water utilities to allow for country and utility performance data comparison. These efforts have been complemented by the Utility Benchmarking Program, which is now operated under D-LeaP, to support utilities in learning from one another and using information about their performance as a basis for creating improvement in the efficiency of service. In addition, the program has supported regulators in more easily collecting data they need for regulation of the sector by creating the DANUBIS Data Collection and Management Platform.

Public Regional Utility Database at DANUBIS.org

The core piece of DANUBIS.org is a regional, public performance indicator database for water supply and sanitation utilities in the Danube region to allow for country and utility performance data comparison. It is based on the methodology, data sources, and information technology (IT) solution of the International Benchmarking Network (IB-Net). Since its launch, DANUBIS.org has collected data on more than 600 utilities from 14 countries and has been visited by thousands of distinct users in close to 50 countries from the region and beyond.

The Utility Benchmarking Program

In close coordination with the other benchmarking activities under the Danube Water Program, the objective of the Utility Benchmarking Program (UBP) lies in assisting utilities in identifying areas, where performance improvement is needed. The ambition is to enlarge the network of utilities that jointly work on improving their services over time. The Utility Benchmarking Program is primarily directed to utility teams rather than individual staff members and is the basis under which utilities can identify their capacity building needs.

In cooperation with the European Benchmarking Cooperation (EBC) as Technical Partner, sustainable benchmarking routines have been established in Southeast, Eastern and Central Europe operating on two different levels:

- ▶ the national/subregional and
- ▶ the Danube regional level

In total, four national/subregional Hubs have been created in accordance with the EBC operating structure focusing on utilities in Bulgaria (hosted by the Bulgarian Water Association), Ukraine (hosted by IAWD in cooperation with the Ukrainian Association of Enterprises of Water Supply and Sewerage Services),

FIGURE 14: SPIDER GRAPH DEVELOPED FOR THE UTILITY BENCHMARKING REPORT

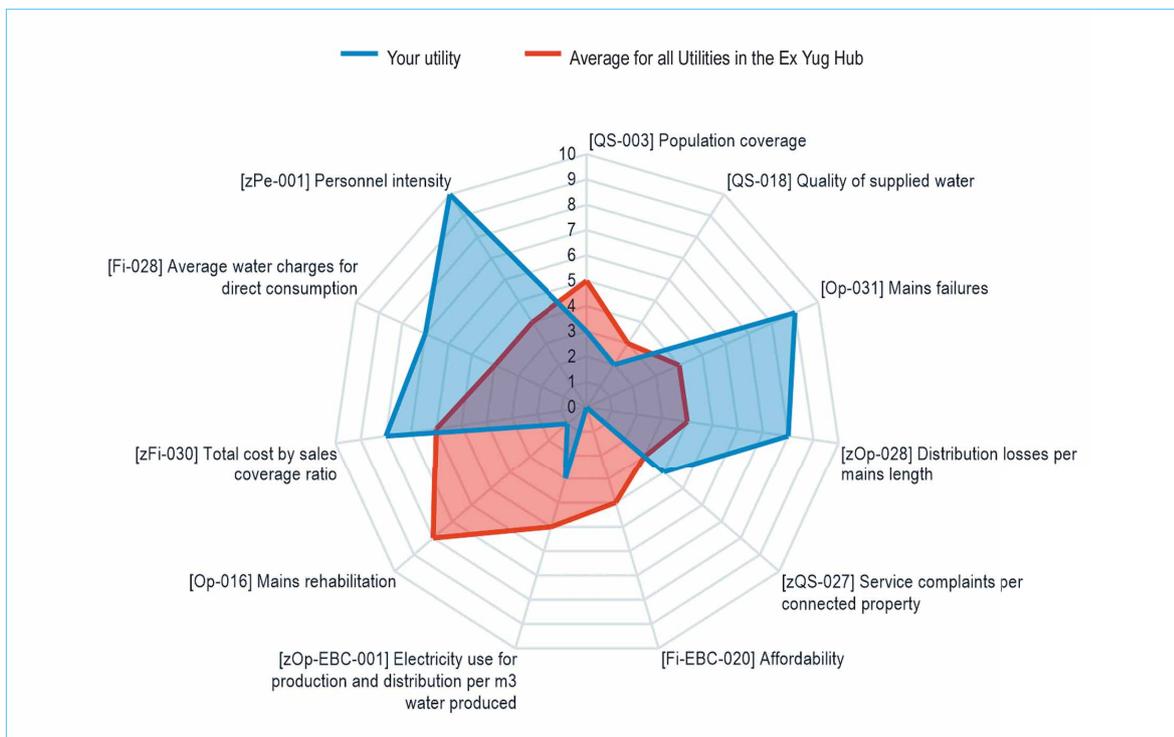
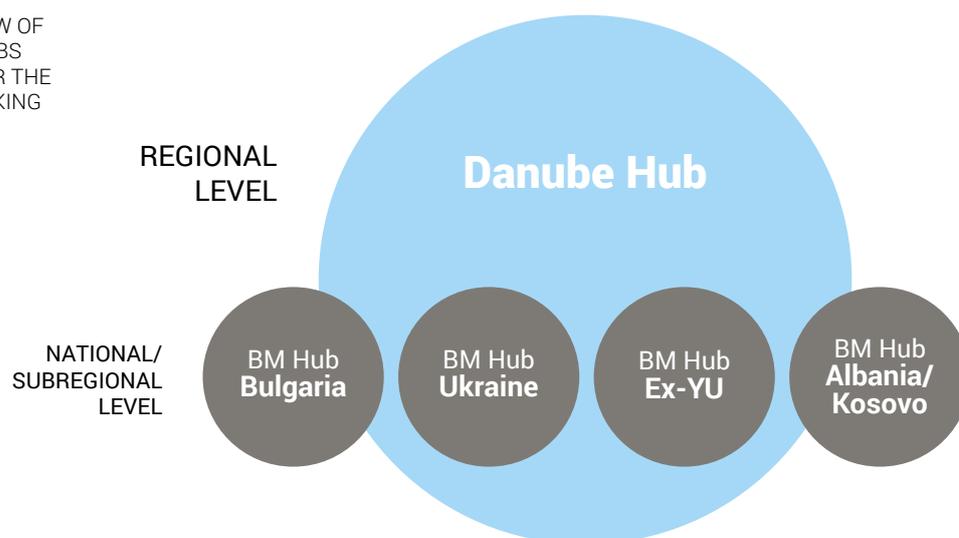


