European Water Association

Yearbook 2024

EUROPEAN WATER ASSOCIATION

Wendy Francken
EWA President 2023-2025

The EU Green Deal set a very important agenda not only for the EU's contribution to combating climate change and halting the decline in biodiversity, but equally for the protection of water resources in the EU. It has given significant impetus and direction to the efforts of the EU and its Member States to improve the state of water bodies in the past 5 years.

The legislative and policy agendas developed under the umbrella of the Green Deal bear witness to its importance in setting priorities and its impact on legislation and implementation across the EU. The fingerprint of the Green Deal has been very visible in the European Commission's environmental and climate change initiatives, proposals on water services, as well as in other important policy areas such as agriculture, and chemicals, pesticides, and pharmaceutical policies.

However, there are still important water policy and implementation gaps that need to be filled to attain the "zero pollution" vision and reach environmental quality targets. EWA expects the new Commission to develop additional initiatives to improve water security. These initiatives should ensure availability of sufficient clean water resources free from hazardous chemicals posing a threat to health and ecosystems, free from excessive amounts of nutrients, as well as protection from the impacts of water-related risks such as floods or droughts.

Ensuring the sustainability of the use of the EU's own water resources will continue to require significant and timely long-term investments. And the EU will need to consider how the necessary capital can be made available. The European Economic and Social Committee has made a proposal for a new Blue Deal which could provide a good starting point for the financial arrangements to support future EU water policy.

The EU has a particularly high vulnerability to lack of water available for goods and services destined for export to third countries. Water resources in the EU are already under pressure as witnessed by water scarcity, increasing frequency and intensity of droughts, low water levels in rivers etc. But at the same time imports of "virtual water" from developing countries will face challenges due to climate change and the growing need to allocate a larger share of their water resources to meet domestic demand for goods and services.

It is only a question of time before the matter of Member States´s access to shared, transboundary water resources becomes an issue. But there is an important obstacle to adoption of EU measures, as

currently, measures to address such matters must be adopted by unanimity of Member States. But there is a remedy for this vulnerability: The EU Treaties allow the Council of Ministers to move such issues to co-decision with qualified majority voting in the Council.

In summary, the upcoming Commission should outline its strategy for addressing deficiencies in the existing legislative and policy framework to ensure the provision of sustainable water services and maintain clean, sustainable water resources in alignment with the "zero pollution" objective. This plan should include proposals for a financial framework to support these efforts and prepare for transitioning EU decision-making on quantitative water management matters to co-decision by the Council of Ministers and the European Parliament. With the adoption of the revised Urban Wastewater Treatment Directive, the members states will start the transposition of the new legal requirements into the national law. The new requirements include topic like energy neutrality or the elimination of micropollutants.

As the European Water Association (EWA) continues to represent water experts in Europe, we pledge to maintain strong communication with the EU Commission and provide ongoing support to its members amid the current challenges.

We encourage all water experts in Europe to stay connected with the EWA-network, whether through our monthly newsletter, participation in our webinars, or attending our annual Brussels Conference held each autumn. Should you have any questions or suggestions regarding our work, please feel free to reach out to us.

Yours sincerely
Wendy Francken, President of EWA March 14th, 2024

Navigating Two Decades of Water Challenges: A Journey with EWA

After nearly 20 years leading the European Water Association (EWA), Johannes Lohaus leaves the position as Secretary General and hands over the function to Arthur Guischet starting 1st June 2024. Johannes Lohaus has been holding this position since the 1st of October 2004. He followed Dr.-Ing. Sigurd van Riesen, who was in charge since June 1989.

In the year 2004, the water sector in Europe faced new challenges and saw some new legal requirements being established. One of the most important new regulations was the EU Water Framework Directive (WFD). In December 2000 the directive came into force and the EU member states were bound to transmit the directive in their national law until end of 2003. Until December 2009 the European member states have had to publish their River Basin Management Plans (RBMPs) and Program of Measures (PoMs) for their water bodies. There was a high demand in Europe for clarification regarding a lot of topics within the WFD. Together with the EWA president, Haakon Thaulow, and Helmut Blöch from the EU Commission, Johannes Lohaus started in 2005 the series of EWA Brussels Conferences to discuss some of these topics. This year the 18th Brussels Conference will take place on the 19th of November 2024.

Johannes Lohaus
EWA Secretary General
2004 - 2024

Another challenge for the water sector, but not only, was the fifth EU enlargement. It took place on May 1st, 2004, and ten new countries joined the EU: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia. This was the largest enlargement of the EU in terms of citizens and number of countries. On January 1st, 2007, Bulgaria and Romania followed and July 1st, 2013, Croatia. It was of great importance for the water sector as all new Member States had to respect the current EU regulations.

In the past, the EWA was primarily known for its technical and scientific focus. This development based on EWA Members request, and the "Brussels topics" gained more and more importance within the association. In 2010, EWA published its first Water Manifesto and dew attention to important water issues in Europe. Most of them are still challenging today: Climate Change, Rain and Stormwater management, Flooding, Water related Urban Planning or Water and Biodiversity. Furthermore, EWA established the "European Policy Committee" at that time with Wendy Francken as its first chairwomen.

Despite this development, technical topics affecting the water sector are still a cornerstone of EWA activities. Today issues such as

Removal of Micropollutants, Energy saving and production, Resource Recovery are of high importance for EWA. One of the most significant platforms to discuss all these developments is the EWA International Water Symposium taking place at each IFAT in Munich. In 2024 the 21st Symposium will focus on "Water in the Green Deal". EWA developed webinars that are targeting new topics and technologies like Phosphorous Recovery or Desalination of Seawater. To be close at the latest technological developments EWA established the new category of Research Members within its membership a couple of years ago. The aim is to offer the scientific water community a platform to meet, to obtain information and to create new cooperations in the field of research.

For 2024, the Urban Wastewater Treatment Directive recast is announced. This revised directive includes new challenges for the water sector. Keywords are Micropollutants, Energy, Stormwater, Monitoring of health parameters among others. EWA will analyse these new requirements under the scope of the best technical solutions currently available. Alongside climate change and the restoration of the water bodies, this will be one of the biggest challenges for the next years.

Arthur Guischet
Secretary General
2024 - present

EWA with its members, its committees, its staff and with Arthur Guischet as the new Secretary General will support the water community to manage these challenges. Arthur Guischet will be bringing his new perspective and approach to the EWA activities. His previous experiences and skills will provide the right set of tools for the EWA to keep growing and face all the challenges ahead.

April 2024

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Facts about EWA

THE EUROPEAN WATER ASSOCIATION

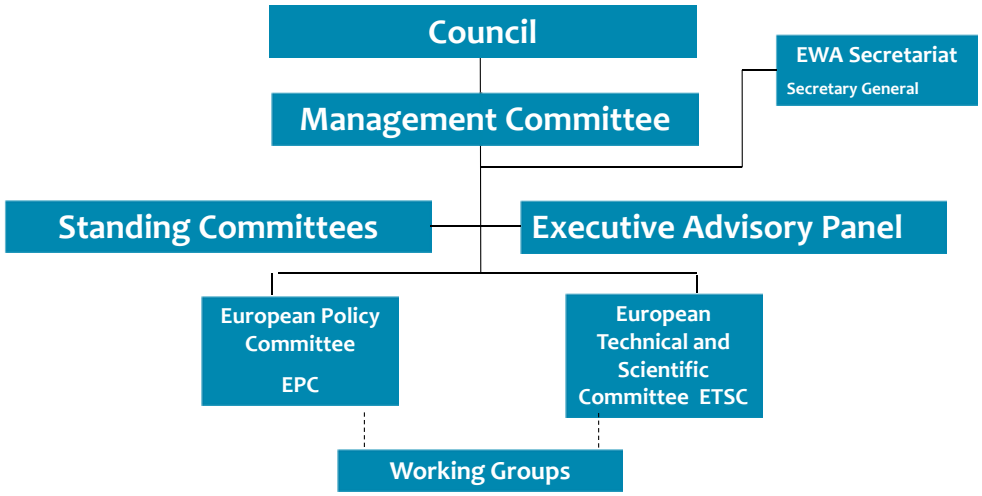
Clean Water for Europe

European Water Association (EWA) is the pan-European, non-governmental, non-profit-making, technical and scientific umbrella organisation of and for national, corporate and research member associations bringing together all professionals involved in the water cycle. Simply, it is the voice of water in Europe. It is the platform and turntable for discussion, exchange and transfer of information and know-how in the European Water landscape on technical and scientific level, not only between the national member associations and with the corporate members, but also for distribution of information from the EU to the members and from the members to EU. EWA's national members and all their working groups and specialized members will build a real task-force to analyse, discuss, translate and communicate the European Agenda to their national, regional and local authorities, the involved consultants, the industry, the contractors and even the general public. Thus; the EWA represents about 50,000 professional individuals working in the broad field of water and environmental management.

Organisation and Structure

The highest authority of the EWA is the Council – it has the executive power of decision. Each member association (23) is represented on the Council and these representatives meet annually to discuss and plan the activities of the association. The smaller Management Committee has responsibility for developing policy and is in charge of the daily work of the association, supported by the Secretariat. The Association is represented by the President, who chairs the Council and the Management Committee. The Secretary General executes the day-to-day operations of the Association. In addition, Standing Committees and Working Groups support the work of the Association.

Organization and Structure



The EWA Standing Committees

From its initiation, the Association has laid emphasis on the exchange of information and knowledge between professional experts. Through this exchange of knowledge, the EWA contributes to a sustainable water management: safe water supply and the protection of water and the environment. Numerous conferences and workshops are a result of the EWA network. These exchanges of knowledge take place all over Europe and covers a very broad range of water related topics such as current European water legislation (covering the Water Framework Directive, the Urban Wastewater Directive, as well as the Groundwater Directive, Sewage Sludge Directive etc.). Moreover, technical questions such as the significance of small wastewater treatment plants in rural areas, or scientific conferences and other topics of the European agenda, which are directly or indirectly involving the water cycle, add to the areas of expertise of the organisation. The European Water Association organizes conferences and symposia at regular intervals, on events such as the International Trade Fair (IFAT) in Munich, as well as its own annual EWA Brussels conference. An increase in the number of members from Central and Eastern Europe (accession countries) has raised the interest for events dealing with water protection issues.

The different EWA Committees and Working Groups are the basis of the organisation's relentless goal to achieve Clean Water for Europe. They rely on the voluntary work of experts deriving from the various European National Member Associations and work together on various subjects of current interest in the water and environmental field.

European Policy Committee (EPC)

The committee follows the work of the European Commission and arranges regular meetings with officials in the Commission, responsible for activities of relevance to water management. The committee gives comments and advice to official European institutions on behalf of its members. The EWA is attending meetings of the Strategic Coordination Group under the WFD Common Implementation Strategy. Furthermore, the EWA is in close contact with other European associations and institutions, which has some interdisciplinary contact with the field of water and wastewater.

Raymond Erpelding
Chairman EPC

The objectives and responsibilities of the European Policy Committee (EPC), under the guidance of the governing bodies of the European Water Association, and within its rules of procedure, are the following:

- Organise and coordinate relationships of EWA with European level bodies, and especially with bodies of the European Union;
- Facilitate and create the necessary and useful flows of information amongst the persons and groups representing EWA towards European level bodies, as well as between the former and the National Associations (NA), members of EWA;

- Identify emerging issues and important trends in water related European policies and issues, which are of interest to EWA and its members, in order to allow EWA to anticipate future changes and to contribute efficiently to European policy development;
- In consequence, and in conjunction with the European Technical and Scientific Committee (ETSC), propose the evolution of thematic activities and actions of EWA.

European Technical and Scientific Committee (ETSC)

Thomas Wintgens

As a particular and "historic" EWA standing committee, the ETSC, European Technical and Scientific Committee provides a unique European point for the discussion, the exchange and evaluation of knowledge and information, and the comparison and definition of positions on key technical-scientific issues and aspects affecting water, wastewater and the related environment at the European level.

The ETSC activities are a product of voluntary and passionate work and contributions of water and wastewater specialists having a qualified technical and/or scientific profile that are active in the different European countries. Under the ETSC, specific task groups gather to discuss topics or aspects that are relevant and strategic for the water and wastewater management at the European level. The ETSC produces technical and scientific papers and strategic position documents. Furthermore, the ETSC is able to cooperate with any national member association within EWA in response to specific national technical-scientific topics or issues to be discussed, evaluated and compared at an appropriate European level.

The ETSC is also responsible for the organization and sponsorship of EWA workshops, seminars, conferences, and symposia having a defined technical-scientific profile (including the well-established International Water and Wastewater Symposium during the biennial international trade fair IFAT in Munich, Germany).

EWA Management Committee (MC)

Members of the EWA Management Committee (MC)

Wendy Francken, BE
President

Harsha Ratnaweera, NO
Vice President

Raymond Erpelding, LU
Past President and Chairman
"European Policy Committee" (EPC)

Dr.-Ing Lisa Broß, DE
Honoray Treasurer

Elisabeta Poci, AL
MC Member

Mara Pavelić, HR
MC Member

Thomas Wintgens, DE
Chairman "European Technical & Scientific Committee" (ETSC)

Johann Wiedner, AT
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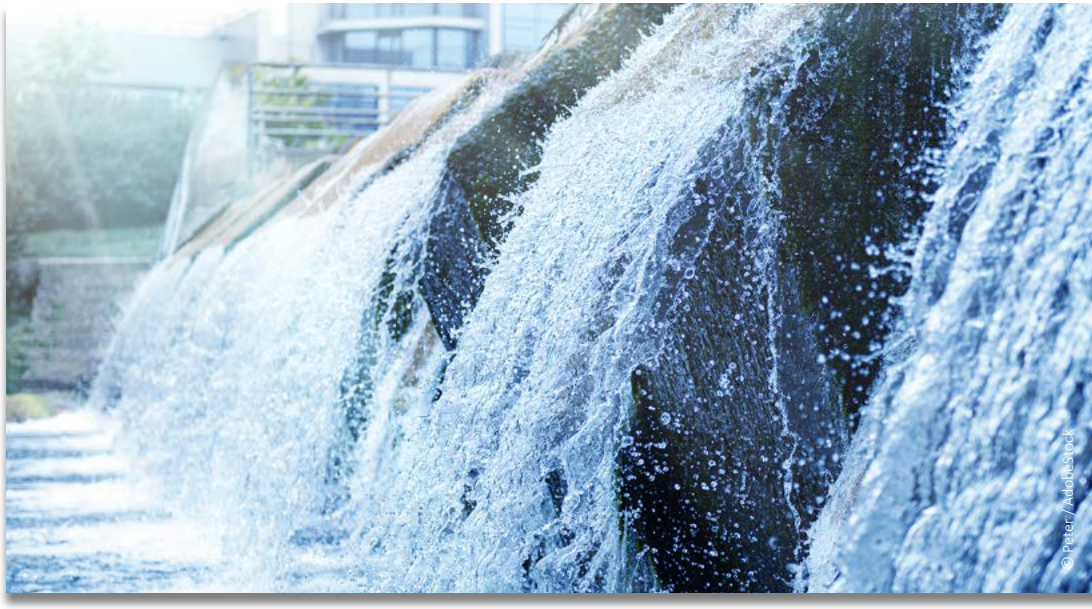
The William Dunbar Medal

This prestigious medal is awarded to an individual of a member country of the EWA, in recognition of his or her outstanding contribution in applied technical development in the field of sewage and waste treatment and disposal. This Award, donated by IFAT, the international trade fair for water, sewage, refuse, and recycling, which is organised by the Messe München International, has been adopted by the European Water Association.

The 2023 Dunbar Ceremony took place during the ÖWAV/EWA Joint Conference: Water Resources subject to Climate Change Challenges in managing Extremes on October 19th, 2023 in Vienna.

The award consists of a gold medal and a certificate. The medal bears the portrait of William Dunbar on one side and on the other the logos of the EWA and IFAT. It is given in remembrance of William Philips Dunbar, born in 1863 in Minnesota (USA), who was appointed as Director of the Government Hygenic Institute in Hamburg in September 1892 to assist in managing the disastrous cholera epidemic. Dunbar improved the detection procedure for cholera and other pathogens and his pioneering improvements in city sanitation made him an authority that is still internationally recognised in the sector.



William Dunbar Medal Award Winners 1975 – 2023

Year	Award Winner	Country
2023	Prof. Hallvard Ødegaard	NO
2022	Prof. Jörg E. Drewes	DE
2019	Prof. Jean Berlamont	BE
2017	Prof. Dr. Milenko Roš	SI
2015	Prof. Dr. László Sómlyódy	HU
2013	Prof. Dr.-Ing. Karl-Heinz Rosenwinkel	DE
2012	Philippe Duchène	FR
2010	Prof. OBE, PHD, FCIWEM, CWEM, CEnv Peter Matthews	UK
2008	Prof., MSc, PhD, DSc Jiří Wanner	CZ
2005	o. Prof. Dipl.-Ing. Dr. techn. Helmut Kroiss	AT
2002	Prof. Dr.-Ing. Rolf Kayser	DE
1999	Prof. Mogens Henze	DK
1996	Prof. Dr.-Ing. E.h. Klaus R. Imhoff	DE
1993	Geoffrey Ashworth Truesdale	UK
1990	em. o. Prof. Dr.-Ing. habil. Franz Pöpel	DE
1987	Prof. Dr.-Ing. Wilhelm von der Emde	AT
1984	Herbert A. Hawkes	UK
1981	Prof. Dr. sc. nat. E.A. Thomas	CH
1978	Dr. Ir. Aale Pasveer	NL
1975	Dr. A.L. Downing	UK

The recipient of the William Dunbar Medal 2023: Prof. Hallvard Ødegaard

Prof. Hallvard Ødegaard

Professor Hallvard Ødegaard, is a highly respected figure in the water sector and professor emeritus and has made significant contributions to water engineering education and research in Norway. For this, he was awarded The Royal Norwegian St. Olav order in 2011.

This is the highest civilian order conferred in Norway. He is widely recognized as the inventor of the Moving Bed Biofilm Reactor (MBBR) and holds five international patents. His expertise and reputation extend globally, establishing him as one of Norway‘s most renowned water professionals.

Following his retirement from the Norwegian University of Science and Technology (NTNU) in 2011, Professor Ødegaard remains actively involved in the field through his consulting company, Scandinavian Environmental Technology AS. Throughout his career, Professor Ødegaard focused his research on various aspects of water treatment, including drinking water, wastewater, and industrial process water. His areas of expertise encompass particle separation, biofilm processes, disinfection, humic substance removal in drinking water treatment, and nutrient removal in water and wastewater treatment. He has written extensively, with over 500 publications to his name, including several books and more than 300 internationally published refereed papers.

Furthermore, Professor Ødegaard played an active role in professional associations, serving as a member of the EWA Council in the period 1984-1991 and as Vice President and Chairman of the Technical and Scientific Committee. He has made significant contributions to water treatment, particularly in Norway, where he helped establish a tradition in water and wastewater treatment.

Given his extensive achievements and dedication, Professor Ødegaard is a well-deserved recipient of this year's (2023) Dunbar Medal. This prestigious award recognizes his significant contributions

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to the field of water treatment, affirming his status as a respected and influential figure in the industry.

During the ceremony, the awardee gave a key note speech offerning valuable insights in his area of expertise. You can read a summary of this presentation on the European Highlights section of this yearbook.

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EWA Online

Find the European Water Association on Social Media:

Feel free to stay connected with us for the latest updates from EWA and our members. By following us, you'll stay updated not only on our upcoming events but also on water-related news from Europe and beyond. Our platform is also used to showcase the activities of our members.

Every two months, we release the EWA Newsletter, ensuring you're well-informed about the various activities and initiatives of the EWA, as well as events organized by our members. Additionally, we'll keep you updated with interesting insights directly from the EU capital Brussels, including news from the European Commission and other European institutions.

You can sign up here: → www

Activities

Recent Activities

Upcoming Activities

Recent Activities

EU Water Policy and Legislation Introduction Course

Revision of the Urbane Waste Water Treatment Directive Webinar

Tallinn
– The Green Capital of Europe – from Water Perspective

EWA/VLARIO Spring Conference

Water Reuse Regulation: Impact on the Water Sector

ÖWAV/EWA Joint Conference: Water Resources subject to Climate Change Challenges in managing Extremes

Race to 0 CO_2 Neutrality

Digitalisation in the Water Sector:
Waste Water Treatment Process

Water Conference: Speeding up to a water resilient Europe.
Towards an EU water resilience agenda

EU Water Policy and Legislation Introduction Course

Introduction course to EU Water Policy and Legislation

Since 2014, the European Water Association organises an Introduction Course to EU Water Policy and Legislation. The seminar has always been offered in person, but with the start of the Corona pandemic, the course has been held online and has been very successful. During this course, participants are made familiar with development and principles of EU water policy, the decision-taking and implementation/scrutiny process, governance at EU level (openness, transparency, citizens' right on access to documents; rights of complaint and petition), as well as the key legislative elements of EU water policy and their implementation. This course is offered as a 2-day event. Following the online course participants also get the possibility of downloading a comprehensive documentation of the issues presented (policy documents, legislation, implementation reports and court judgments).

A certificate is also sent out to all participants attending both online sessions.

This course targets persons working for:

- Governmental and advisory bodies, experts, planners and other practitioners at local, regional and national level involved in water management and water protection;
- Industries involved in planning, permitting, monitoring and analysis;

Dr. Helmut Blöch © EWA

- Research and training institutions, consultants involved in the water sector;
- Water utilities and management associations in the waste water and drinking water sector;
- Non-governmental organisations and stakeholder bodies involved in the water sector;

Previously led by Dr. Helmut Blöch, Political Consultant for the EWA and former Head of the Water Sector at the EU Commission in Brussels, the course will now be taught by Arthur Guischet, Secretary General of the EWA, starting in 2024.

The last course has been given on December 12th and 13th, 2023 and you can find the date of the next course on our website or on our upcoming activities. If you would like to offer this course to your team, students to give them knowledge on water policy and legislation, contact us and we can create a tailored course.

Revision of the Urban Waste Water Treatment Directive Webinar

On February 7th 2023, the European Water Association invited Michel Sponar **Deputy Head of Unit at the European Commission, Directorate General for the Environment** to talk about the Revision of the Urban Waste Water Treatment Directive.

On October 26th, the European Commission released the **Proposal for a revised Urban Wastewater Treatment Directive**. In order to understand more the proposal and its potential implication, we have decided to invite participants for a free webinar.

During this 1,5 hour webinar, Michel Sponar gave us a general introduction of the directive and also presented the last revision with its new impacts, new criteria/obligation for all concerned water actors and to exchange on the ideas and concepts behind this proposal.

More than 500 participants from all over the world have registered for this webinar and have submitted hundreds of questions. For more than half an hour, Michel Sponar answered questions from the participants.

The full webinar is recorded and available on the European Water Association Youtube Channel.

→ YouTube

Johannes Lohaus, EWA Secretary General; Arthur Guischet, EWA Water Policy Officer and Michel Sponar, Deputy Head of Unit at the European Commission during the webinar. © EWA

Tallinn – The Green Capital of Europe – from Water Perspective

On March 22, 2023, in celebration of World Water Day, an online event took place in collaboration between the European Green Capital 2023, Tallinn, and the European Water Association.

This webinar served as a platform to showcase Tallinn from a Water Perspective, highlighting ongoing activities and projects dedicated to addressing water challenges within the city. It aimed to foster an exchange of ideas and expertise among water professionals in Estonia, with a particular emphasis on Tallinn. Moreover, scholars responsible for training the next generation of water experts and representatives from the private sector currently operating in Tallinn also participated in the event.

This webinar presented an opportunity for Tallinn to showcase its various activities and innovative ideas, which played a pivotal role in the city's designation as the Green Capital of Europe for the year 2023.

The program featured presentations that shed light on Tallinn's water-related initiatives, followed by an open discussion inviting public participation. The event concluded with a significant take-home message from the Green Capital Tallinn, summarizing the key insights and emphasizing the city's commitment to sustainable water management.

If you have missed it, you can watch the recording on the webinar on our Youtube Channel: → www

You can learn more about the Green Capital of Europe 2023 on their website: → www

EWA/VLARIO Spring Conference

On the 11th of May 2023, the EWA, together with VLARIO, successfully organised the **"EWA-VLARIO Spring Conference: Urban Water Management: Challenges, Innovation and EU Requirement versus local needs and possibilities"** in Antwerp, Belgium.

This event was divided in two sessions. The first one was focusing on the challenges and instruments of the Urban Waste Water Treatment Directive proposal and the second one focussed on how innovation can be stimulated by this directive. Various speakers shared their point on views and among them several from the European Institutions, European Water association or European Universities.

During this conference, the new UWWTD proposal was explained to the participants and its new requirements and goals were discussed. We also discussed how innovation can be stimulated by this proposal. Some keys discussions points have been identified and to name a few, we heard about:

- A transition toward a systemic approach with this new text as the first version of the directive was more focusing on a structural approach. This change toward systemic approach will only be successful if the policy makers are taking this mind-set as well.
- A new focus on circular economy and energy neutrality with the new text. Ambition regarding energy neutrality is "very challenging", depending on the precise definitions used in the proposal but it is achievable via a better sludge treatment, innovation and cooperation among all water actors.

VLARIO
OVERLEGPLATFORM

- The importance of the Extended Polluter Responsibility. The EPR is fundamental for 3 main reasons: governance (will bring exchange between operators and polluters) – will support the budgets that are now mainly public money – reinforcement of the polluter pay principal might push companies to reduce their pollution.
- The storm water quality will be different in every city/collecting point as it is affected by local contexts (road quality, industrial one, gardening, pets and wildlife, drainage infrastructure and so on.
- Digitalisation is one way to support the implementation of the directive in some ways (of course not all) and to reduce the costs for the operators as well as ensuring the new transparency requirement and involvement of the general public in the water sector.

All in all, this proposal is welcome by all actors of the water sectors, but some questions are still remaining opens. The proposal would need clarification on certain aspects such as how to successfully implement the energy neutrality objective while implementing the

tertiary and quaternary treatment obligations. The local context of each plant is also playing a key role in the upcoming implementation of the new proposal, and it should be linked with EU funds to insure the same water quality and access across Europe in big and small towns. Moreover, questions about the ambitious proposed timetable for implementation and the costs of the future investments have been discussed but we will need to wait for the final version of the text to discuss these topics further. All speakers believe that this proposal can be successfully implemented if we are first "very ambitious in the targets" of the proposal and creative in its implementation and if all actors in the sector are working together. Moreover, this proposal will push for the development of new infrastructures that will be there for the next hundreds of years and therefore we need to be creative and to anticipate the future needs and requirements for the plants and the impact of the climate change according to several scenario.

As previously stated, this proposal was well received but water actors are still looking for clarification and we will have to wait for the final version of the text to see some of our questions answered.

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IDEXX

Location of the conference: Havenhuis, Antwerp, Belgium. © EWA

Wendy Francken, EWA President: Opening Speech © EWA

Water Reuse Regulation: Impact on the water sector

The Regulation on minimum requirements for water reuse in agricultural irrigation came into effect in June 2020. As of 26th June 2023, the new regulations have been implemented, aiming to promote and facilitate water reuse throughout the European Union (EU). These rules not only cover water reuse in agriculture but also allow EU member states to utilize reclaimed water for other purposes such as industrial water reuse, environmental initiatives, and amenity-related uses.

To commemorate this milestone, the European Water Association organized a webinar on Water Reuse on June 26th 2023. The webinar provided participants with a comprehensive introduction to water reuse and an overview of the current legislation in Europe.

Furthermore, the event served as a platform for stakeholders to discuss the impact of these regulations on water-related entities. The speakers presented a general approach for implementing water reuse and addressed the barriers that need to be overcome for its further implementation in Europe. Águas do Tejo Atlântico also shared their plan towards water reuse and the adoption of a circular economy pathway.

Following the presentations, a fruitful discussion took place among the speakers.

The recording of the video is available on our Youtube Channel:

→ YouTube

ÖWAV/EWA Joint Conference: Water Resources subject to Climate Change Challenges in managing Extremes

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On October 19th and 20th, the EWA-ÖWAV Joint Conference **"Water Resources subject to Climate Change Challenges in managing Extremes"** was held at the House of Engineers in Vienna. Johann WIEDNER (ÖWAV Honorary President), Wendy FRANCKEN (President of the EWA) and Günter LIEBEL (Federal Ministry of Agriculture, Forestry, Regions and Water Management) welcomed around 150 participants to the two-day conference with international participation.

On the first day, the current findings of climate research were first reported on and then the focus was placed on recognizable effects and requirements for action and analyzed together with the numerous actors in water management in the form of keynote speeches and implementation options for adaptation in water management were identified. This was followed by the presentation of the Dunbar Medal, which was awarded by the EWA to the Norwegian Hallvard Ødegaard, before the evening reception.

Wendy Francken, EWA President, during her opening speech
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With the presentation of concrete adaptation measures and projects from Europe, the second day of the conference focused in particular on the extreme challenges posed by heavy rainfall events and drought.

On the first day of the conference, the Dunbar Medal was awarded during a prestigious ceremony. The recipient of the medal is Professor Hallvard Ødegaard, a highly respected figure in the water sector and professor emeritus. He has been awarded the prestigious Dunbar Medal 2023 for his remarkable contributions to the field of water engineering and research. With groundbreaking innovations in water treatment and an extensive body of work spanning over decades, Professor Ødegaard's expertise has revolutionized the industry. You can learn more about this in the Dunbar Medal section of the yearbook.

Johannes Lohaus , former Secretary General of EWA, surprised by receiving the Golden Badge of Honour from ÖWAV. © *Apa-Fotoservice/Nielsen*

Race to 0-CO_2 Neutrality

The race to achieve CO_2 neutrality, or net-zero emissions, involves global efforts to drastically reduce greenhouse gas (GHG) emissions in order to mitigate climate change and create a sustainable future for our planet.

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In addition to reducing GHG, the race to achieve CO_2 neutrality also emphasizes the conservation and responsible management of water resources, recognizing the crucial role that water plays in both climate adaptation and mitigation strategies.

During our webinar on **"Race to 0-CO_2 neutrality"** on October 10th 2023, speakers engaged in discussions covering a range of subjects such as the development of greenhouse gas reduction targets, technical solutions for emissionreduction, climate mitigation within the water sector and the European Union's ambitious 2040 climate target for the water sector.

In the second part of the webinar, we had the valuable opportunity to hear from industry experts and operators who shared their experiences and expertise on making significant strides towards reducing GHG emissions. This interactive session provided an enriching platform for insightful discussions and the exchange of knowledge.

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Digitalisation in the Water Sector: Waste Water Treatment Process

In today's changing world, the influence of digital technologies can be seen in nearly every sector. The water utility sector is no exception. Digitalisation is often mentioned as a key tool to achieve current and upcoming regulatory goals and to support the decarbonisation objectives in the water sector.

But how is the digital transformation impacting the water sector?

On December 5th 2023, the EWA facilitated a discussion on the current and upcoming digitalisation aspect of the water sector and wastewater management. One of the main discussed points was cyber security. We also heared from professionals on their experiences and know-how.

The session titled "Navigating the Waters of Cybersecurity" explored the implications of the NIS2 Directive on drinking and waste water companies. Marianthi Theocharidou, a cybersecurity expert at the European Union Agency for Cybersecurity (ENISA), led the discussion.

A round table followed, featuring presentations on various topics related to water and wastewater systems:

- Slavco Velickov, the Global Advancement Director in the Water Industry, discussed cloud-powered solutions for water and wastewater systems.
- Daan Buekenhout from KU Leuven presented the achievements of the DIGIWATER project, which is part of the Erasmus+ program.
- Johannes Laures, Deputy Chief Operating Officer at Zahnen Technik, discussed the role of digitalization and artificial intelligence in managing sewage networks.

The recording of the webinar is also available on our youtube channel:
→ YouTube

Sponsors of the webinar:

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Advancing Infrastructure

Water Conference: Speeding up to a water resilient Europe. Towards an EU water resilience agenda

On March 12, 2023, the European Water Conference took place in Leuven, under the title **"Speeding up to a water resilient Europe"**. This conference was organized by the Flemish Environment Agency (VMM) as part of the Belgian EU Presidency. The conference offered valuable perspectives and insights on water resilience in Europe.

On the day of the event, over 200 participants, policy makers and experts from the water sector in Europe converged to Leuven to exchange on the current statute of water in Europe and what is needed to improve it.

The Water Conference features presentations and in-depth panel discussions covering:

- Changing risks of hydrological extremes
- Outlining the future towards a water resilient Europe
- Implementing evidence-based pathways to a water resilient Europe: actionable knowledge for decision makers
- Advancing towards a water smart society
- Fostering water resilience in a transboundary context

Among the speakers, we could note the participation of Dr. Florika Fink-Hooijer of the European Commission. She reaffirmed the importance of water resilience and the challenges ahead. She highlighted the link between climate risks, biodiversity loss and pollution, and the need for more ambitious policies to promote water resilience. She stressed that therefore an integrated approach is essential for achieving these goals and pointed out the significant investment gap in water management. She also gave a strong call to participate at the EU Green Week on Water resilience.

Mr. Pietro Francesco De Lotto shared the European Economic and Social Committee call for an EU Blue Deal. This was a strong message underlining the need for a more comprehensive and strategic approach to water in the EU and a strong call for a joint effort. This call for a joint effort already got a positive answer from the European Committee of the Regions, with their EU Blue Deal from an agricultural and rural development perspective across the EU Regions. This provides the use of nature-based solutions to restore the sponge function and a call for a shift in water use towards a reuse in all economic sectors: not only agriculture, but also industry, leisure and tourism and consumers water-use.

Mrs. Wendy Francken, EWA President and Managing Director at VLARIO, took part on the Panel discussion: "Towards a water smart society: a discussion amongst Europe´s most prominent water stakeholders". She presented the EWA keys points toward a Sustainable Water Management. EWA believes in a fair access to water for all that should allow every citizen a right to water. A secure financing for water sector is also needed to provide a clear view of available maintenance and investment opportunities. A clear financial scheme will have a positive impact on water infrastructure and will support a more global EU Strategic autonomy and competitiveness where the strategic value of water would be recognised. Moreover, a potential systemic water crisis will not only affect the water sector but would have an impact on the Food-Energy-Water nexus. She highlighted the importance of making the water services more visible and rethink urban planning to allow more place for water in our cities via nature-based solutions when doable. Mrs Francken concluded her intervention by sharing the "Urgent call to deliver the Water Resilience Initiative" letter co-signed by a coalition of Europeans organisations (among others the EWA) and shared that day. The partners signing this letter called upon the European Commission to uphold its commitment and deliver the Water Resilience Initiative, making water a top priority for the next mandate of the European Commission.

The conclusion of the event was provided by Mr Bernard De Potter, administrator general of the VMM. He stressed the importance of immediate actions and call to scale-up the Flemish Blue Deal to the European level. He recognized the fundamental value of water and the need for innovative solutions for water resilience. He also emphasized the need for a systemic approach, the importance of learning through experience and working with diverse stakeholders.

This event was a joint organization by watercircle.be, Vlakwa, European Water Association (EWA) Minaraad and Vleva.

Upcoming Activities

Water Reuse - Chance or Meander?

13.05.2024 – 14:30-15:20, IFAT Munich

As droughts increase over time due to climate change, reusing water from urban waste water treatment plants can become an essential tool to ensure a safe and predictable source of water, whilst lowering the pressure on water bodies and enhancing the EU's ability to adapt to climate change. This Session will present the current state of the art in terms of water reuse in Europe. It will be an opportunity to hear the scientific point of view on water reuse with a risk-benefit discussion. The second intervention will focus on the operator perspective and what is happening on the ground. The last intervention will be an opportunity to hear from the manufactures on the new opportunities offered by water reuse. Join us at the Blue Stage!

More information: → www

Strengthening water availability through seawater desalination

14.05.2024 – 10:30-11:20, IFAT Munich

Technologies behind seawater desalination to tackle water scarcity challenges in coastal areas.

This Session will focus on operators and technical experiences dealing with the desalination challenges. It will tackle several technological challenges and lessons learned from past and current projects. One of the focuses will be brine. It is often mentioned as a negative externality of desalination but one of the speakers will present a unique solution on brine valorisation to reduce its negative impact. This experience sharing session will allow the audience to interact with the speakers via a Q & A Session and will provide technical insight on seawater desalination. This panel discussion will take place at the Blue Stage of IFAT Munich, make sure to participate.

More information: → www

IWA/EWA Panel discussion: Invest in Water – Invest in Security

14.05.2024 – 14:30-15:20, IFAT Munich

This year's theme of the UN World Water Day is 'Water for Peace', which focuses on the critical role water plays in the stability and prosperity of the world. When water is scarce or polluted, or when people have unequal or no access, tensions can rise between communities and countries. As climate change impacts increase, and the global population grows, we must unite around protecting and conserving our most precious resource. By working together to balance everyone's human rights and needs, water can be a stabilizing force and a catalyst for sustainable development. Due to climate change (rising of the sea water level, storms, floods and droughts) water is often the reason of migration. This is dangerous to live for the emigrants and leads to conflicts in the countries of immigration. The panel discussion will focus on, what can the politics, the water and the finance sector do, to avoid conflicts and to support the economy and wellbeing of the people.