FIGURE 15: OVERVIEW OF BENCHMARKING HUBS ESTABLISHED UNDER THE UTILITY BENCHMARKING PROGRAM



Albania and Kosovo (hosted by the Water and Wastewater Works Association of Kosovo) and the former Yugoslavian countries (hosted by IAWD).

Utilities participating at national/subregional level get their own, individual company report, in which their performance in several areas is compared with other utilities in the group. Next to this, workshops are organized to exchange knowledge and good practices.

The regional organized Danube Hub has been established in the frame of the newly developed Danube Regional Benchmarking Initiative. Utilities participating at Danube regional level are intended to be the leading utilities of each country that are willing to learn from other utilities of similar size and level in other countries of the region. They get their own individual company report, in which their performance in several areas is compared with the average performance of utilities in the Danube region as a reference.

Leading utilities are motivated to continue the process of collecting data on their performance and comparing this with other utilities in the region and in Western Europe. The EBC experience in the Danube region and elsewhere shows that voluntary benchmarking organized through national, subregional and regional Hubs builds capacities, enables local ownership of the project, and promotes learning from best practices. Participating utilities show strong interest and commitment to the benchmarking effort in their companies.

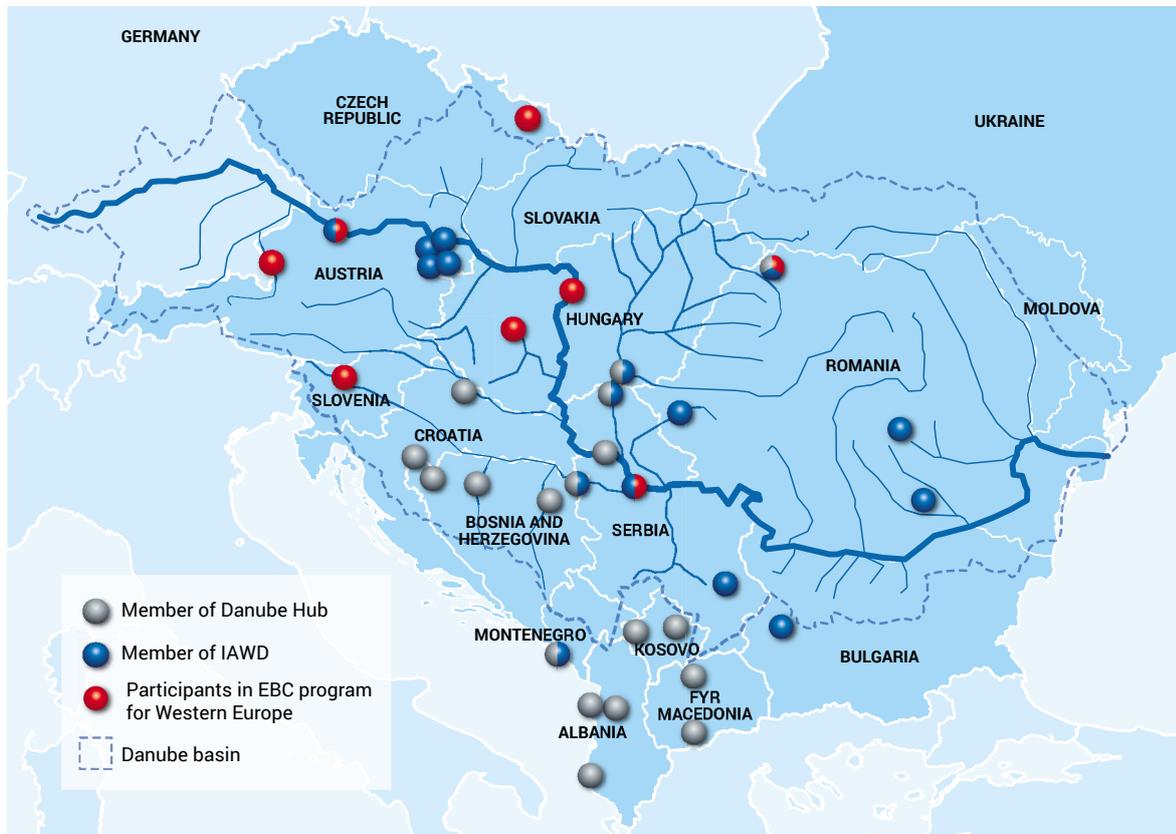
DANUBIS DCM as Utility Performance Data Management System

In order to support the creation of institutional benchmarking systems in countries that currently lack them, a Data Collection and Management platform called DANUBIS DCM has been launched at www.danubis-dcm.org end of 2016. The DANUBIS DCM platform enables utility companies to enter

Darius Boer
Director Economic,
APAServ Satu Mare,
Romania