More information: → www

3rd International Conference on Water Management in Changing Conditions

14 & 15.05.2024, IFAT Munich

The 1st and 2nd WMCC conferences held in 2016 (Spitsbergen, Norway) and 2020 (Harbin, China) focused on water management in cold climates. Responding to the needs of the scientific community, from now on the WMCC will focus on Water Management in Changing Conditions.

The conference will specifically cover three aspects

(1) Changing temperatures – especially colder climates,

(2) Changing climate – causing changing precipitations,

(3) Changing populations – due to seasonal activities increasing populations to serve.

This conference is a paid conference and will be hosted by IFAT-Munich – the world's leading trade fair for water, sewage, waste and raw materials management, giving a unique opportunity to learn about market-leading suppliers and technologies. This conference is organized by the EWA, the Norwegian University of Life Sciences and supported by the International Water Association (IWA).

More information: → www

21st EWA International Symposium: Water in the Green Deal

15 & 16.05.2024, IFAT Munich

Every two years, the European Water Association facilitates knowledge exchange and innovation within the water sector through its symposiums, with the upcoming **21st EWA Symposium** focusing on the pertinent theme of **Water in the Green Deal**. The European Green Deal endeavors to transform pressing climate and environmental challenges into opportunities for building a resilient, resource-efficient, and circular economy and society, thereby safeguarding European natural capital and citizens' well-being. Embedded within this ambitious agenda is the imperative role of the water and wastewater sector in achieving Water and Energy Neutrality for enhanced energy efficiency and clean energy transition, Water and Recovery of Resources for advancing circular economy goals, and Sustainable Storm Water Management for the preservation or restoration of natural water functions. However, realizing the environmental and water-related aspirations of the Green Deal necessitates collaborative efforts on both European and international fronts in water management. These independent but integrated water-related themes will be addressed at the Symsposium. The symposium will take place room B12 at IFAT Munch, make sure to join us.

More information: → www

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Water Qualification in Europe: the challenge ahead

16.05.2024 – 13:30-15:30, IFAT Munich

The water sector in Europe is not only facing new challenges due to climate change but also facing the questions on how to attract and keep new employees in the sector.

This Session will focus on the upcoming challenges affecting the water sector in term of employee's qualifications and how to match the theoretical knowledge with the needs from the sector. Participants will be able to hear several best examples on different levels inside the European Union. This event will take place in room B12 at IFAT Munich, we hope to see you there.

More information: → www

Introduction course to EU Water Policy and Legislation

18 & 19.06.2024, Online Webinar

This online course in two sessions, introduces you to the EU water politics and legislation. You will be made familiar with development and principles of EU water policy, the decision-taking and implementation/ scrutiny process, governance at EU level (openness, transparency, citizens' right on access to documents, rights of complaint and petition), as well as the key legislative elements of EU water policy and their implementation. The online course will be conducted by Arthur Guischet, Secretary General of the EWA. An EWA certificate will be issued to the participants completing the course. You need a tailored course on the European Water Policy and Legislation? Do not hesitate to contact us so we can adapt the course to your needs.

More information: → www

18th Brussels Conference

19 November 2024, Brussels

Each year, the European Water Association (EWA) hosts the Brussels Conference, and this year marks its 18th edition. Covering diverse topics ranging from Blue initiatives in the Green Deal to the latest Developments in the EU Water Policy and its nexus with Sustainable Development, our conference serves as a pivotal platform for discussion. Renowned speakers from the European Commission or Parliament, along with field experts from across the EU, converge to share insights. Make sure to mark your calendars and join us in Brussels. Further details will be shared at a later point.

More information: → www

You can find more information about all of our upcoming events on our website: www.ewa-online.eu/events.html

European Highlights

Veronica Manfredi – Summary of the Commission activities in the water sector 2019 – 2024
Towards Water Resilience for the EU – and beyond

Veronica Manfredi is Director in DG Environment since February 2018.
Her Directorate plays a pivotal role in leading Europe towards Zero-Pollution and securing an effective management of Water – it thus significantly contributes to tackle the Climate, Biodiversity and Circular Economy challenges.

Her Directorate is more specifically responsible for EU policies on Clean and Well-Managed Water, next to having oversight on EU laws and policies on Clean Air, Environmental Noise, Industrial Emissions and prevention of Industrial Accidents. Internationally, her team leads the EU negotiations within the UN Minamata Convention on Mercury and the UN Convention on Long-Range Transboundary Air Pollution. A lawyer by background, Veronica deepened her knowledge of International and EU law in Rome, Turin, Kiel, Bruges and Brussels.

April 2024

There is an increasing realization that sustainable water management and water resilience are a key challenge for the future of the EU.

At global level, a major milestone moment has been the **UN Water Conference** held in New York in March 2023, where the EU presented its ambition to achieve, by 2050, water-resilience across the continent, accompanied by 33 clear commitments to further progress in this direction.

Yet, in the meantime, the latest climate projections suggest that annual damages could amount to EUR 40 billion annually in the extreme scenario of a global warming of 3°C which, unfortunately, appears increasingly likely. We have also already seen the many devastating impacts of more frequent and more intense floods that have affected many European countries over the past few years with 2/3 of Slovenia being flooded in August 2023, to name one example. In addition, we continue to face water that is too polluted to meet the demands of our society and protect the health of our ecosystems. We know from the previous assessments of the state of European waters that much remains to be done, with only 44 % of EU's surface waters having reached good ecological status and only 31 % good chemical status. Unfortunately, the situation on the ground has not improved much in the last years with the increasing concern on emerging pollutants such as PFAS, microplastics, pesticides and antimicrobial resistance.

It is imperative to act now and put in place a transformative agenda to work towards a water-resilient Europe which is better equipped to adapt to the existing and future challenges, leaving no-one behind.

Water has featured prominently across the pillars of the European Green Deal. Building on an already robust EU water acquis, the Commission has not only continued to invest in ensuring an effective implementation of the ground but has also taken a significant number of measures as part of the European Green Deal to further strengthen EU's water law, protect freshwaters and seas and enhance water resilience. Several **EU water laws** have been **proposed for revision** and are currently in co-decision.

A revised **Urban Wastewater Treatment Directive** has been agreed by the co-legislators. It will contribute to **cleaner and healthier freshwater and marine** environment. Improvements include **integrated management plans**, stricter **nutrient standards** and, for the first time, requirements for the removal of **micropollutants**. In line with the '**Polluter Pays Principle**', extended producer responsibility (EPR) has been introduced for medicinal and cosmetics products, to cover the **costs of quaternary treatment of micropollutants**. In line with the One Health approach, we have strengthened environmental surveillance for public health parameters (such as SARS-CoV-2, polio and influenza viruses, and emerging pathogens), and **antimicrobial resistance**. We have also now monitored for chemical pollutants including PFAS, and **microplastics**. Member States are required to promote the **reuse of treated wastewater** from wastewater treatment plants where appropriate, **especially in water-stressed areas**. This complements the recent entry into application of the **Water Reuse Regulation**. Together these measures are expected to play an important role in reducing freshwater abstraction from surface and groundwater bodies.

In October 2022, the Commission proposed an updated list of pollutants affecting surface and groundwater **under the Water Framework Directive**. Based on up-to-date scientific evidence, the Commission is proposing to add 25 substances with well-documented problematic effects on nature and human health to the lists. These include substances like pesticides, such as glyphosate, some pharmaceuticals, bisphenol A, and a group of 24 PFAS. For groundwater, the 24 PFAS, two pharmaceuticals and some pesticides breakdown products would be added as substance subject to EU-level standards. As soon as suitable monitoring methods have been identified, micro-plastics and selected antimicrobial resistance genes substances should be included in the existing 'watch list' for surface water bodies. The substances should also be included in the proposed 'watch list' for groundwater pollutants, which the Commission proposed to establish. Simultaneously, the Commission suggests removing four pollutants that no longer pose an EU-wide threat and bring the standards for 16 existing pollutants in line with the latest scientific knowledge. Also, **learning the lessons from ecological incidents such as the mass death of fish in the Oder River**, the Commission proposes mandatory downstream river basin warnings after major incidents. The proposal has been strongly backed by the European Parliament and discussions are ongoing in the Council.


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The **recast Drinking Water Directive**, that entered into application in January 2023, better protects human health and empowers the management of drinking water in a resource-efficient and sustainable manner, supporting reduced energy use and unnecessary water loss through leakage. The Directive includes updated safety standards, and addresses monitoring of **microplastics, PFAS** and **endocrine disruptors**. Just recently, the Commission issued important secondary legislation regulating **hygiene requirements**, with EU citizens better protected from unsafe **materials and products in contact with drinking water**. We have also just adopted a **standard methodology to measure the presence of microplastics** in drinking water. The Directive is also key in **supporting water resilience** with **improved water efficiency**, particularly by introducing new obligations on assessment and reduction of leakages, with the Member States due to report on their water leakages by early 2026, o enable to Commission to set an **EU-wide water leakage threshold by no later than 2028.** There has also been more attention given to realisation the **human right of access to safe drinking water and sanitation for all,** with obligations in both the recast Drinking Water and Urban Waste Water Treatment directives.

Other laws are under evaluation: i) the Marine Strategy Framework Directive ii) the Nitrates Directive and iii) the Bathing Water Directive. The Commission has also adopted proposals for new essential laws which will enhance water resilience by better protecting ecosystems (that is, the **Nature Restoration Law** and the **Soil Monitoring Directive**), and by promoting water efficiency across economic sectors (i.e. through the revision of the **Industrial Emissions Directive**, the **Eco-design for Sustainable Products Regulation**).

Better implementation of this evolving EU acquis and upscaling investments in the water sector should be a priority in the coming years, to eventually secure that EU water bodies reach good status, in line with the Water Framework Directive.

But **we need a revamped approach**. One that moves away from crisis management to long-term sustainable stewardship of our precious water resources. One that applies a water efficiency first principle across all sectors and secures that heavy water users like agriculture, industry including major digital actors, energy, transport internalise water protection in their way of functioning – at source and by design. And one that develops increasingly strategic alliances also on water management with like-minded, less developed third countries, to tackle with revamped determination this major, root-cause of poverty in a way that consolidates resilience whilst creating sustainable jobs and competitiveness.

Pernille Weiss – The EU Blue Deal: what is the role and opportunity for the industry?

MEP Pernille Weiss is a politician from the Conservative People's Party of Denmark and belongs to the European People's Party (EPP Group) in the European Parliament. She holds both a seat in the Industry, Research & Energy Committee (ITRE) and in the Committee on Environment, Public Health and Food Safety (ENVI).

Additionally, she is the Chair of the MEP Water Group, member of the Panel for the Future of Science and Technology (STOA) and a board member of SME Europe. MEP Weiss is a trained nurse and holds a Master's degree in Health from the University of Southern Denmark and a Master's in Innovation and Leadership from Copenhagen Business School. MEP Weiss has been head manager in the public health care sector and the building consultancy industry before establishing her own consultancy firm in 2008.

April 2024

The EU Blue Deal: what is it and why it matters?

Water is a fundamental resource for life, for our ecosystems, economic activities and society as a whole. However, in the face of growing consumption and climate change, water-related challenges are on the rise. Their mitigation is also becoming an increasingly complex task, which requires coordinated action among all players. Unfortunately, our current policy framework does not adequately address the issues at stake: water remains fragmented across legislations and the improvements of the water sector are often overlooked.

Something must change. This is where the added value of an EU Blue Deal comes in. The purpose of this initiative is that water must be addressed comprehensively, shifting from a 'silo mentality' to a holistic and collaborative approach that caters for all the different aspects of water management (supply, use, quality, protection, restoration and governance) and across all relevant sectors (agriculture, environment, industry, energy, tourism, domestic uses, etc.).

As a Chair of the Water Group in the European Parliament and Member of both the Environment (ENVI) and Industry (ITRE) Committees, I have been publicly voicing my support for the development and adoption of an EU Blue Deal for the European Commission's next term (2024-2029). Together with the voice of organised civil society, the European Economic and Social Committee, we are calling for water to become a strategic priority for the European Union and, as such, to be mainstreamed into all EU policies.

The role for the industry

What role can the industry play in this story? It is a key character with a unique and necessary voice. As a major consumer of water, an overwhelming majority of businesses depend on water resources for the proper functioning of their activities. In the event of scarcity or shortages, they will also be amongst the first and most

impacted stakeholders. Current and future water-related challenges make businesses more vulnerable, especially if unprepared.

As a result, it is imperative that the industry plays an active role in shaping the Blue Deal. In practice, it means being able to identify and articulate its biggest concerns, priorities, and solutions going forward. So far, I am glad to see the positive reception and increasing interest from stakeholders on the topic, but this is just the beginning of the journey.

Within the industry, the voice of the water sector in particular, is essential. It brings a highly concrete expertise to the table and a positive outlook. Whereas other sectors may share about their concerns and obstacles (rightfully so), the water sector is able to contribute with solutions and opportunities. It has the power to shine light on what is feasible (or not), what is cost-effective (or not), and where the low hanging fruits are. The sector has also a fine understanding on where the implementation of already existing solutions is most needed and where more research and innovation make sense.

With this incredibly valuable input, the water sector can guide policy-makers on what issues should be prioritised and how to concretely achieve them. To be impactful, the sector should collaborate with other industry players to identify potential synergies and speak with a unified voice, when possible. In addition, it should reach out and provide specific and concise recommendations to the relevant policy makers in the Commission, Parliament, and Council so that its voice is heard, loud and clear.

The opportunity for the industry

The Blue Deal represents a great opportunity for the industry, and in particular for the water sector. Ensuring a safe and secure water supply is in the interests of absolutely everyone: big or small, private or public, international or local. Ignoring this serious and growing risk does not make sense, either economically or environmentally. In fact, it is estimated that the cost of inaction will be five times more costly than the required investments to tackle water-related challenges for the industry. We can no longer afford to wait.

For the water sector, the Blue Deal would enable it to hit three birds with one stone. First, it would make a positive impact on what is the most urgently needed: reducing our water footprint. In this regard, building a water-smart society, where water resources are highly

valued and used efficiently, is key. Second, it would contribute to the dynamism and growth of both the water sector and our economy, while creating more jobs and training opportunities. Third, it would strengthen the position of the European water sector to compete globally, especially to export its products, services, and know-how worldwide, in view of becoming an indisputable leader in the field.

Finally, time is ripe: the end of the Commission's mandate is around the corner and a new one is about to start. As a result, the EU's executive is looking for a new "raison d' être". It stands open for suggestions and recommendations on what topics could be tackled at the EU level for the next five years. I believe that water deserves to climb to the top of the agenda.

Conclusion

To sum up, there is more than ever the need to make water a strategic priority for the EU. As the threat of water-related challenges arises, our policy framework needs to adapt. Adopting an EU Blue Deal will enable us to move away from a fragmented approach to a comprehensive and collaborative one. The industry has a crucial role to play in shaping this initiative: it holds great stake in mitigating water risks and is equipped with the much needed expertise to provide valuable solutions going forward. The Blue Deal thus represents a significant opportunity for businesses, especially the water sector, to shape this agenda according to its needs and interests.

Now is the best time for the industry to take a proactive role in identifying and voicing its priorities, concerns, and solutions to the relevant policy-makers in Brussels and in the national capitals. As a reshuffle in both the European Commission and Parliament will take place this year, the EU institutions will lend an attentive ear to new ideas and recommendations for the work ahead. In the end, it does not matter which name or label the Blue Deal takes: it only matters that water takes the centre stage.

Jutta Paulus – Water Matters: Navigating the Challenges and Opportunities for Clean Water and Sustainable Management in Europe

Jutta Paulus is a Member of the European Parliament for the German Green Party Bündnis 90/Die Grünen since 2019. She is a member of the Committees on Environment, Public Health and Food Safety (ENVI), Industry, Research and Energy (ITRE) and Transport (TRAN) and has worked on a multitude of Green Deal files ranging around energy and environmental issues.

Paulus started her career as a pharmacist, co-founded an independent laboratory for the examination of chemical hazards, and worked in quality management.
For the German Green Party, she chaired the Working Group Energy from 2014 to 2018. From 2017 to 2019, she was the regional co-president of the Rhineland-Palatinate Greens.

Jutta Paulus works for a safe future within the Planetary Boundaries. She fights for a European Union that halts biodiversity loss, transitions to renewable energy, stops environmental pollution, and moves to climate-friendly mobility.

April 2024

Water is the foundation of all life on earth. Without water, there is also no agriculture, no economy, industry or culture. Prosperity and peace are severely threatened without a sufficient availability of water.

We humans know the importance of access to clean water since our very existence. Management and control of water was and is part of every culture worldwide over the course of thousands of years. In a modern, globalized world, cross-border measures to guarantee access to and distribution of water were established.

In the United Nations General Assembly Resolution 64/292, water and access to sanitation are recognized as a human right. Two UN Sustainable Development goals address clean water and sanitation as well as sustainable water management for all humans. Numerous international fora and conventions aim to protect this indispensable resource with regard to human wellbeing, nature and species protection as well as cross-border water use. The UN Convention to Combat Desertification addresses especially the dangerous scarcity of water.

At the same time, hardly a year goes by without new devastating records in global warming, desertification, droughts and wildfires. 2023 was the hottest year ever recorded. Climate change continues to aggravate water scarcity, also in Europe. Every year, Europeans are increasingly faced with extreme weather events resulting from the heating of our planet. This year, before spring even started, Spain was already suffering from droughts. And the water crisis will further escalate, as the European Environment Agency assesses in

its Climate Risk Report: large parts of Southern Europe will be faced with desertification in the coming decades. At the same time, extreme weather events increase the risk of torrential rains and flooding for virtually all regions.

In the European Union, the Water Framework Directive, the Groundwater Directive and the Drinking Water Directive set a framework for the protection and restoration of water bodies, as well as the promotion of sustainable water use. With the Urban Waste Water Treatment Directive, the treatment of wastewater is being regulated. The European Green Deal aims to build on these legal cornerstones by the announcement of further policy measures. Goals for restoring freshwater and marine ecosystems were set in the EU Biodiversity Strategy for 2030. The Action Plans on Circular Economy and Zero Pollution promotes water reuse and resource efficiency and aims to minimize the pollution of water by various sources.