“The interactions between the participants and opportunity for knowledge and experience sharing between colleagues in the Benchmarking program were by far the main benefit of the project. The purpose of Benchmarking is to improve performance and the program has allowed that to happen. The Danube Water Program offers the participants the opportunity to improve, so the participants have the chance to improve. So, “Embrace Benchmarking, it will reward you.”

MAP 4: UTILITIES PARTICIPATING IN THE DANUBE HUB (FIRST CYCLE, 2018)



utility performance data in an amicable web interface, helps national institutions check the quality and consistency of the data provided and manage and safeguard the data in a secure manner. It additionally provides utility managers with a simple scorecard of their performance over time and against targets and includes a complete set of tools for Managing Institutions of the DANUBIS DCM to undertake utility benchmarking at national level. Currently, national in-

stitutions in five countries, Bosnia and Herzegovina, FYR Macedonia, Kosovo, Montenegro and Serbia, use the platform and have signed a Memorandum of Understanding with IAWD and the World Bank to define the roles and responsibilities of each institution with regards to the DANUBIS DCM platform. Several other countries, e.g. Albania, Bulgaria or Moldova have expressed their interest to also join the DANUBIS DCM community.

Raif Preteni
 Director, Water
 Services
 Regulatory
 Authority
 Kosovo

“WSRA has been using the Data Collection and Management platform DANUBIS DCM to manage utility performance data since 2016. We find that this tool has helped our teams to improve the quality and consistency of the data provided and manage the data in a secure and reliable manner. We look forward to continuing the collaboration with IAWD, the World Bank and the DANUBIS DCM community to continue to improve the tool based on our experience.”

THE COMPETITIVE GRANT WINDOW SUPPORTING INNOVATION

The Competitive Grant Window serves as a vehicle for local stakeholders to access financing for projects they consider priorities in their entities, and that match the topics of the Danube Water Program. The grants are designed to support innovative and creative ideas from organizations throughout the region to address challenges they are facing.

IAWD supports the best projects by covering the bulk of the expenses in a range of up to € 50,000, while all recipients commit to co-fund the activities up to a certain level. All projects need to be connected to other activities associated with improving water supply and wastewater management.

The Program has already supported two cycles of competitive grants, one in 2013 and a second one in early 2016. The first round of projects concluded in October 2015. Out of 71 applications, IAWD selected the 14 most promising projects. The successful contenders hailed from 10 different countries in the region. The second round of grants yielded 47 applications, showing continued interest from the region for bottom-up activities. Out of those, IAWD chose the 11 most innovative projects from applicants coming from 9 different countries.

FIGURE 16: FACTS AND FIGURES ON COMPETITIVE GRANTS



Similar to the first round of Competitive Grants, some of the most innovative projects were highlighted in the frame of a poster reception at the 2018 Danube Water Conference.

Some examples of supported projects include:

- ▶ 14 Water Associations in the program region – development of a Strategic Business Plan (implemented by SHUKALB)
- ▶ Water Utility East Sarajevo, BiH - successful establishment of a pilot District Metering Area (DMA) reducing water losses by 120m³/day in the respective area
- ▶ Water Utility Banja Luka, BiH – establishment of a center for monitoring and reduction of losses including 7 fully-equipped DMA zones
- ▶ Water Utility Sofiyska Voda JCS - Improvement of the asset management in Sofiyska Voda JCS by linking technical data with financial data
- ▶ 40 Water Utilities in Moldova – retraining of managers and technical staff by the Technical University of Moldova
- ▶ Water Association Romania – development of 4 training curricula for water operators (e.g WWTP operation, development of NRW strategy)
- ▶ Croatian Water and Wastewater Association - organization of an annual “Leak Detection Competition” for Croatian water utilities with 13 participants from 10 utilities attending in 2017

Example of a Competitive Grant implemented by SHUKALB : Developing a Training Course for the Preparation of a Strategic Business Plan for Water Associations

SHUKALB, the Water Supply and Sewerage Association of Albania, was one of 14 selected entities to receive a competitive grant from IAWD in 2013. The overarching goal of this project was to strengthen the capacities of water and wastewater associations in the Danube region, to make their work more structured and effective, thus allowing for greater leverage and better performance.

This training course guided the associations through the preparation of draft business plans for their operations. To facilitate this, SHUKALB developed a full set of course material on business planning for water supply and wastewater associations, including a

PICTURE 4: EXAMPLES OF COMPETITIVE GRANT PROJECTS PRESENTED IN A POSTER SESSION AT THE DANUBE WATER CONFERENCE

STRENGTHENING THE CAPACITY OF WATER UTILITIES IN THE REGION WITH BENCHMARKING OF KEY PERFORMANCE INDICATORS

Project partners

- Vodovod "Bistrica" Bijelo Polje (MNE)
- PUE "Lim" Prijepolje (SRB)
- PUE "6. mart" Goražde (BiH)
- Hydro Engineering Institute Sarajevo (BiH)

Project funding [€]

IAWD	74,899.50
Co-finance	14,000.00
Total	88,899.50

Project duration
Starting date: 07 March 2014
Ending date: 06 March 2015

The project was designed and implemented to increase the efficiency of use of water resources relying on four pillars: 1) Inception Phase/GAP Analysis, 2) Water Supply Network Mapping/ GIS Development; and 3) Bookkeeping of fixed assets module and new procedures, accompanied with required software and hardware for water meters reading and improving of billing.

Within 12 – month period of implementation, following activities were carried out:

- 2 Project Steering Committee meetings organized, on 15th April 2014 and 10th September 2014 in Bijelo Polje;
- GAP Analysis performed in the period from 01st August to 30th September 2014;
- 5-day training on network digital mapping and development of GIS, delivered in Sarajevo 17-21 November 2014;
- Technical assistance for mapping the primary and secondary water supply network in the period from 21st November 2014 to 28th February 2015, with organised three on-site joint visits/workshops (with all three utilities participated);
- Procuring of bookkeeping of fixed assets module and new procedures, accompanied with required software and hardware for improved water meters reading and invoicing, so as improved accounting in the utilities including fixed assets bookkeeping, in the period 01-30 November 2014;
- Procuring of Electric Device for Pipe Freezing for PUE "Lim" Prijepolje in January 2015;
- Organizing Final Workshop – Press Conference, held in Bijelo Polje on 02nd March 2015.