Besides the ambitions set in the Green Deal, the looming European elections put policies for cleaner and healthier water increasingly under pressure. Negotiating the new EU Nature Restoration Law, EU Legislators finally agreed on urgently needed restoration measures for wetlands and rivers that, besides the protection of ecosystems, would strengthen drought and flood prevention. Moreover, measures for healthier and cleaner marine ecosystems were established. But the Regulation is stuck in the Council of the Member States. There, it could theoretically end in a yearlong deadlock, putting the brakes on urgent measures for climate change mitigation and adaptation.

In 2017, when Glyphosate was renewed, a phase-out of the herbicide had been promised. But this never happened, and in 2023, despite serious concerns and warnings by scientific experts, the European Commission prolonged the authorisation of Glyphosate for another ten years. The herbicide is suspected to cause severe damages to health and environmental. Unsurprisingly, it also ends up in water bodies where it has detrimental effects on aquatic ecosystems.

The rollback on policies for clean water do not endanger only climate mitigation and access to clean water, but also the very foundations of European agriculture. Farmers rely on healthy soils and the availability of clean water. This further intensifies further societal conflicts. The European Union has a responsibility to ensure a future for European farmers and agriculture. It is therefore politically irresponsible to further delay policies that help preventing water loss and pollution.

Besides new and revised legislation, it is of utmost importance that already existing policies are respected and implemented in the member states. Especially with regard to nature protection, prevention and restoration, legal enforcement of binding policies is not sufficiently pursued. For example, more than 30 years after the first Nitrates Directive, European soils and water bodies still are loaded with excessive amounts of nitrate.

The next European Commission must ensure that all suspended policy measures of the Green Deal will be brought forward as soon as possible. A toxic-free environment is not achievable without a revision of the European Chemical Regulation REACH as well as the EU Pesticides Regulation. Both legislations are long overdue to be revised in order to include the current state of the science and to better protect water bodies from pollution. With regard to cross-border cooperation and protection of water bodies, the European Union needs to establish a Transeuropean Network for Nature (TEN-N), which connects also aquatic ecosystems and facilitates their management. What is possible for Transport and Energy should also be possible for the foundations of life itself.

The European Union could act as a role model with regard to the protection of its water bodies and pollution prevention as well as sustainable forms of water management in agricultural and economic activities. Droughts, repeated fires and lack of clean water will very likely lead to conflicts worldwide. Already today, the devastating consequences of the climate crisis force people into refuge. Moreover, the danger of conflicts, upheavals and even wars increases. Water scarcity will get worse. But there are ways to better manage its consequences and prepare for the future. The new EU Commission must build on the Green Deal and enhance efforts for clean water and sustainable water management.

Hallvard Ødegaard – My wastewater treatment philosophy

Professor emeritus, Norwegian University of Science and Technology (NTNU)
CEO Scandinavian Environmental Technology (SET AS)
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Professor Hallvard Ødegaard, is a highly respected figure in the water sector and professor emeritus and has made significant contributions to water engineering education and research in Norway. For this, he was awarded The Royal Norwegian St. Olav order in 2011. He is widely recognized as the inventor of the Moving Bed Biofilm Reactor (MBBR).

Prof. Ødegaard was awarded by EWA and IFAT the Dunbar Medal at a prestigious ceremony in Vienna on October 19th, 2023, during the ÖWAV/EWA Joint Conference: Water Resources subject to Climate Change Challenges in managing Extremes.

March 2024

Introduction

I graduated from Norwegian Institute of Technology (NTH) in 1969 and received my PhD (Dr.ing.) at NTH in 1975, with water and wastewater treatment as my major. After graduation I spent 4 years at Norwegian Institute for Water Research (NIVA) in Oslo and in 1973 I returned to NTH and was appointed associate professor at Department of Water- and Environmental Engineering in 1977 and full professor in 1985 – a position that I held until retirement in 2011. Now I am consulting in SET AS.

At the beginning of the 1970'ies, the major water pollution challenge in Norway was eutrophication of lakes and fjords – calling for nutrient removal measures. Hence, nutrient removal technologies became a focus of mine throughout my professional career.

P-removal

In the early 70'ies, we demonstrated through pilot experiments at NIVA (see Figure 1), that direct chemical precipitation gave almost equally good P-removal as biological-chemical treatment, the Swedish standard at that time - however, at much lower investment cost. This resulted in many wastewater treatment plants being built in Norway based on direct chemical precipitation alone. Surveys carried out decades later confirmed good P-removal and surprisingly good organic matter removal as well (see Figure 2). The reason for this is, of course, that a very considerable fraction (ca. 70-75%) of the organic matter present in wastewater (and particularly in the cold Norwegian one) is suspended or colloidal.

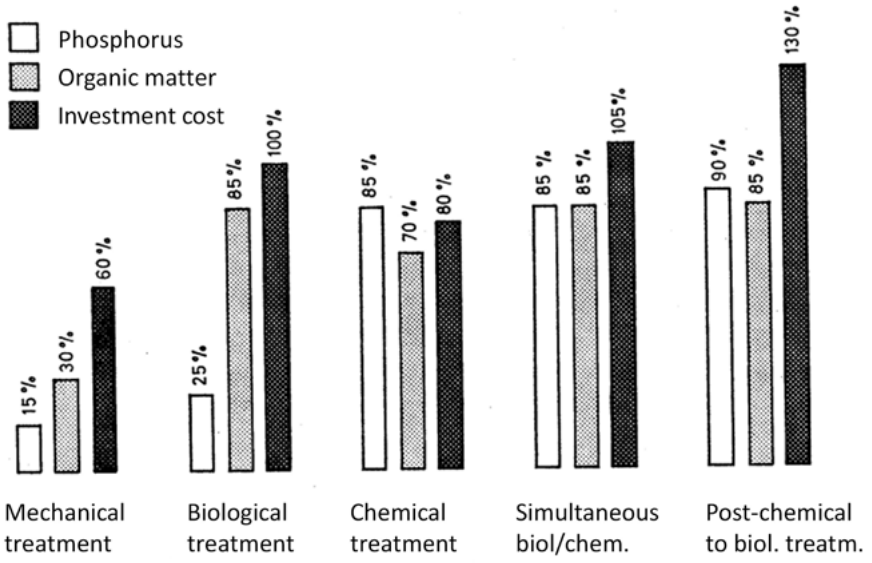


Fig.1 Result of pilot experiments (NIVA, 1970)

Surveys	N	n	COD_{in} g/m³	COD_{out} g/m³	COD_{rem} %	BOD_{in} g/m³	BOD_{out} g/m³	BOD_{rem} %	Reference
1990 investigation	87	531_{COD} 183_{BOD}	418	99	73,4	167	27	80,9	Ødegaard 1990
2002 investigation	88	778_{COD}	366	90	75,5	135	33	75,7	Nedland 2002

N – Number of plants in survey n – number of samples in survey

Fig. 2 Organic matter removal in Norwegian chemical wastewater treatment plants

These experiences were the basis for my wastewater treatment philosophy, depicted in Figure 3, that led to the fact that a number of compact wastewater treatment technologies were developed in Norway during the 1980'ies such as; the Salsnes Filter for pre-treatment, the moving bed biofilm reactor (MBBR) for biological treatment, the Dissolved Air Flotation (DAF) for biomass separation and the Cambi Thermal Hydrolysis (THM) for sludge processing.

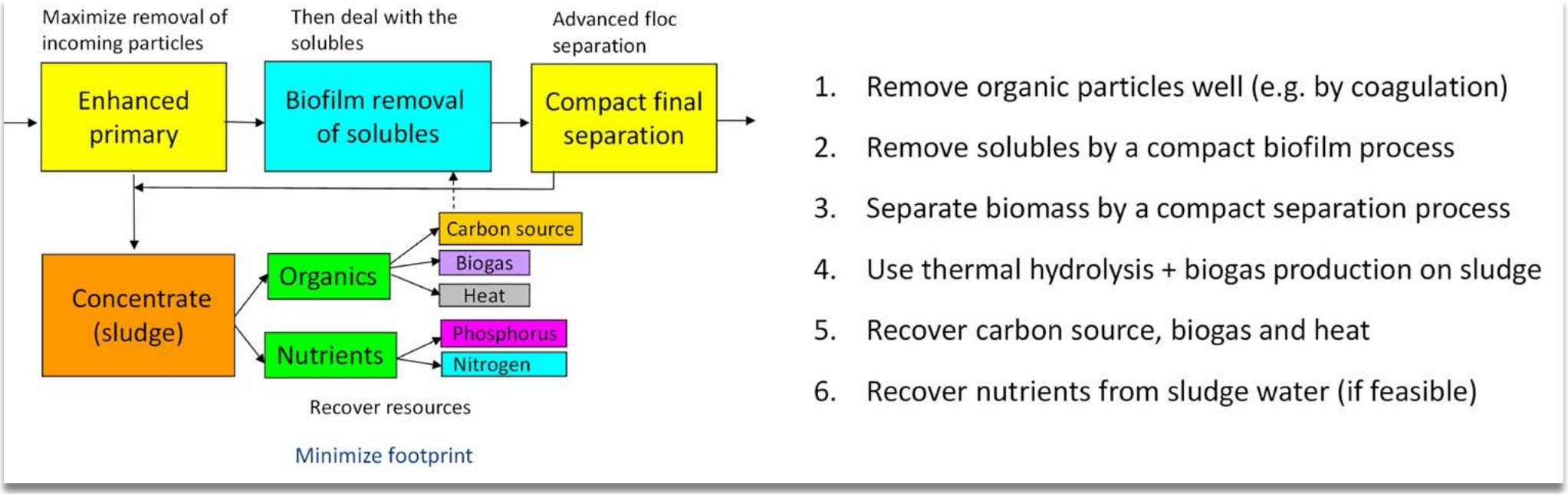


Fig. 3 My wastewater treatment philosophy

N-removal in biofilm reactors

In the late 1980'ies I invented the moving bed biofilm reactor (MBBR) that became very popular, first in Norway and then in Scandinavia and USA, and later it has spread to all continents. There are now probably more that 2000 MBBR plants around the world. The development of the MBBR happened as a result of the eutrophication incident in the North Sea in 1987 and the later revision of the EU Wastewater Directive (1991), that led to the requirement of nitrogen removal in wastewater treatment plants. The Ministry of Environment in Norway launched a R&D program on removal of nitrogen, of which I was the program leader. In this program we developed systems based on the MBBR, in variants suitable according to the wastewater characteristics (see Figure 5 and Table 1).

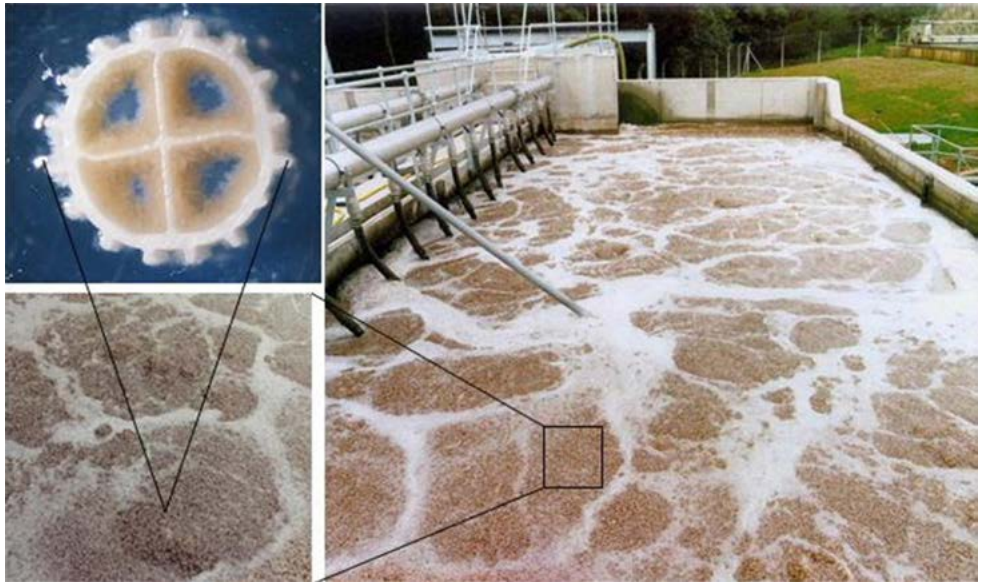


Fig. 4 The moving bed biofilm reactor (MBBR)

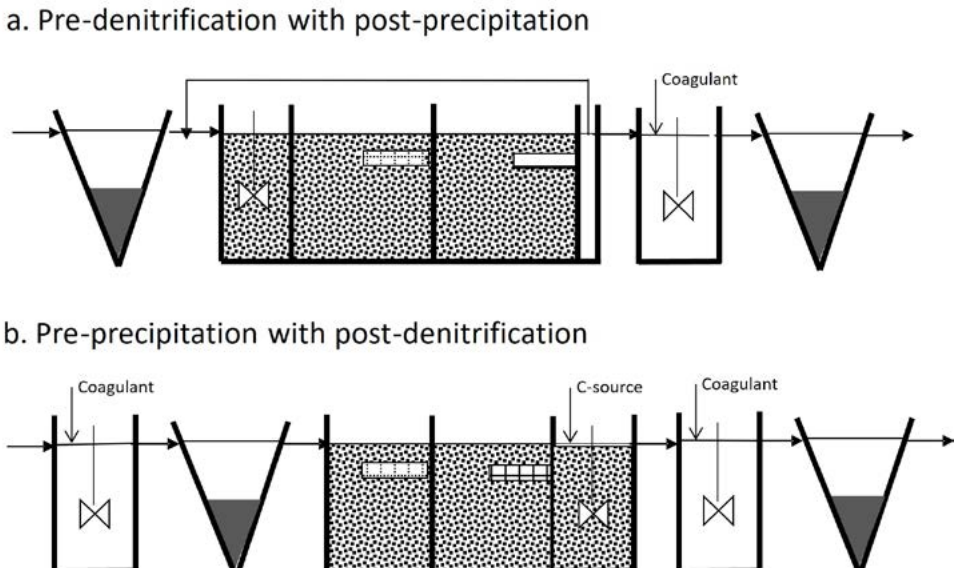


Fig. 5 The MBBR-based N-removal systems investigated in the R&D program on N-removal

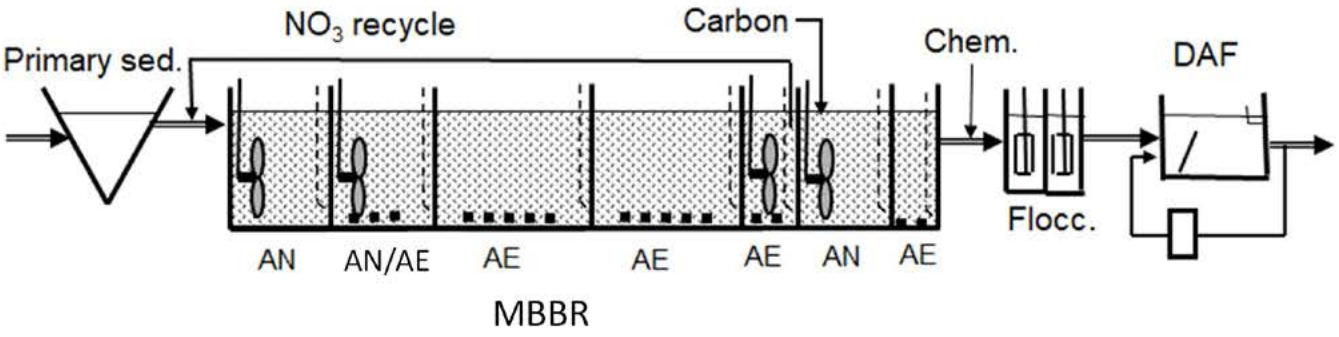
Table 1 Comparison of benefits and draw-backs of the thee systems in Figure 6

Pre-denitrification with post-precipitation	Pre-precipitation with post-precipitation	Combined pre- and post-denitrification with post-precipitation
• Limited N-removal (< 70%) • No need for external carbon • Require high in-coming C/N	• No limit to N-removal (> 90%) • Need for more external carbon • Independent of in-coming C/N	• No limit to N-removal (> 90%) • Need for less external carbon • Less dependent of in-coming C/N

In the 90'ies several treatment plants were constructed in Norway according to the combined pre- and post-denitrification system, one of them being built for the winter-olympic games at Lillehammer in 1994, and another for the international airport and surrounding communities, the Gardermoen WWTP (see Figure 6).

Today the Norwegian N-removal plants have to reach 70 % N-removal as yearly average and the table in Figure 6 demonstrates that Gardermoen WWTP achieves this by far, even if overloaded and even if operated at low temperatures during parts of the year (5-7oC during snow-melt).

Recently a survey was made of four of the combined WWTP's of the 1990'ies, especially with respect to their performance in cold weather. This is a concern because of the proposed stricter N-removal requirements (85 % or 6 mg Tot N/l) in the revised EU-directive. Figu-



Parameter	Removal (%)		Effluent (mg/l)	
Year	2019	2020	2019	2020
Tot. COD	97.0	95.9	22	27
Tot. P	96.1	96.7	0.32	0.26
Tot. N	84.0	86.8	11.2	7.9
Temp., °C Average Minimum	 11,2 6,7	 10,7 5,4		

Figure 6 Flow-diagram and average treatment results of the Gardermoen wastewater treatment plant

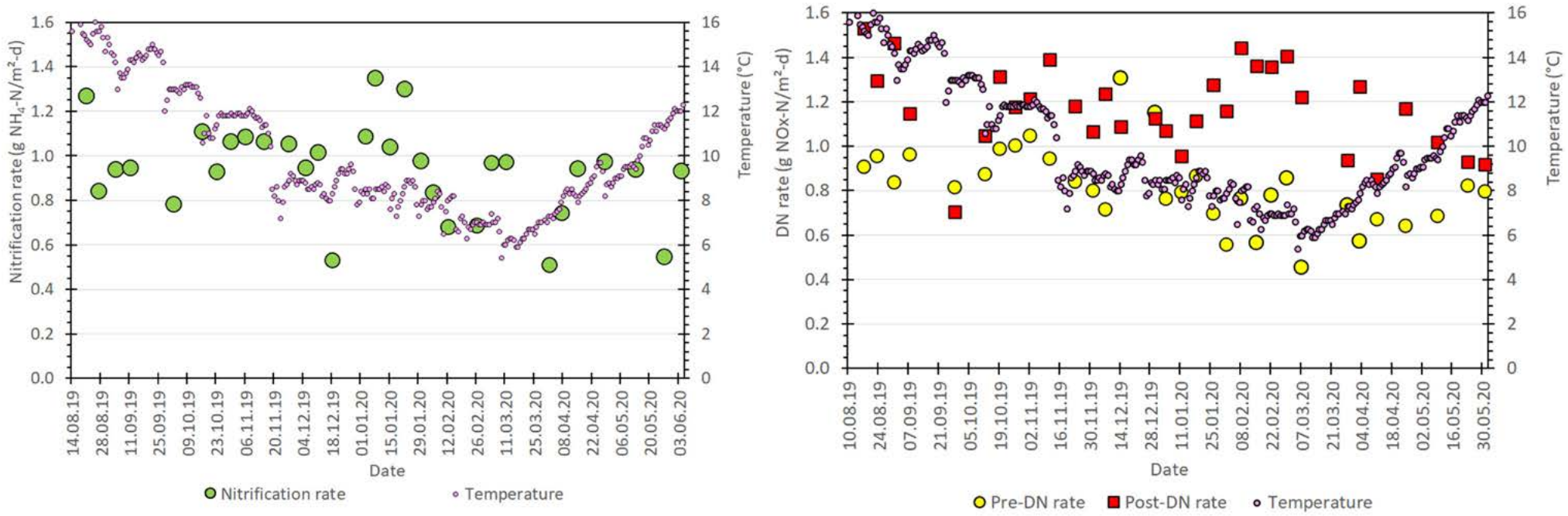


Figure 7 Temperature influence on observed nitrification and denitrification rates at Gardermoen WWT in 2019 and 2020

re 7 shows the temperature influence on the observed nitrification and denitrification rates at Gardermoen WWTP.

The influence of temperature on observed rates are surprisingly low. This is (for nitrification) caused by the fact that DO increases when water temperature decreases, and since nitrification rate is strongly and linearly dependent upon DO (even at DO> 4 mg/l), the effect of increased rate because of the higher DO is compensating for lower nitrification rate, caused by the lower temperature.

For denitrification it is caused by the fact that the operators increase the addition of carbon source during periods of colder water temperatures, and hence the expected lower denitrification rates at lower temperatures are compensated for by higher carbon source addition.

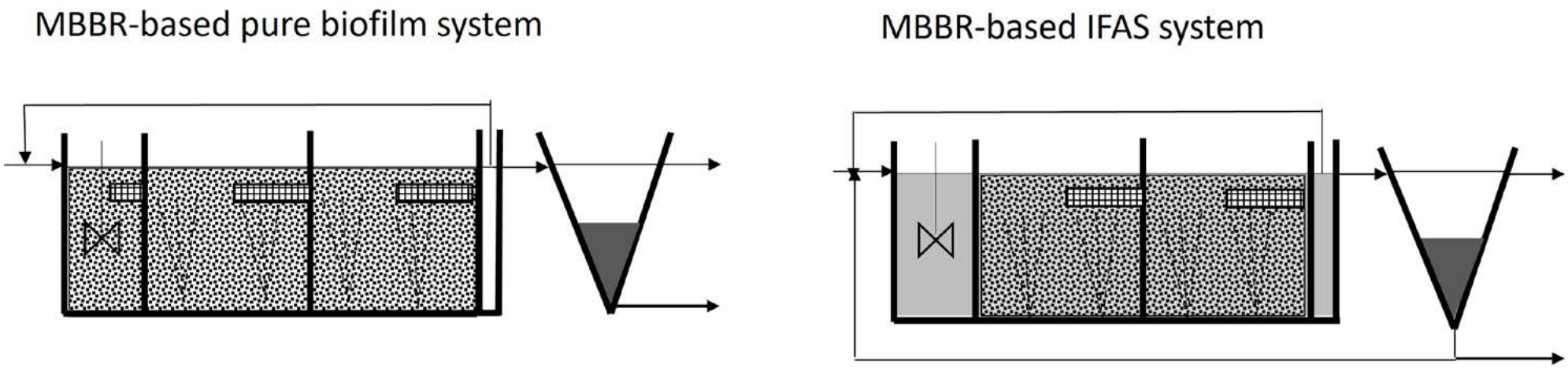


Figure 8 Two ways of utilizing the MBBR

MBBR-based IFAS systems

MBBR's may be utilized in two ways (see Figure 8):

1. As a pure biofilm system without sludge return
2. As an integrated fixed-film activated sludge (IFAS) system

In Norway the pure MBBR-system, that is more compact and combines very well with chemical P-removal, is preferred. But in many countries where activated sludge is the dominating biological treatment method, the IFAS system may offer several advantages, especially when upgrading for stricter N-removal.

The main reason for this is the fact that the size of the nitrification reactor may be halved since nitrification will mainly be taking place on the carriers, independent of the aerobic sludge age of the activated sludge and nitrification can be experienced at very low sludge ages (2,5-4 days).

Since a very strict P-removal standard will also have to be implemented by the new EU-directive, a particularly interesting system may be that of a combined pre- and post-denitrification IFAS-MBR. I carried out a desk-top study of the three alternative systems in

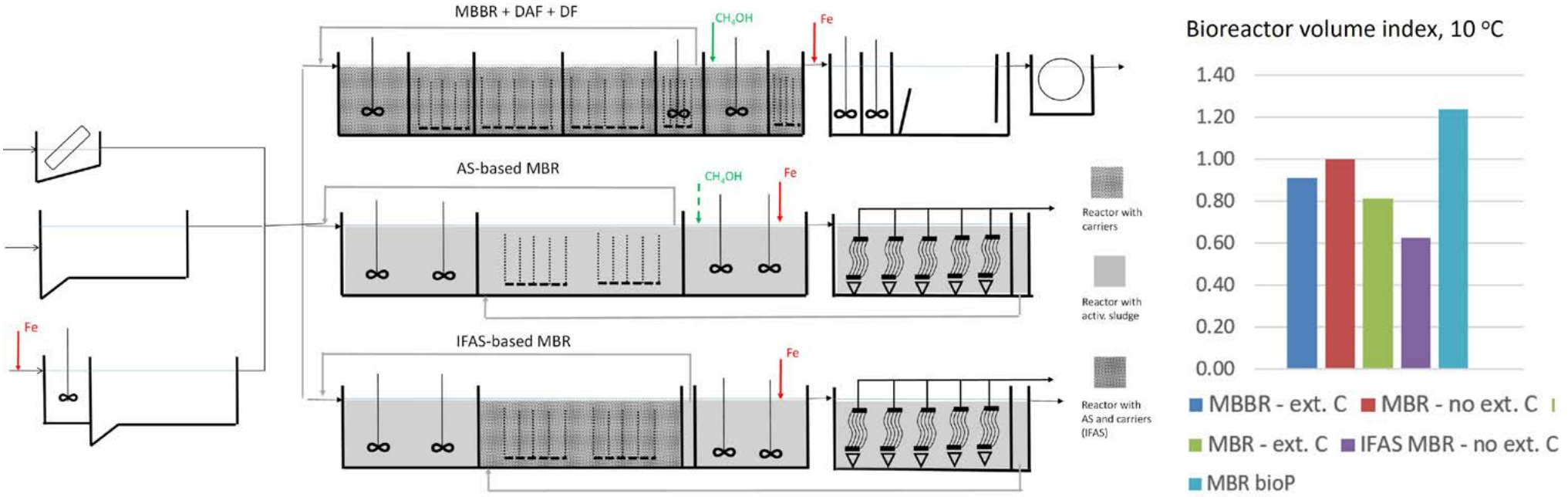


Figure 9 Systems comparison

Figure 9; one based on MBBR and DAF, one based on activated sludge MBR and one based on MBBR-based IFAS-MBR.

To the right in Figure 0, is shown the calculated bioreactor volumes relative to the one based on activated sludge MBR. It is demonstrated that the MBBR-bioreactor volume would be about 10 % smaller than that of the MBR if no external carbon is used in the MBR, but about 10 % larger if external carbon source is used also in the MBR-alternative. The most interesting result is, however, that the bioreactor volume for the IFAS-MBR system is about 40 % smaller than the MBR-system.

In a recent tender competition for a treatment plant in Norway, aiming at the revised, strict EU-directive, the MBBR-alternative came out 35 % cheaper in total cost, however, than the IFAS-MBR alternative, mainly because of the high cost of the membrane reactor (membranes and energy).

Conclusion

My wastewater treatment philosophy from the 1980'ies (depicted in Figure 3), still represents a sustainable guide for establishing efficient, robust and resilient treatment plants for the future.

Jiří Wanner – Wastewater 2024: A paradigm shift – from a source of nuisance to a source of water, materials, energy and information

Jiří Wanner is a full professor of the University of Chemistry and Technology in Prague, Czech Republic, where he leads research group on wastewater treatment and reuse. He has been active in different positions in IWA and in EWA.

He is a "distinguished fellow" of the IWA and an honorary member of the IWA and EWA. He chairs the group of specialists on Wastewater Treatment and Reuse of the Czech Water Association. He was involved as consultant in the process of approval procedure of EU water reuse regulation.

March 2024

Motto

Statisticians have calculated that France alone makes a deposit of half a milliard every year, in the Atlantic, through the mouths of her rivers. Note this: with five hundred millions we could pay one quarter of the expenses of our budget. The cleverness of man is such that he prefers to get rid of these five hundred millions in the gutter. It is the very substance of the people that is carried off, here drop by drop, there wave after wave, the wretched outpour of our sewers into the rivers, and the gigantic collection of our rivers into the ocean. Every hiccough of our sewers costs us a thousand francs. From this spring two results, the land impoverished, and the water tainted. Hunger arising from the furrow, and disease from the stream.

A sewer is a mistake.

Victor Hugo: Les Misérables, 1862; Volume V - Book Second. - The Intestine of the Leviathan

Paradigm shift

From the times of Cloaca Maxima in ancient Rome through the large-scale sanitary works of the 19th century to the end of the 20th century the urban drainage was based of gravity sewers. Their role was first to carry our sewage quickly from urbanized areas, later on the collected wastewater started to be treated as dangerous liquid which can cause health and environment problems if discharged untreated.

A paradigm shift is currently underway. As a result, the wastewater sector in developed countries has started changing from simply treating wastewater into resource recovery facilities. These recovery facilities can produce clean water, recover nutrients and reduce fossil fuel consumption through the production and use of renewable energy. Such a development we can now observe in most European countries. The overall volume of treated wastewater in the EU countries amounts to 40 000 million m3/year, which represents a high potential for recovery facilities. In addition to the change of wastewater understanding from problem to resource of water,

materials, and energy, we are beginning to look at wastewater as a source of important information.

According to publications by the European Investment Bank and the World Bank, which can be accessed at the following links:

→ www

→ www

municipal wastewater is now understood as a source of water, nutrients and other materials, energy and even of useful information. This role of wastewater is also reflected in the Proposal for a Directive of the European Parliament and of the Council concerning urban wastewater treatment (recast), 6848/24, especially in Article 15 Water reuse and discharges of urban wastewater, Article 17 Urban wastewater surveillance, and Article 20 Sludge and resource recovery.

Recovery of nutrients and other materials

Urban wastewater has always been valued as a source of nitrogen and phosphorus and has been used as such in the past. Today the tendency is to recover the nutrients in a form which is not contaminated by other wastewater pollutants. Phosphorus recovery technologies are operating at full scale at several locations. In some EU countries such as Germany, Switzerland or Austria, legislation already obliges wastewater treatment plants of a certain size to recover a minimum amount of the incoming phosphorus load. The typical final product which can be used, among others, as fertilizer is struvite. Many EU countries perform also “phosphorus recycling” (in contrast to “recovery”) by wastewater sludge land applications.

Unlike phosphorus, which is a limited and non-renewable resource, nitrogen is abundantly present in the atmosphere in a highly stable

and non-reactive form of nitrogen gas (N_2). Since the invention of the Haber-Bosch process in 1909, the mass production of nitrogen fertilizers (around 450 million tons/y containing about 120 million tons of nitrogen → www) has been based on industrial conversion of atmospheric nitrogen to ammonia. Hydrogen is also needed to produce ammonia from nitrogen. This is nowadays mainly obtained from natural gas. The Haber-Bosch process consumes 3 to 5 % of the world's natural gas production (about 1 to 2 % of the world's annual energy consumption → www). Therefore, efforts are being made to produce ammonia from waste water with less energy consumption.

There are three main ammonium recovery mechanisms, namely:

(i) struvite precipitation;

(ii) ammonia stripping coupled with adsorption and

(iii) membrane concentration (→ www).

Cellulose is one of the materials that can be recovered from municipal wastewater. Cellulose is recovered by physical separation of cellulosic materials from the influent of wastewater treatment plants. The removal of cellulose from the influent produces a material that can be used in biocomposites and construction. Another useful material that can be obtained by thermal treatment of sewage sludge is a biochar (→ www).

Energy recovery

Wastewater contains energy in a number of forms. Currently, energy recovery from wastewater typically only considers chemical energy in the form of biogas (or: "biomethane") produced from the anaerobic digestion of wastewater sludge. However, estimates of the recoverable energy embedded in municipal wastewater suggests that the potential for thermal energy (80% of energy recovered) is much higher than for chemical energy (20%) while only a very small amount (less than 1%) of the embedded energy is in the form of hydraulic energy. This indicates that a significant portion of recoverable energy in wastewater is currently unexploited.

There are many projects around the globe (e.g., → www). The theoretical principles and basic arrangements of thermal energy recovery are summarized for example here: → www

Municipal wastewater as a renewable heat resource has been recognized also in the EU directive 2018/2001 "on the promotion of the use of energy from renewable sources (recast)".

Using wastewater as an alternative water resource

Treated effluent of municipal wastewater treatment plants is used for various purposes worldwide (Fig. 1). The overall extent of water reuse in EU countries is not yet very significant. Only about 1,100 million m3/year of treated wastewater is reused. The volume of reclaimed water indicates that the theoretical potential of producing the water for reuse from municipal wastewater is used from only 2.5 % while in the Mediterranean countries ranges between 12 % in Italy and Spain up to 60 % in Malta or even 90 % in Cyprus. The estimates of the European Commission speak about 14 % on the Union average in the future as a result of the application of new "Regulation 2020/741 of The European Parliament and of The Council of 25 May 2020 on minimum requirements for water reuse". (→ www)

Lautze J., Stander E., Drechsel P., Da Silva A.K., Keraita B. (2014) Global experiences in water reuse. CGIAR Res. Progr. Water, L. Ecosyst. (WLE). Int. Water Manag. Inst. (IWMI), Colombo, Sri Lanka 31.

→ www

Municipal wastewater as a source of information

A rapid development in instrumental analysis and in molecular biology enabled us to "read" very specific and helpful pieces of information from municipal wastewater. The wastewater can provide different sets of the-so-called biomarkers (→ www):

- lifestyle and substances use biomarkers (illicit drugs, caffeine, …)
- exposure biomarkers from environment and food (pesticides, mycotoxines, ….)

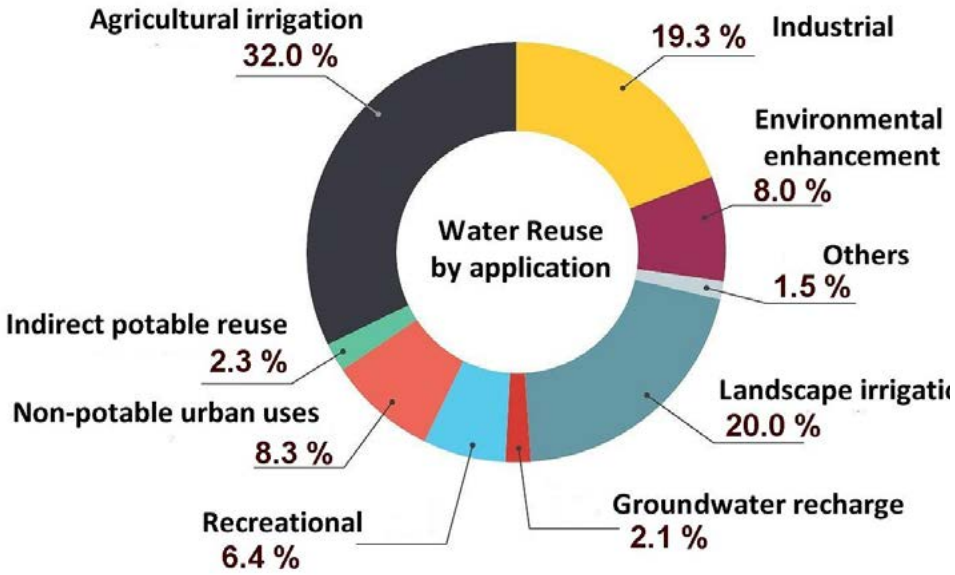


Figure 1 Global water reuse after tertiary treatment: market share by application

- health biomarkers (various types of pharmaceuticals, hormones,…)
- population biomarkers (sweeteners, endogenous compounds like human metabolism products,…)

It was found in many countries during the recent Covid-19 pandemic that municipal wastewater can bring very accurate and rapid answer to the question on epidemiological situation in different parts of an agglomeration (e.g., → www). New methods of molecular biology help us also to identify wastewater treatment plants as possible open doors for dissemination of antibiotic resistance genes (e.g., → www).

Wider uptake of water-smart solutions

The European Union is currently financing several projects touching the possibility to accelerate the transition from wastewater disposal to wastewater reuse. One of the most complex projects is project Horizon 2020 on "Wider uptake of water -smart solutions". This project brings together researchers, water utilities and private industries in five countries (Norway, Italy, The Czech Republic, The Netherlands, and Ghana). The aim is to find the best possible use of water resources, reduce carbon emissions and develop sustainable business models. WIDER UPTAKE demonstrates innovative solutions that optimize water reuse, resource recovery and energy utilization. Market utilization of the recovered resources is achieved through a symbiosis between the utility and industry.

The four-year project (2020-2024) is divided into several case studies covering various aspects of water reuse and material recovery from wastewater. The objectives of individual case studies are as follows:

Case 1 Ghana: → www

Development and demonstration of a value chain for use of treated wastewater for urban agriculture and promotion of biochar usage as substitute for wood fuel used in the kilns of textile and chemical industries, which can reduce emissions and reduce deforestation through reduction in dependence on wood fuel.

Case 2 Italy: → www

Demonstrate solutions for: i) Reduction of greenhouse gas (GHG) emissions by improving the wastewater treatment process; ii) Recovery of nitrogen and phosphorus from wastewater by biochar and zeolite filters; iii) Reuse of the recovered nutrients (as slow-release fertilizers) and sewage sludge (as amendments) for agricultural and forest purposes; iv) Extraction of polyhydroxyalkanoates (PHA) from mixed microbial cultures. v) Reuse of treated wastewater for irrigation in agricultural and possibly in public gardens of urban areas.