Results achieved by implementing this project:

R.1 GAP Analysis for three partner utility companies, together with Guidelines for Complaints and Proposals Management for each utility company produced, completed;

R.2 Five days lasting training was delivered during 17-21 November 2014, i.e. six employees from three water utilities successfully accomplished training on digitalisation of existing networks and GIS development;

R.3 Maps of primary and secondary water supply network are produced, with the following level of completeness:

- Utility „Bistrica“ Bijelo Polje mapped the whole primary water supply network, so as collected and inserted into the GIS all related data on these pipelines; Utility also mapped all pipelines to the level of secondary network, filed collection of related data will continue after the project implementation period;
- Utility „Lim“ Prijepolje mapped all primary and secondary network, except one smaller settlement (lack of data);
- Utility „6. mart“ Goražde mapped primary network and presently is mapping secondary network and home connections (complementing existing cadastre of underground installations on the municipal geodesy department);

R.4 Three partner water utilities equipped with needed equipment and missing software, which will contribute to improvement of billing system and bookkeeping of fixed assets, as well as reading of consumptions, which will in general strengthen financial management of water utilities;

R.5 Three partner water utilities equipped with hardware needed for GIS development;

R.6 Vodovod „Bistrica“ Bijelo Polje has established computer network in one system, which will contribute to effective operations;

R.7 Purchased Electrical Device for Water Pipes Freezing will enable faster field interventions in Prijepolje; and

R.8 Sustainable partnership established, possible cooperation initiative for the future identified.



WORLD BANK GROUP
International Association of Water Supply Companies in the Danube River Catchment Area

DANUBE WATER PROGRAM
IAWD
Smart policies, strong utilities, sustainable services

THE ACTIVE CONTROL OF LOSSES IN WATER SUPPLY SYSTEM OF EAST SARAJEVO

PROJECT IMPLEMENTER:
UC "Vodovod i kanalizacija" jsc East Sarajevo

PROJECT FUNDING [€]:

IAWD	38.500.-
Co-finance	17.000.-
Total	55.500.-

PROJECT DURATION:
Starting Date: 1 July 2016
Ending Date: 30 September 2017

SPECIFIC PROBLEMS ADDRESSED BY THE PROJECT

- The active control of water losses
- Difficult detection of pipe breaks
- Difficulties in management of the system
- Detection of illegal consumers

ACTIONS TAKEN TO DETERMINE AND DECREASE REAL AND APPARENT LOSSES USING IWA METHODOLOGY

- Preparation, development and hydraulic modeling in Epanet of DMA Dobrinja
- Installing "all in one" equipment for monitoring flow, pressure and noise logger
- Monitoring of parameters (pressure, flow, noise) in the DMA zone
- Replacing 50 oversized water meters with better accuracy meters in old residential buildings
- Installed water meters at lump sum consumers in residential buildings
- Conference for water companies from the region on active control of losses

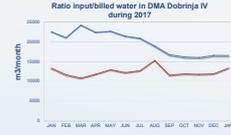
RESULTS ACHIEVED BY IMPLEMENTING THIS PROJECT:

- Real losses are reduced by ~120m³/day (from 193m³/day to 69m³/day)
- Amount of revenue water is increased in DMA
- Infrastructure leakage index (ILI) is reduced from 26 to 7 in this DMA
- Non-revenue water is reduced from 60% to 20%

INDICATORS OF SUCCESS:

- Successful establishment of the pilot DMA
- Successful adoption of the IWA methodology
- Training of employees in UC "Vodovod i kanalizacija" East Sarajevo to actively control losses in water supply network
- Knowledge transfer to other interested companies

Ratio input/billed water in DMA Dobrinja IV during 2017



DANUBE WATER PROGRAM
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International Association of Water Supply Companies in the Danube River Catchment Area

BMF
AUSTRIAN FEDERAL MINISTRY OF FINANCE

guide for trainers, a manual for trainees, a supporting PowerPoint presentation, and an Excel business plan model. In twelve modules, the course guided trainees towards their own business plan. The modules ranged from defining the value and roles of associations, to membership governance, setting strategic goals, and updating the 5-year business plan.