Case 3 Czech Republic: → www

Demonstrate safe use of treated effluent for irrigation purposes in grey-green solutions for urban development with reasonable water transportation expenses. Treated effluent of Prague WWTP was used for irrigation of urban greenery under controlled conditions (Fig. 2).

Case 4 Norway: → www

i) Phosphorus recycling to agriculture based on innovative continuous MBBR process for EBPR

ii) Production of both organic and balanced inorganic fertilizers

iii) Increased support to the gas-based regional energy grid

Figure 2 Irrigation box simulating urban park greenery (grass, flowers, bushes and trees) © Photo author

Case 5 The Netherlands: → www

This unique case study explores the production and applications e.g. construction materials in park benches and river/canal bank protection solutions, of a new bio-composite material made by recovering resources from drinking water treatment (calcite), wastewater treatment (cellulose fibers) and surface water management (water plants), all glued together using a biobased resin.

Harsha Ratnaweera – DIGIWATER: A success story in the realm of Digitalisation in water higher education

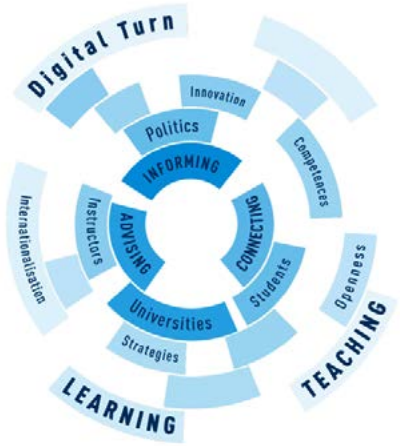
Harsha Ratnaweera is a Professor in Water and Wastewater Technology at the Faculty of Sciences and Technology, Norwegian University of Life Sciences. He was employed as the Director of International Projects and Innovation at the Norwegian Institute for Water Research (NIVA), where he initiated and led NIVA's commercialization of research results.

He has a Dr. Ing. degree in Civil Engineering from the Norwegian University of Science and Technology NTNU, and a MSc (Hons) Chemical Engineering from the National Technical University of Ukraine KPI, Ukraine. He is also the Norwegian representative in the Council of the EWA and a member of the Management Committee (MC).

April 2024

Digitalisation emerges as a viable solution in water industry and management, therefore promoting the uptake of the digital tools and technologies is a must including AI, data analytics, and IoT. Digital transformation is changing the job market and requiring new skill sets; therefore, systemic change is required to reach the full potential of this transformation. Reforming and evolving the programs in water higher education comes a critical element in this change to reflect on and react to these updates. Creating new programs enables the future young water professionals to acquire the necessary skills and competences to fully embrace this digital era.

The European Commission has presented a set of possible actions, initiatives and funding opportunities to boost the development of digital skills at all levels of education and training. The European Commission also works towards linking the physical and digital world for water solutions, tackling the societal challenges of water availability, quality, and climate-change-related impacts, while the water industry goes through a digital revolution.

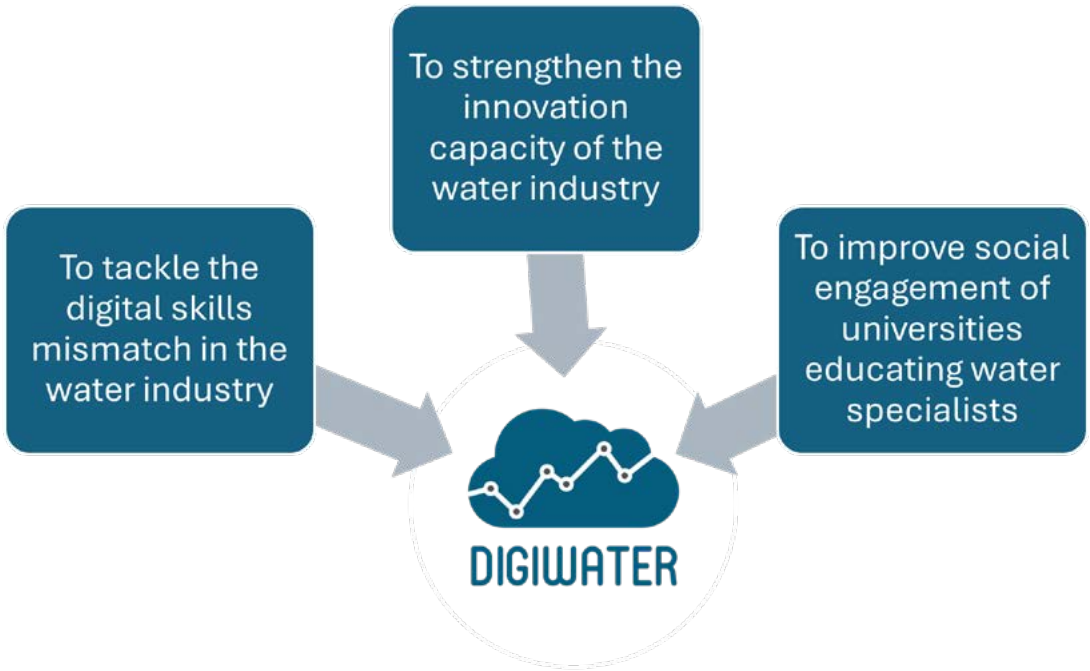


To contribute to the ongoing efforts and adapt to needs of the water industry, DIGIWATER was approved for funding from the Erasmus+ Knowledge Alliances IN 2021. Since 2014, Knowledge Alliances have helped strengthen Europe's capacity to innovate and to support the modernisation of Europe's higher education systems.

Today and after almost three years of running DIGIWATER, the project is coming to its conclusion on 30th April 2024. The project has brought together six universities six SMEs. The European Water Association (EWA) as an umbrella organisation coordinated the dissemination activities.

ning tools and virtual facilities with access in cloud systems and Problem Based Learning; (2) to stimulate entrepreneurship and entrepreneurial skills of higher education teaching staff and company staff using Innovation Camps and (3) to facilitate the exchange, flow and co-creation of knowledge by creating inter-stakeholder courses integrating academic, corporate learning and professional development for external specialists.

The ambition was to foster digital innovation in the water sector by showcasing in water and parallel sectors (e.g. energy), building IT skill sets to water professionals, mainstreaming technology entrepreneurs into water sector, connecting the water sector with related industries and resource issues, and shift future water leaders from late to early adopters of new innovations and ideas. This consortium worked together (1) to develop new, innovative and multidisciplinary approaches to teaching and learning by using multidisciplinary curricula integrated with digital lear-



Innovation camp

DIGIWATER results:

- Eight workshops with different topics on digitalization to promote digital skills among partners staff and students.
- Digital Water e-learning platform which you can visit here: Digiwater Platform (ucy.ac.cy)
- Two innovation camps to promote the engagement of students.
- Five demo cases as a part of the Digital Water Living Lab to promote the engagement of end-users.

DIGIWATER foreseen impacts:

The main target groups are TG1 (future water professionals), TG2 (water professionals), TG3 (water educators), TG4 (technology entrepreneurs), TG5 (local communities), TG6 (the Water industry), TG7 (European community at large).

DIGIWATER consortium recognizes the following impacts resulting from its work:

Impacts	
Short-term	**Long-term**
Development of skills and competences necessary to support digitalization of water industry	Growing generation of water professionals leading digital transformation of water industry
Update of knowledge and competences towards 'smartening of the water system'	Support of digital transformation in the industry, rather than resistance
Upgraded curricula, improvement of teaching styles by modern tools and resources	Enhancing smart specialisation for water in higher education
Reduction of research costs and quicker implementation of innovations in the market	Sustainable of Open Innovation in the industry
Growing specific opportunities that can be realised in practice	Growing positive changes based on regional innovation ecosystems
Transfer of positive impacts of digitalization from other industries	Skills match between water engineers and process control specialists
Digitalization of water enterprises	Highly competitive European water sector and attractive water-related higher education

Sustainability actions:

In order to ensure that DIGIWATER goals are achieved, and long-term impacts are delivered, the consortium has planned to sustain the results beyond the project time by:

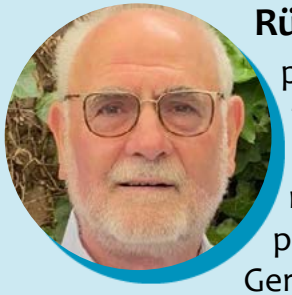
- Mainstreaming Innovation Camp practices by university staff members trained in the project and motivated to continue this practice beyond the project together with innovative enterprises
- Incorporation of curricula and lecture materials, revised to reflect the needs of the industry and future employers, into study programs of partner universities and professional extension life-long learning programs of enterprises
- Initiating innovative ideas that can be developed further beyond the project and establishing innovation and entrepreneurship as a culture among the students in the water sector.
- Connecting with other European projects and initiatives such as SMART4ENV (→ www).

DIGIWATER Facts:
Period: 2021-2024
Grant: 1 million €
web: https://waterharmony.net/projects/digiwater-2/

Universities:
Norwegian University of Life Sciences, Norway (Coordinator)
University of Applied Sciences Ostwestfallen Lippe, Germany
Katholieke Universiteit Leuven, Belgium
University of Galati, Romania
University of Cyprus, Cyprus
Istanbul Technical University, Turkey

SMEs:
DOSCON, Norway
Stadtentwaesserungsbetrieb, Germany
SumAqua, Belgium
Smartech Automation SRL, Romania
I.A.CO Environmental And Water Consultants Ltd
Memsis Environmental Technology R & D Co.Lt, Turkey
Umbrella organisation: European Water Association EWA

Rüdiger Heidebrecht, WorldSkills and the new Skill #55 „Water Technology“



Rüdiger Heidebrecht is the former head of Department Training International Cooperation at the German Association for Water, Wastewater and Waste (DWA), where he played a pivotal role in developing standards, overseeing training programs, and facilitating publications within the German water sector. With a background in civil engineering from the Cologne University of Applied Science and international work in Nepal, Rüdiger has been instrumental in various projects under the German Technical Cooperation (GIZ). He is currently serving as the Senior Advisor for Worldskills Germany.

March 2024

In the field of Water Technology, skilled professionals play a vital role in monitoring, treating, and safeguarding the water infrastructure. In this skill we concentrate on the operation and maintenance of water facilities.

Who is Worldskills?

Worldskills is an organisation active in more than 80 countries. The aim is to motivate young people in TVET-technical vocational education and training by conducting skill competitions. It started more than 70 years ago in Spain in a vocational school. It became the biggest competition event in TVET in the world and takes place every two years (2024 in France/Lyon, 2026 in China/Shanghai). With more than 60 skills and more than 1500 competitors it is an event for professionals in education and training. It is also called the Olympic Games for Skills and each competition last four days.

Who is Euroskills?

In 2008 the first Euroskills took place in Rotterdam. Since than over 30 European countries and more than 500 competitors in over 40 skills are meeting every two years for three days. This regional events takes place also in other continents, like Worldskills Africa.

How Skill #55 Water Technology was developed?

In 2010 the German Association for Water, Wastewater and Waste, DWA, learned from their friends in the US how to run a competitions in the water sector. The first competition organized by DWA took place in 2010 during the IFAT Munich/Germany. In 2013 I organized with the financial support from the German Ministry of Research and Education (BMBF) a demonstration skill in Water Technology at Worldskills 2013 in Leipzig. German teams from Water Utilities showed their skills and together with partners like FESTO/Adiro we developed step by step the tasks.

During the Worldskills events 2015 in Brasil and 2017 in Abu Dhabi further countries joint the competition and finally in 2019 in Kazan where 11 countries participated the skill #55 „Water Technology“ became an official skill in the program of WorldSkills.

2022 Stuttgart, 7 countries participated in the skill #55 Water Technology

What does a Water Technician do during the competition?

Water Technicians are operating, monitoring and maintaining the water infrastructure. They have to show their skills in trouble shooting, monitoring, automatisation on mechanical and electrical equipment. They have to run a water lab, to explain the flow regime of a wastewater treatment plant and to solve sludge and gas problems. However, participants consistently enjoy engaging in the competition alongside peers from diverse countries and cultures. Following the event, these young individuals return home with numerous new friends from across the globe.

worldskills

Directory of Members

© Mylene / Pixabay

- National Members
- Sponsor Members
- Corporate Members
- Research Members
- Cooperation Organisations

Albania

Water Supply and Sewerage Association of Albania (SHUKALB)

Executive Director
Elisabeta Poçi

EWA Council Representative
Petrit Tare

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SHUKALB is a professional, not-for-profit Association of water supply and sewerage professionals, who wish to improve the management of the water sector in Albania, making it efficient, sustainable and effective in accordance with the current laws and regulations in Albania.

SHUKALB vision is “Acknowledged leader in advancing quality performance and sustainability in the water sector“.

The four main mission objectives:

- To advocate the collective interests of professionals in the water sector in Albania.
- To serve as a leading resource for knowledge, professional development and networking.
- To invest time and resources to build awareness and attract future generations to seek a career in the water sector.
- To be a positive force for mutual understanding, collaboration and regional partnerships in the Western Balkans.

Social Media

zukunft SEIT 1909 denken

Austria

Österreichischer Wasser- und Abfallwirtschaftsverband (ÖWAV)
Austrian Water and Waste Management Association

Executive Director
DI Dr. Daniel Resch

President
RA Mag. Martin Niederhuber

EWA Council Representative
HR DI Johann Wiedner

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Since 1909 the Austrian Water and Waste Management Association (ÖWAV) represents the entire spectrum of water and waste management in Austria. As a non-profit organization the ÖWAV is committed to achieve the goals of sustainable water, wastewater and waste management at national and international level.

The ÖWAV provides its over 2.000 members a sector network and a neutral and independent platform for all specialized experts and involved professional groups as well as up-to-date information and a balance of interests in the national water, wastewater and waste management.

The tasks of the association include the elaboration of ÖWAV-regulations provided by working groups within the association's departments, the organization of education and training offerings related to practical needs along with information and communication.

Belgium

VLARIO

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Wendy Francken

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VLARIO is an independent non-governmental and non-profit organization in Flanders (Belgium). VLARIO is the consulting platform and information and knowledge centre for Flemish sewerage professionals and has the following targets:

VLARIO is willing to participate and to cooperate in a European network based on the principles of supporting the making of the European water policy (especially as we are living in Flanders and are at home in Brussels).

VLARIO offers an independent platform for experts of rainwater, wastewater and integral water management;

VLARIO collects knowledge through continuous consultation and exchange of experience with all market players, national and international;

VLARIO supports the ambition of Flemish towns and cities in pursuing quality and applying the 'Principles of integrated sewerage management".

Social Media

BULGARIAN WATER ASSOCIATION

BULGARIA

Bulgarian Water Association (BWA)
Balgarska asotsiatsia po vodite

EWA Council Representative
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BWA is a non-governmental organization which members are corporate and individual ones who are involved in the water supply and sewerage (WSS) field, including the quality and treatment of drinking-, industrial-, agricultural- and waste water as well as management, preservation and utilization of water resources. The core of the Association are the regional and local companies dealing with water supply and wastewater disposal as well as designers' bureaus, construction/assembly-, manufacturing-, export-, import- and other companies as well as scientific, managerial and technical staff working in the water sector; therefore, it can be fairly called "The Bulgarian Water Voice".

Social Media

Croatia

Croatian Water Pollution Control Society (CWPCS)

EWA Council Representative
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CWPCS is a voluntary, non-profit association of citizens and legal entities joined together to promote water protection and other water related issues. Established in 1979 as the first environmental organization in this part of Europe, today the CWPCS has an important role in the education of new generations of water professionals in different fields of water management.

CWPCS has always had close cooperation with other national organisations, working towards improving relations, exchange of experience and solving neighbourhood problems.

Our vision is to become a recognized national and European organisation in the field of water protection by bringing together members and participating in different national and international projects, programmes and events in the field of water management, all based on a long term engagement and rich history.

Czech Republic

Asociace pro vodu ČR
The Czech Water Association (CzWA)

EWA Council Representative
Martin Srb, PhD

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The Czech Water Association (CzWA) associates experts, companies and institutions wishing to contribute to the effective and sustainable development in the field of water management and water environment protection. CzWA came into being in 2009 by transformation of the Association of Wastewater Treatment Experts (AČE ČR) established in 1992.

Whereas the activities of AČE ČR focused mainly on the field of collection and treatment of municipal and industrial wastewaters and sludge and wastes treatment, the scope of CzWA is much broader covering all areas of water management targeting at the improvement of the surface and ground waters quality.

Social Media

Denmark

Danish Water Forum (DWF)

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Danish Water Forum, established in 2002, is a network organisation with a focus to promote knowledge sharing and cooperation across the Danish water sector, including government agencies, universities, vocational training institutes, sector institutes, consultants, water and wastewater utilities, business companies and individual water sector stakeholders.

Our members cover all aspects of the hydrological cycle from water resources management through water supply and wastewater treatment to protection of water resources and water-based ecosystems.

We aim at disseminating Danish water solutions globally to help in climate adaptation and fulfilling the SDG 6.

Social Media

SUOMEN VESIYHDISTYS RY
Water Association Finland

Finland

Suomen Vesiyhdistys ry – Water Association Finland

EWA Council Representative
Anne Liljendahl
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The Water Association Finland is a non-governmental body with the aim to improve and distribute knowledge and promote professional networking in Finland and abroad. The purpose of the association is to improve and disseminate knowledge and promote professional networking in Finland and abroad on hydrology, limnology, water ecology, fisheries, water supply, hydraulic engineering, water pollution control and water legislation.

Social Media

France

Association Scientifique et Technique pour l'Eau et l'Environnement (ASTEE)
Scientific and Technical Association for Water and Environment

Executive Director
Anne-Laure Makinsky

EWA Council Representative
Nicole Couder

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Created in 1905, ASTEE is the French scientific and technical association for water and waste professionals working on public services issues specific to the environmental field. It brings together key experts, researchers, scientists, practitioners, and representatives of public and private institutions working in different sectors of the environmental field. The association carries-out in-depth reflections on various methodological, technical, and regulatory aspects linked to the management of drinking water, waste, sanitation, and aquatic environments in France. Its mission is to build consensus, develop common references and recommendations, as well as produce and disseminate technical information. ASTEE has more than 3,800 members and has a network of 12 regional units located throughout the French territory to ensure the true consideration of local specificities and the dissemination of information.