In February 2015, SHUKALB organized a training workshop with 38 participants from 11 associations of the Danube region, plus representatives of IAWD and EWA, the European Water Association. With assistance from the trainers, the participants went through all twelve of the course modules and drafted business plans for their associations. Participants of this workshop can now serve as

trainers for their colleagues in their own water and wastewater associations.

As the water supply and wastewater sector in Southeast, Eastern and Central Europe is facing great changes and challenges, the associations can be a driving force in adapting to new circumstances and in improving services. They are the voice of the sector in policymaking processes, while also being of central importance in training and capacity development of the region's utility workforce.

A network of strong associations will therefore be crucial for the successful and sustainable implementation of region-wide capacity development efforts, as stipulated by the associations and IAWD.

STRENGTHENING IAWD BY BUILDING SUSTAINABLE PARTNERSHIPS

A key activity within the Program deals with strengthening IAWD to achieve financial and institutional long-term sustainability to further facilitate the improvement of water utilities in the Danube region. One way is building sustainable partnerships.

THE ROUNDTABLE OF DANUBE REGION WATER UTILITY ASSOCIATIONS

Enhancing the cooperation among national water utility associations in the Danube region has been a central activity of the Danube Water Program and is a strategy to achieve multiplication of program results and strengthening of the water utility sector. The Roundtable of Danube region water utility associations (a representative of each utility association from Danube countries) has been meeting regularly to exchange information and plan

and carry out cooperative actions. The principle behind the cooperation has been that the national water utility associations in the region can learn and profit from products and activities of associations from neighboring countries and of those developed at the regional level by IAWD. The most important initiative emerging from this Roundtable has been the establishment of the Danube Learning Partnership.

The Roundtable of Danube region water utility associations has provided benefit from organizing common activities, but also from sharing positive experiences about management and organization of the national water utility associations.

In addition to the Roundtable, the national water utility associations also benefit from another key feature of the Danube Water Program called Association Grants. These grants support the national water utility associations in developing a business plan for managing the association and in receiving support from the Danube Water Program to implement one of the key business elements identified in the plan. The specific design of the Association Grants contributes to the national water utility associations' further development towards economically sustainable institutions.

Ivan Ivanov
President,
Bulgarian Water
Association

"The Danube Water Program enables us to have direct contacts with the water associations in the region, which is a prerequisite for the exchange of good practices and the realization of useful business initiatives by our members, but it is also an accelerator for the realization of our ideas benefitting the water sector in Bulgaria."

PICTURE 5: MEETING OF THE ROUNDTABLE OF THE DANUBE REGION WATER UTILITY ASSOCIATIONS (VIENNA, SEPTEMBER 2017)



THE COOPERATION WITH NALAS TO ACKNOWLEDGE THE CRUCIAL ROLE OF MUNICIPAL GOVERNMENTS

Improvement of water services requires not just technical and managerial changes at the utility level, but good management and support from the owners and ultimate managers of the utilities in most countries (municipal governments). The recognition of the importance of this relationship during activities of the Program has led IAWD and the Network of Associations of Local Authorities of South-East Europe (NALAS) to sign a Memorandum of Understanding (MoU) specifying a will and

interest to cooperate together in issues related to improving the water sector.

This MoU and the activities already initiated have been further strengthened through funding from the German and Swiss Governments for a project entitled Regional Capacity Development Network (RCDN), which is focused on supporting capacity building between municipal governments and utilities and their respective associations. The project has been providing useful synergy to activities of the Danube Water Program and strengthening the cooperation between NALAS and IAWD at the regional level and between national water utility and municipal government associations.

Kelmend Zajazi
 Executive Director,
 NALAS

"NALAS has been working intensively to improve the conditions in the water and wastewater sector, supporting municipalities to provide well managed, good quality and sustainable water services to their citizens. During this process, we have met a valuable partner, IAWD, and have started an exchange of knowledge and expertise, being aware that municipalities and their integral part, the public utilities, must work closely together in improving the services and planning investments. NALAS relies on IAWD's technical expertise and offers the coordinated political power of Local Government Associations for effective advocacy and change."

PICTURE 6: IAWD AND IWA REPRESENTATIVES (FROM LEFT TO RIGHT: WALTER KLING, IAWD PRESIDENT, DIANE D'ARRAS, IWA PRESIDENT, VLADIMIR TAUSANOVIC, IAWD VICE PRESIDENT)



COOPERATING WITH THE INTERNATIONAL WATER ASSOCIATION TO SUPPORT THE YOUNG WATER PROFESSIONALS IN THE REGION

In 2017, IAWD has signed a Memorandum of Understanding with the International Water Association (IWA), as both organizations share some common goals and members, which is a good basis for partnership.