Social Media

Germany

Deutsche Vereinigung für Wasserwirtschaft, Abwasser und Abfall
German Association for Water, Wastewater and Waste (DWA)

Executive Director
Dr. -Ing. Lisa Broß

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The DWA – German Association for Water, Wastewater and Waste is the technical-scientific professional association which brings together the specialists and managers of the water and waste management sector from municipalities, universities, engineering firms, government agencies and companies under one roof. The DWA formulates technical standards, contributes to standardization work, supports research, promotes training and further training, and advises politics, science and the economy. The DWA was established in 1948. It is nationally and internationally active.

Social Media

Hungary

Magyar Víz- és Szennyvíztechnikai Szövetség (MaSzeSz)
Hungarian Water Association

Secretary General
Bálint Rózsa

EWA Council Representative
Dr. Károly Kovács PhD (oec)

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The HWA is representing around 300 members of the Hungarian water-industry, utilities and research/education institutions.

We promote sustainability, cost recovery, "The Value of Water" by professional training, knowledge sharing and connecting stakeholders in the field of municipal water and river basin management.

Our main areas of activity is represented in workgroups as Education, Juniors, Value of Water (PR), Digital Water, Professional coordination.

We strive to find professional, innovative and dynamic ways to support our workgroups in their activities.

Luxembourg

Association Luxembourgeoise des Services d'Eau (ALUSEAU)
Luxembourg Association of Water Services

President
Georges Kraus

EWA Council Representative
Raymond Erpelding

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ALUSEAU is the national association of water services in the Grand-Duchy of Luxembourg, regrouping members of the drinking-water sector, the wastewater sector and other public actors active in water management. ALUSEAU is a politically independent and non-profit making association.

Challenging topics

1. Transposition of the new drinking water directive in national law
2. Following the ongoing discussions regarding the amendment / renewing of different water relevant EU-directives

Social Media

Montenegro

Association of Waterworks of Montenegro (AWM)

Executive Director
Mrs. Tijana Vojvodić

President
Mr. Milan Bulatovic

EWA Council Representative
Tijana Vojvodić

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The AWM is a nongovernmental and non-profit association (established in 1999.) dealing with the management and improvement of the water and wastewater environment. Our association thought brings together all Water Utility Companies (WUCs), Wastewater Treatment Plants (WWTPs) and Regional Water Company in Coastal region of Montenegro.

Our vision is to become a recognized national and European association in the field of Water Sector by bringing together all stakeholders form both, national and international level, with aim to enable environment and create bright future in this area.

Social Media

YouTube

National Members

Netherlands

Stichting RIONED

Executive director
Hilde Niezen

EWA Council Representative
Hilde Niezen

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Stichting RIONED was founded in 1986 as a non-profit organization that provides knowledge, does research and defines standards and data dictionaries for municipalities, companies and other specialists working in the field of urban water management.

Besides being a knowledge institute we also facilitate exchange and education. With inspiring sample projects and enthusiastic people we demonstrate the impact of our work for the society.

We inform the general public about the benefits of good sanitation and climate adaptivity, and the role they can have themselves.

We follow the development of new national or European policies and we provide the decisionmakers with advice. We cooperate with many scientific and governmental partners.

Social Media

North Macedonia

Association for Treatment of Water and Wastewater – ATW MK

President
Prof. Dr. Petko Pelivanoski

EWA Council Representative
Prof. Dr. Petko Pelivanoski

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The Water and Wastewater Treatment Association (ATW MK) is a non-governmental and non-profit association whose goals and tasks derive from the needs of its members and are in function of the development and advancement of practice and science in the area of the water and wastewater treatment.

ATW MK stimulates the monitoring of the modern development of science and practice in the field of water treatment; encourages the exchange of professional, engineering, and scientific ideas; encourages various forms of professional workshops, seminars, conferences; cooperates with international and domestic associations for the purpose of information exchange; organizes cooperation with competent state institutions on matters of interest for water treatment. ATW MK is a member of European Water Association (EWA) since 2020.

Norway

Norsk vannforening – Norwegian Water Association (NWA)

Chair
Elisabeth Elgsæter

EWA Council Representative
Harsha Ratnaweera

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The Norwegian Water Association (NWA) is an independent non-governmental and non-profit organisation dealing with the management and improvement of the water environment. The NWA provides a forum for discussion of key technical, scientific and policy issues on water covering both water resources and water quality. The object of the Norwegian Water Association is to promote good protection and a balanced use of water resources by disseminating information and promoting knowledge and debate on water-related issues. The activities of the Norwegian Water Association shall be characterized by a high level of expertise and commitment. The association shall be visible and recognized by all professional water-related communities, relevant authorities, and among the members of the association.

Social Media

Portugal

Associação Portuguesa de Engenharia Sanitária e Ambiental (APESB)

President
Prof. Lígia Costa Pinto

EWA Council Representative
Prof. José Saldanha Matos

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The Portuguese Association for Sanitary and Environmental Engineering (APESB) is a non-profit, scientific and technical association. APESB is a national body aiming, among others, to study, analyze and discuss aspects related with water supply, drainage, treatment and final disposal of wastewater and the collection, treatment and final disposal of solid waste, in order to contribute to the implementation of better, feasible and sustainable solutions. It provides up to date information on relevant topics to its members and actively promotes discussion forums via the regular edition of a peer-reviewed technical and scientific journal, in its annual events, and regular online seminar series.

Social Media

Romania

Romanian Water Association (RWA)

President
Dr. Ilie Vlaicu

EWA Council Representative
Dr. Monica Isacu

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Asociația Română a Apei

The Romanian Water Association (RWA) is a professional, non-profit and an employers' association that facilitates and promotes collaboration between its members in order to identify new sustainable and cost-effective approaches and solutions to improve the quality of water resource management, water supply and sewage treatment services, while aiming a holistic approach, integrating all water-related activities into broader concepts of sustainability, development and environmental protection.

RWA is important for connecting the vast community of water professionals, nationally and internationally – integrating the latest finds in the field of research and practice.

Thanks to its network of experts in research, practice, regulation, consulting, and production, RWA can address the unique expressions of global challenges within the country's communities, thus leading to the sustainability of the field.

Social Media

SERBIA

Serbian Water Pollution Control Society (SWPCS)
SRPSKO DRUŠTVO ZA ZAŠTITU VODA

Executive Secretary
Dr. Aleksandar Djukić

EWA Council Representative
Dr. Aleksandar Djukić

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Serbian Water Pollution Control Society (SWPCS) is a non-profit independent organisation of experts in water sector which was established in 1966. The main objective of the Society is to create and foster the network of leading water professionals through the provision of services and products to the members, including conferences, publications and support for member groups. In addition, to represent the views of members in the national and international forums aimed at advancing best practice in the sustainable water management.

ASOCIÁCIA ČISTIARENSKÝCH EXPERTOV SR

Slovak Republic

Asociácia čistiarenských expertov SR (AČE SR)
Association of the Wastewater Treatment Experts of the Slovak Republic

President
Prof. Ing. Igor Bodík, PhD.

Secretary
Dr. Peter Ševčík

EWA Council Representative
Dr. Zuzana Matulová

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The AČE SR is a non-profit association that englobes professionals and companies focused on wastewater treatment, sludge management and water protection. The association actively promotes the exchange and development of knowledge, professional networking and transmission of knowledge, through scientific conferences, publications, workshops, online meetings, academic lectures, expert services and other professional activities. AČE SR is firmly committed to continuously improve water quality standards and treatment processes towards a more sustainable common future.

Social Media

Slovenia

SLOVENSKO DRUŠTVO ZA ZAŠČITO VODA (SDZV)
Slovenian Association for Water Protection

President
Dr. Marjetka Levstek

Vice President
Prof. Dr. Mihael J. Toman

EWA Council Representative
Dr. Marjetka Levstek

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The Slovenian Association for Water Protection (SDZV) was founded in 1991 as a voluntary, independent and non-profit association. Its primary purpose is to develop awareness for the importance of water protection.

The association is a recognized and active partner for local communities and the state in the field of water protection. Its advantage is interdisciplinary knowledge, linking different sciences and objectivity of opinions.

The Association operates in the territory of the Republic of Slovenia and is connected with related societies and associations at home and abroad.

Social Media

Spain

Asociación para la defensa de la calidad de las aguas (ADECAGUA)

EWA Council Representatives
Antoni Ventura-Ribal

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The Asociación para la Defensa de la Calidad de las Aguas (ADECAGUA) started its activity in 1967 with the aim of being a reference framework and meeting point for all those interested in aspects related to the knowledge and improvement of water quality. Today it has more than 200 members and is the main Spanish association related to water quality management.

Social Media


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Switzerland

Verband Schweizer Abwasser- und Gewässerschutzfachleute (VSA)
Association Suisse des professionnels de la protection des eaux
Associazione svizzera dei professionisti della protezione delle acque
Swiss Water Association

Executive Director
Stefan Hasler

President
Anja Herlyn and Mauro Suà

EWA Council Representative
Mauro Suà

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The VSA is the association representing Swiss specialists working in the fields of wastewater treatment, urban drainage, sewerage, treatment of industrial and commercial wastewater and water pollution control management. For this area, the association defines the state of the technology and is the reference point for water protection.

The association enables experts to exchange technical know-how. Another task is the professional training of members and staffs of sewage treatment plants. The VSA is anchored in all three of Switzerland's linguistic regions – with offices in in Zurich, Lausanne and Bellinzona.

Social Media

Gesellschaft zur Förderung der Abwassertechnik e. V. (GFA)

(Organisation for the Advancement of Wastewater Technology)

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GFA (Gesellschaft zur Förderung der Abwassertechnik e.V.) acts as a service organisation for the DWA (Deutsche Vereinigung für Wasserwirtschaft, Abwasser und Abfall e.V.) and publishes journals on the working areas of the DWA – water and waste management. It promotes the fields of water management, wastewater and waste management in close co-operation with the DWA. The German Association for Water, Wastewater and Waste (DWA) is intensively committed to the development of safe and sustainable water and waste management.

As a politically and economically independent organisation, it works professionally in the fields of water management, wastewater, waste and soil protection. In Europe, the DWA is the association with the largest number of members in this field and occupies a special position thanks to its expertise in setting regulations, educating and informing experts and the public. The approximately 14,000 members represent specialists and managers from municipalities, companies, engineering offices, authorities and universities.

IFAT Munich

Messe München GmbH

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Description

The European Water Association is one of the official partner of IFAT Munich. IFAT is the world's leading network for environmental technologies: here, more than 2,900 exhibitors from all over the globe present their solutions for water, sewage, waste and raw materials management to around 119,000 international trade visitors. And with 48 percent of exhibitors and 49 percent of visitors coming from abroad, IFAT is also the most international trade event in the field of environmental technologies.

Spanning 270,000 square meters and thus occupying all 18 halls plus an extensive outdoor area of the Messe München trade fair center, half of the event is dedicated to the water and sewage sector and covers the whole spectrum from supply and recycling to disposal.

IFAT hence not only offers the ideal setting for top market players to find out about latest trends and challenges in the various markets, but also to discuss strategies for making the best possible and sustainable use of the 'blue gold'. Strengthening the circular economy plays an essential role here. It is about keeping resources circulating as well as using them sustainably and repeatedly. Circular economy ultimately means a raw material shift. And in view of the increasing water shortage worldwide – partly caused by climate change – it is more important than ever to make maximum use of this resource.

The next IFAT will take place from May 13 to May 17, 2024 in Munich, Germany.

Further information is available at www.ifat.de

Social Media

we clean water

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VTA – the No. 1 for innovative environmental Engineering

Since more than 30 years, the VTA group is known as a pioneer in wastewater technology. The company is active in more than 60 countries around the world. The scope of the VTA group is centered at wastewater treatment plants – maximum efficiency combined with minimum ecological burden. This is our aspiration, this is our driving force. With two decades of gained experience, research work and partnerships, our company holds more than 110 patents on high-tech products for wastewater treatment! 320 employees in Austria and on the international level are currently taking care of our partnerships, technological maintenance and the success of our company. VTA products are used in a wide variety of sectors, ranging from municipal wastewater plants up to paper, food, textile, drilling, disposal and automotive industry. Our unique characteristic is based on our long-standing experience, which allows us to offer customer – oriented solutions with sustainability and integrity. The VTA Nanofloc® – one of our flagship products, is based on nanotechnology and opened the door to a new dimension of wastewater technology. The use of nanoparticles ensures rapid flocculation, sedimentation and stable operation of sewage plants. Another business area of VTA is developing innovative water engineering technology. For example sludge disintegration, microturbines or dosing systems. Our technology division provides solutions for all kind of waste water treatment. Profound expertise, sustainability, innovation and flexibility combined with full-service support for our customers – this is VTA!

Social Media

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About Xylem

Xylem is a leading global water technology company committed to solving the world's critical water, wastewater, and water-related challenges through technology, innovation, and expertise. We serve customers across utility, industrial, commercial, and residential markets. Our 23,000 global colleagues deliver solutions to customers and communities in 150+ countries around the world. In 2023, we generated combined pro forma revenue of $8.1 billion. In Europe, our 8,400 employees work across 21 countries from more than 15 manufacturing sites, delivering efficient and sustainable water technologies that reduce life cycle costs and contribute to environmental sustainability.

Our approach and vision centers on our belief that by providing innovative and reliable technology, solutions, services and expertise, we can help our customers achieve their sustainability goals and advance sustainability in communities across the globe. By deploying our innovative technologies and solutions, our customers mitigate water scarcity, reduce water losses and optimize water system assets to improve water affordability. Other solutions prevent stormwater pollution, predict and protect against flooding, and lower greenhouse gas emissions to help communities and their water systems become more resilient to the impacts of climate change and other challenges. We are a leader in the digital transformation of water, enabling our customers to leverage data, analytics and decision intelligence to optimize the way they manage water and realize bold water, energy and cost savings for the communities they serve.

Social Media

Aquademica Foundation

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Aquademica is a non-profit organization in Romania active in the environmental, water and waste water sector. Being an information and knowledge center, the Foundation promotes professional development in the environmental field and offers itself as a networking platform supporting specialists, professional organizations and companies.

Social Media

Bentley Systems

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Bentley develops innovative software solutions for the enterprises and professionals who design, build, and operate the world's infrastructure – advancing both the global economy and the environment for improved quality of life. In particular, Bentley has helped water utilities, governments, and engineering firms around the world demonstrate excellence and cutting-edge digital advancements in water, wastewater, and stormwater infrastructure.

Social Media

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Emile Egger & Cie SA is a medium-sized and independent Swiss industrial enterprise founded in 1947 with a concentration on the development and manufacture of centrifugal pumps and flow control valves.

Egger is present in many areas of wastewater treatment from pumping raw sewage, sand and water mixtures, primary and secondary sludge to digested sludge. The Iris® diaphragm control valves also offer the perfect solution for precise control of liquids and gases.

Social Media

Emschergenossenschaft / Lippeverband (EGLV)

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Emschergenossenschaft / Lippeverband (EGLV) is the largest water association in Germany. In a catchment area of around 4,100 km2 with a population of around 3.6 million, EGLV is responsible for wastewater treatment, watercourse maintenance, flood protection and polder management. Together with its municipal and industrial members and the mining industry, the Emschergenossenschaft has implemented the generation project Emscher Reconstruction at a cost of around 5.5 billion euros and freed the Emscher from wastewater after 170 years.

Social Media

Endress+Hauser Group Services AG

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Endress+Hauser is a global leader in measurement and automation technology for process and laboratory applications. The family company, headquartered in Reinach, Switzerland, achieved net sales of more than 3.3 billion euros in 2022 with a total workforce of nearly 16,000.

Our devices, solutions and services are at home in many industries. Customers thus use them to gain valuable knowledge from their applications work economically and at the same time protect people and the environment.

Social Media

Environmental and Public Health International

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Environmental and Public Health International (EPHI) provides premium advisory services to clients throughout the world to help them resolve critical drinking water challenges. Our premium advisory services include:

Webinars on the Flint, Michigan Lead in Drinking Water Crisis. A crisis that has impacted many lives and has resulted in billions of dollars in lawsuits.

Critical Drinking Water Problem-Solving Service and emergency response assistance.

ERFTVERBAND

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The Erftverband is a non-profit organisation under public law with a focus on a healthy environment and the public interest. The organisation is financed by fees paid by its approx. 290 members. The Erftverband with its 600 employees reconciles the different water-related interests of regional stakeholders in a responsible and sustainable way.

Social Media

Hach Lange GmbH

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HACH is part of the Veralto Corporation, an US based company with its headquarters in Waltham, MA, USA. Veralto is a ~$5 leader in water and product quality.

Our Mission: Ensuring water quality for people around the world.

Our Vision: We make water analysis better – faster, simpler, greener and more informative – via unsurpassed customer partnerships, the most knowledgeable experts, and reliable, easy-to-use solutions.

Social Media

HUBER SE

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HUBER SE is a worldwide active company in the field of water, wastewater and sludge treatment.

At our headquarters in Berching, Germany, 900 employees develop and manufacture products, manage projects and develop system solutions for municipalities and industries. With more than 55,000 installations worldwide HUBER is one of the internationally leading companies in this field. HUBER's adapted treatment processes contribute to the solution of the global water problems.

Social Media

Hungarian Water Partnership Nonprofit Kft.

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E-mail: office@waterpartnership.hu
Web: www.hungarianwaterpartnership.hu

Being a non-profit professional organisation, Hungarian Water Partnership (HWP) is a cluster of Hungarian-owned, export-oriented water industry companies and enterprises with connection to the area. Being a non-profit professional organization, Hungarian Water Partnership serves as first point of contact for foreign partners interested in doing business with Hungarian companies. HWP helps members companies export and participates in water industry knowledge & best practices exchange globally.

Social Media

Hungarian Association of Environmental Enterprises

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Web: www.kszgysz.hu/en

The Hungarian Association of Environmental Enterprises is a non-profit advocacy organization, established 30 years ago. The 250 members are key economic operators of the Hungarian green industry with high expertise in a wide range of activities.

They are companies providing environmental services, manufacturers, academic institutes and green NGOs, who work to observe and enforce the local, regional and global goals and priorities of environment and nature protection.

Social Media

IDEXX Laboratories Inc

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IDEXX Water is a global expert in water microbiology testing, providing innovative solutions that ensure the safety of drinking water and other water supplies for over 2 billion people in more than 175 countries around the world. Our water testing technologies are in use on all seven continents and on the International Space Station.

Social Media:

International Association of Water Service Companies in the Danube River Catchment Area

IAWD - International Association of Water Service Companies in the Danube River Catchment Area

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Grabnergasse 4-6
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IAWD facilitates the voice of the water service sector in the Danube region acting as a regional platform for information exchange, peer to peer networking and knowledge sharing. Established in 1993, IAWD has built a strong network of cooperation in the region's water sector, engaging in the provision of safe and reliable water services for all in the Danube region.