The agreement enables collaboration in the Danube and Black Sea region and focusses on four priority areas:

- ▶ Young Water Professionals
- ▶ Engagement of national entities, i.e. national water associations, who are often IWA Governing Member representatives
- ▶ Capacity Building, i.e. synergies between the Danube Learning Partnership and IWA Learn
- ▶ Events in the region

Kalanithy Vairavamoorthy
Executive Director,
International Water
Association

“Due to its valuable network and the support of the Danube Water Program, IAWD proved to be a reliable partner for us in the Danube and Black Sea region. The partnership with IAWD will help us to strengthen the relationship with national entities as well as the Young Water Professionals in the region.”

PICTURE 7: PARTICIPANTS OF THE FIRST YWP DANUBE REGIONAL WORKSHOP IN MAY 2017



Arlinda Ibrahimllari
Chair of the IWA
Emerging Water
Leaders Steering
Committee and
the Albanian YWP
chapter

“The Young Water Professionals are thrilled to have found IAWD with the support of the Danube Water Program as a valuable partner for strengthening and supporting the YWP network in the region. IAWD’s constant empowerment of the YWP, e.g. by the visibility provided in the frame of the Danube Water Conference, helps us to further raise our profile.”

As part of this collaboration, IAWD acts as the regional focal point to support IWA in working with its Governing Members in the region facilitating cooperation amongst each other and the global IWA network and also in the context of the IAWD - IWA collaboration.

The network of Young Water Professionals (YWP) in the region has been growing significantly over the last years. At this stage, so called YWP chapters often associated with the national water (utility) association in their countries have been established in nine countries of the region. IAWD with the support of the Program significantly acknowledges this process by organizing the second YWP Danube regional workshop within the frame of the Danube Water Conference in May 2018. Furthermore, the Danube Water Program team works intensively on the full integration of YWP within the program and set-up of the Danube Water Conference, e.g. by providing speaker slots, applying a chair/co-chair system and offering financial support to attend the conference.

EXPANDING THE FOCUS ON IWRM BY COOPERATING WITH ICPDR

Another relationship that has benefitted from the activities of the Danube Water Program is the cooperation between the ICPDR (International Commission for the Protection of the Danube River) and IAWD. Joint activities related to the improvement of waste water management including the first “International Workshop on Wastewater Management in the Danube river Basin” jointly organized by IAWD, World Bank and ICPDR with the support of the Danube Water Program held in Bucharest in November 2017 has strengthened the already existing cooperation and has led to plans for further joint initiatives.

Walter Kling
President, IAWD

“Utilities in the region have shown enthusiasm and strong interest for improving themselves through the capacity building activities offered by the Danube Water Program. IAWD is committed to building upon this success a long-term sustainable basis for managing and delivering capacity development activities, jointly with the national water utility associations. Strong efforts will be made to ensure the strengthening of IAWD and the continuation and financial viability of the Danube Water Conference. Furthermore, IAWD will further develop the Danube Learning Partnership, improve DANUBIS.org and continue to grow as a regional platform for water utilities.”

Guang Zhe Chen
Senior Director,
Water Global Practice,
World Bank

“For the Danube region, achieving the water-related Sustainable Development Goals and meeting the requirements of the EU Directives on water serve as a call to action. They require a doubling down in terms of focus on providing universal access to services, ensuring sound water resource management and adapting to a changing climate. Countries in the region will need to do this by connecting investment financing with institutional and policy reforms to build capacity. The Danube Water Program, funded by the Austrian Government, has allowed us to work with IAWD and others to deliver smart policies, strong utilities, and sustainable services for all. It has also helped us to connect capacities and experiences across the Danube region’s utilities, policy makers and other sector stakeholders. Now starts a period to further develop the mechanisms to sustain the key initiatives of the Program, such as the Danube Learning Partnership (D-LeaP), which brings together the national utility associations and the IAWD to deliver capacity development programs to the utilities in the region on a sustainable basis. The DWP will also increasingly support an integrated vision for water, including water resources management, productive use of water and water-related risks mitigation, matching the World Bank’s mission of achieving water security for all.”

FOR FURTHER INFORMATION

www.danube-water-program.org

www.danubis.org

www.iawd.at

www.d-leap.org



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