Social Media

KOCKS INGENIEURE

KOCKS CONSULT GMBH

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Comprehensive Engineering Solutions worldwide since 1946. Consulting, Planning and Project Management in the sectors Water, Environment, Civil Engineering and Transport.

Luxembourg Institute of Science and Technology

Maison de l´innovation
5 Avenue des Hauts-Fourneaux
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The Luxembourg Institute of Science and Technology (LIST) is a mission-driven Research and Technology Organisation (RTO) that develops advanced technologies and delivers innovative products and services to industry and society. These innovations can also be used to solve a number of societal challenges, particularly in the areas of the environment, security, education and culture, sustainable development, as well as the efficient use of resources.

Social Media:

L-Recycling

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L-Recycling builds and operates sewage sludge upcycling plants for the recovery of phosphorus in the form of biochar. It is part of Liechtenstein Group, a group of companies owned by the Princely House of Liechtenstein.

Social Media:

MedEcoTest SIA

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SIA MedEcoTest develops, produces and customizes test kits – simple tools for on-site express chemical analysis of water and soils samples for professional and personal use.

MedEcoTest kits can be used for:

- Natural and drinking water analysis;
- Environmental samples and wastewater analysis;
- Agriculture, farming, or hydroponics related analysis;
- Educational and citizen science projects.

MOLEAER

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Social Media

PIPELIFE

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We offer solutions for your infrastructure. We are water and energy managers. Together, we relieve our customers with integrated system solutions and simplify the planning, organisation and installation of complex infrastructure systems.

Social Media

SIEMENS AG

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Siemens AG is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 170 years. For the water and waste water industry Siemens provides comprehensive solutions from a single source: from process instrumentation, industrial communication, and power supply systems to drive and protection technology as well as automation and process control technology.

Social Media

Société Publique de la Gestion de l'Eau (SPGE)

SPGE s.a. Société Publique
de Gestion de l'Eau
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The Société Publique de Gestion de l'Eau (SPGE, Public Water Management Company) is a public limited company set up by the Walloon Region in 1999. Its main mission is to take care of the coordination and the financing of the water sector in Wallonia. Together with the other water collaborators, it primarily deals with wastewater sanitation (from the sewer to the water treatment plant) and catchment protection.

Stadtentwässerungsbetriebe Köln, AöR

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Web: www.steb-koeln.de

We see ourselves as a service provider in the water industry and form an essential component of public services.

Our main tasks are wastewater disposal, flood prevention and the management of flowing waters and park ponds in the Cologne urban area – we shape the water cycles in the city. Sustainability, quality, reliability and economic efficiency determine our actions.

Social Media:

Teknodepurazioni Aquae s.r.l.

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Teknodepurazioni Aquae has been working for more than 30 years in the field of purification and water treatment, bringing in dowry a long and solid experience in the field.

TIROLER ROHRE

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Tiroler Rohre develops, manufactures and markets high-grade systems made from ductile cast iron for the transport of water. Furthermore, we manufacture general-purpose pile systems for deep-foundation engineering. We are making a major and lasting contribution to the construction and operation of high quality, water supply and wastewater-disposal infrastructures.

Social Media:

YouTube

Unie van Waterschappen
Dutch Water Authorities

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Dutch Water Authorities represents the interests of 23 water authorities (Waterschappen in Dutch). The water authorities are decentralised functional governments, responsible for regional water management (quantitative and qualitative), flood defence and waste water treatment.

Social Media:

Association of Dutch Water Companies (Vewin)

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Vewin is the national association representing Dutch water supply companies. Back in 1952 it was founded; more than 200 water supply companies were active in the Netherlands. Today there are about 10, which is a change that has altered the association's essential task.

Social Media:

WILO SE

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Wilo Group is one of the world's leading premium providers of pumps and pump systems for the building services, water management and industrial sectors.Wilo has around 8,000 employees worldwide. Our innovative solutions, smart products and individual services move water in an intelligent, efficient and climate-friendly manner. We are making an important contribution to climate protection with our sustainability strategy and in conjunction with our partners.

WTE Wassertechnik GmbH

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WTE Wassertechnik is one of the leading German suppliers for municipal and industrial water management. For more than 30 years, more than 20 million people in 18 countries have relied on our sustainable knowledge for wastewater disposal, water supply and sewage sludge treatment.

Social Media

Corporate Members

Wupperverband

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Wupperverband is a public body responsible for water volume management and water quality within the Wupper catchment area. Wupperverband members are town councils, local and district authorities, municipal water suppliers, effluent disposal businesses and trade and industrial organisations in the Wupper area. Wupperverband operates 14 reservoirs, 11 wastewater treatment plants, numerous storm water tanks and flood control reservoirs and manages around 2,000 kilometres of streams and rivers.

Social Media

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„zahnen water engineering performance“

We combine our know-how in electrical – mechanical and process engineering, standardisation and digitalisation.

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Thanks to decades of experience, we have developed into a competent solution provider for innovative processes and products in the (waste)water sector.

Social Media

Aalto University

School of Engineering
Department of Built Environment
Water and Environmental Engineering Research Group

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Aalto University is where science and art meet technology and business. Our campus is located in Espoo, Greater Helsinki, Finland. Aalto University's purpose is to shape a sustainable future. We spark the game changers of tomorrow, and renew society with research-based knowledge, creativity and an entrepreneurial mindset. All our work is guided by the values of the university: responsibility, courage, and collaboration. The Aalto University community is made up of 12 000 students, 400 professors and close to 4 000 other faculty and staff.

Social Media

Aarhus University – Department of Environmental Science

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The Department of Environmental Science at Aarhus University focuses on multidisciplinary research supporting high quality scientific advice for policy and sustainable development. Our expertise spans water-related issues such as contamination and treatment, especially as part of the university's Centre for Water Technology, WATEC. We work with groundwater, wastewater, glaciers, marine and freshwater, with research covering environmental chemistry, microbiology, cutting edge non-target screening, and socioeconomic analyses.

Social Media

Research Members

Aarhus University, HydroGeophysics Group, Geoscience

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Based at Department of Geoscience, Aarhus University, the Hydro-Geophysics Group does research on the highest level with the overall aim to develop methods for knowledge-based mapping and modelling of water resources for the benefit of society.

HGG combines geophysical instrument development with advanced data processing and inversion algorithms and hydrological modelling.

Social Media

Center for Water and Environmental Research (ZWU)

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The Centre for Water and Environmental Research (ZWU) at the University of Duisburg-Essen (UDE) is an interdisciplinary research centre with more than 290 members of the UDE from natural sciences, engineering, economics, medical and social sciences (>30 chairs from 6 faculties), affiliated institutes, research institutions, regional water associations and industry in the region

Social Media

CERIS, Civil Engineering Research and Innovation for Sustainability

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The mission of CERIS is to create and disseminate scientific knowledge and to promote innovation in the Built and Natural Environment sector through the active involvement in fundamental and applied research, at both national and international levels, and to enhance higher education and research training. To accomplish its mission, CERIS operates under a clear set of objectives and organizes its activity in thematic strands selected according to national and European policy guidelines.

Social Media

CITEEC, Universidade da Coruña

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The Center for Technological Innovation in Building and Civil Engineering (CITEEC) is a research center of the Universidade da Coruña (UDC) in multiple fields and sectors included in civil engineering, such as urban water systems. CITEEC aims to improve and intensify research, knowledge transfer an innovation with a sustainable and innovative perspective, based on experimental analysis complemented by the expertise of its affiliated researchers.

Social Media

Research Members

IKT – Institute for Underground Infrastructure gGmbH

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IKT – Institute for Underground Infrastructure is a neutral, independent non-profit institute, and works on solving practical and operational issues concerning underground sewers, pipes and other conduit engineering, its primary focus being on sewer systems. The institute conducts research projects, material testing, CIPP liner testing, consultations and seminars on the construction, operation and renovation of underground infrastructures.

Institute of Environmental Engineering– Institut für Siedlungswasserwirtschaft (ISA) / RWTH Aachen University

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ISA is part of RWTH's Faculty of Civil Engineering and has been focusing on the field of environmental and water protection for many years now. About 25 academic staff members work on diverse research and development activities in interdisciplinary cooperation. Their work focuses on the areas of wastewater discharge, wastewater treatment and waste management, particularly resource recovery from sludge. Water reuse is an emerging research area.

Social Media

INSTITUTO DE HIDRÁULICA AMBIENTAL DE CANTABRIA (IHCantabria)

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Joint research centre created in 2007, currently employs 180 experts specialized in basic and applied research based on scientific excellence, training and technology transfer focused on the sustainable management of the water cycle: integrated management of river, coastal and marine systems, hydraulic engineering, climate change, numerical and physical modelling of water-related processes, water quality, and coastal and freshwater ecosystems.

Social Media

University of Duisburg-Essen, Institute of Hydraulic Engineering and Water Resources Management

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The Institute focuses on river continuity and restoration measures of small creeks and rivers, digital twins and nowcasting systems in the water sector, sensor and measurement technology development, water demand and flood forecasting and optimization of water management strategies. Additionally, the institute operate facilities for teaching and research. These include a teaching lab and a research lab within a 480 sqm experimental hall, featuring a tiltable flume, teaching modules, and various water supply/pumping capabilities.

Social Media

IVL Swedish Environmental Research Institute

Magnus Rahmberg
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IVL is an independent, non-profit research organisation founded in 1966 by the Swedish government and industry to develop solutions to environmental problems at national and international level. With around 400 employees, it is a leading institute for applied environmental research and consultancy services. IVL has a strong water expertise including drinking and wastewater data analysis, process-modeling and optimization, and wastewater pilot tests.

Social Media

JOANNEUM RESEARCH Forschungsgesellschaft mbH LIFE – Insititute for Climate, Energy and Society

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Web: www.joanneum.at/life

The LIFE – Institute is one of the leading research institutes for key issues relating to climate change, climate risks and transformation research towards a climate-neutral and climate-resilient society. Its more than 40 researchers have a comprehensive overall system understanding of the complex correlations in the fields of climate, energy and society in economic, technological, ecological, social and political terms.

Social Media

KU Leuven

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bwk.kuleuven.be/hydr/index_html

KU Leuven is one of Europe's eldest, highest-ranked and most renowned universities. According to Thomson Reuters, it is the most innovative university in Europe, and the 7th most innovative university worldwide. KU Leuven has different research groups performing fundamental and applied research in different aspects of water-related process knowledge, management and technology.

Social Media KU Leuven:

Patrick Willems:

Mineral and Energy Economy Research Institute of the Polish Academy of Sciences (MEERI PAS)

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Research and development center dealing with mineral and energy management. The special interest of Division of Biogenic Raw Materials are topics related to water and sewage in circular economy, incl. water reuse, recovery of nutrients from waste, policy recommendations, material flow analysis, life cycle assessment, monitoring framework and environmental education.

Social Media

Norwegian University of Life Sciences

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NMBU is the leading producer of graduates in Water and Wastewater Technologies in Norway. It has 6400 master and PhD students and 1900 staff members and modern technical, analytical and teaching facilities. NMBU's Smart Water Group specializes in process surveillance and advanced water treatment. The group leads a Global Educational and Research Network "Water Harmony", which at presents have 82 universities from 51 countries.

Politecnico di Torino, Department of Environmental, Land and Infrastructure Engineering (DIATI)

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First Italian School for Engineers, from 1859 Politecnico di Torino has been training engineers, and architects involved in all societal changes and innovations. Nowadays ever-changing global scenario, Universities need to evolve in order to produce their tangible impact. PoliTO thus evolved into an inclusive University playing a key role in innovation and lifelong learning.

Social Media

Technical University Munich, Chair of Hydrogeology

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The chair of Hydrogeology at TUM works on numerical underground modelling, innovative monitoring systems and geopotential assessments and management. In many projects, the chair assessed geopotentials of regions/cities, developed user-focused approaches and groundwater management tools and investigated the thermal and sustainable use of groundwater. The chair acts as consultant for authorities and is member of strategic boards fostering knowledge exchange of from research to policy

Social Media

University of Jan Evangelista Purkyne/Institute for Water Diplomacy and Hydropolitics (Rivalis)

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Rivalis is designed as an interdisciplinary research institute analyzing non-traditional water challenges in Eurasian region. Currently, our team is focusing on the EU water diplomacy and political impact assessment of the controversial water project. Our goal is to provide feasible conflict resolutions for the international water disputes, facilitate water citizen science and build foundation for water diplomacy in Middle-Eastern Europe.

Social Media

Universität der Bundeswehr München

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Teaching and research activities of the chair of sanitary engineering and waste management are focused on protection of health, water and other resources. The chair's mission is knowledge development in the field of sanitary engineering with a wide range of research interests from drinking water supply to wastewater and sludge treatment.

Universität Luxemburg

Prof. Dr.-Ing. Joachim Hansen
Chair for Urban Water Management
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web: www.uni.lu/fstm-en/research-groups/chair-for-urban-water-management

Research activities of the Chair for Urban Water Management (UWM) at University of Luxembourg cover the following areas: Energy efficiency of the Urban Water System, development of sustainable wastewater treatment technologies, Decision support systems and application of control strategies to minimize water pollution, Valorisation of products from wastewater and sewage sludge. In recent years, the Water Group carried out numerous transnational and interdisciplinary research projects with partner from praxis and academia.

Social Media

University of Palermo, Department of Engineering

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The Department manages and supports teaching, research and the so-called third-mission activities. It involves more than 260 researchers and is divided into 6 Sections:

- Chemical, Biochemical and Materials Engineering, Hydraulics
- Computer Engineering
- Structural and Infrastructural Engineering
- Mechanics, Manufacturing, Management & Aerospace
- Electronics - Physics - Mathematics
- Energy

More than 6500 students follow 16 Bachelor's and 13 Master's degree courses as well as 6 PhD courses.

University of Salerno
Sanitary Environmental Engineering Division (SEED)

Department of Civil Engineering
Professor Vincenzo Naddei, Ph.D
Director of the Sanitary Environmental Engineering Division (SEED)
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Sanitary Environmental Engineering Division (SEED) of Department of Civil Engineering develops, since 1992 at University of Salerno, its research, teaching and consulting activities in the field of Environmental Engineering, nowadays directed by professor Vincenzo Naddeo.

In the National ranking made by ANVUR (Italian National Agency for the Evaluation of the University and Research System) SEED meets the highest standards according to the quality of the research in the field of Environmental and Sanitary Engineering.

Social Media:

University of Sheffield

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The Sheffield Water Centre at the University of Sheffield is an interdisciplinary water research centre, dedicated to continuing the University of Sheffield's highly collaborative and innovative approach to solving major challenges in the water sector.

University of the Aegean

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The University of the Aegean was founded in 1984. The, then-called, Department of "Natural Environmental Sciences" was one of the University's first departments. In 1989, the Department was renamed into "Department of Environment" and in January 2004 it joined, alongside the Department of Marine Sciences, the University's newly established School of Environment. The main objectives of the Department of Environment main mission is educate and carry out research into a wide range of environment-related topics such as Ecology, Economics, Education, Politics, Engineering and Pollution.

Social Media:

Research Members

University of Urbino „Carlo Bo“

Prof.-Dr.-Eng. Fabio Tatàno
Sanitary-Environmental Engineering
Department of Pure and Applied Sciences (DiSPeA)
– Environmental Section
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The University of Urbino dates back to 1506 and is located in a magnificent Renaissance city, in the Unesco World Heritage, offering students and scholars a wide range of courses and research opportunities. Specifically, the teaching and research activity in the water related environment is promoted at the DiSPeA Department as a multidisciplinary approach in the key areas of Chemistry, Physics, Geology, and Environmental Engineering.

Social Media

VIA University College

Research Centre for Built Environment,
Climate, Water Technology and Digitalisation
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We carry out applied research within sustainable construction, energy, water and intelligent digitalization. We are a proud partner within the EU research framework and contribute as a UNESCO institution for sustainable development.

Our research focuses on developing sustainable solutions to environmental and climate challenges. We work to ensure that our knowledge is made available to public and private partners as well as to our students.

Social Media:

Cooperation Organisations

ASEM

Water Resources Research and Development Center (ASEMWater)

Chairperson
Mr Liu Yanhua; CN

Vice Chair among others:
Károly Kovács, HU

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E-mail: asemwater@asemwater.org
Web: www.asemwater.org

Founded in China, ASEMWater is a permanent research and development organization in water science and technology cooperation under the framework of ASEM mechanism. Being a regional and a public non-profit international organization specializing in S&T cooperation, ASEMWater expects to unite related governments, universities, institutions and high-tech enterprises to promote sustainable development in Asia and Europe through S&T collaboration and capacity improvement in water resources management.

IWA

International Water Association

Export Building, First Floor
1 Clove Crescent
London E14 2BA | United Kingdom

Phone: +44 207 654 5500
Fax: +44 207 654 5555
E-mail: water@iwahq.org
Web: www.iwa-network.org

The International Water Association is the network of water professionals striving for a world in which water is wisely, sustainably and equitably managed.

Drawing exceptional professionals from over 140 countries, the membership of the International Water Association (IWA) brings together scientists, researchers, technology companies, and water and wastewater utilities."

Social Media

JSWA

Japan Sewage Works Association

Suisui Building
2-19-12 Uchikanda
Chiyoda-ku
Tokyo 101-0047
Japan

E-mail: y.matsumiya@ngsk.or.jp
Web: www.jswa.jp/en/jswa-en

JSWA started its operation in 1964 to achieve clean water environment by representing wastewater utilities in Japan. Currently, around 1500 public utilities are providing wastewater service to their citizens. JSWA's membership includes not only the utilities but also the companies and the individuals who support the JSWA's mission. JSWA acts to have dialogues with regulators and politicians, publish standards and guidelines, raise the awareness of the importance of wastewater services among citizens, inspect sewer products for the utilities' procurement, and provide educational opportunities to the industry professionals.

WEF

Water Environment Federation

601 Wythe Street | Alexandria, VA 22314 | USA

Phone: +1-703-684-2400
Fax: +1-703-684-2492
E-mail: lsukkariyyah@wef.org
Web: www.wef.org | www.weftec.org

The Water Environment Federation (WEF) is a not-for-profit technical and educational organization of more than 30,000 individual members and 75 affiliated Member Associations representing water quality professionals around the world. Since 1928, WEF and its members have protected public health and the environment. Our mission is inspiring the water community in pursuit of human and environmental well-being and a vision of a "Life free of water challenges".

Social Media

EM80, pixabay

Value of membership

Membership registration

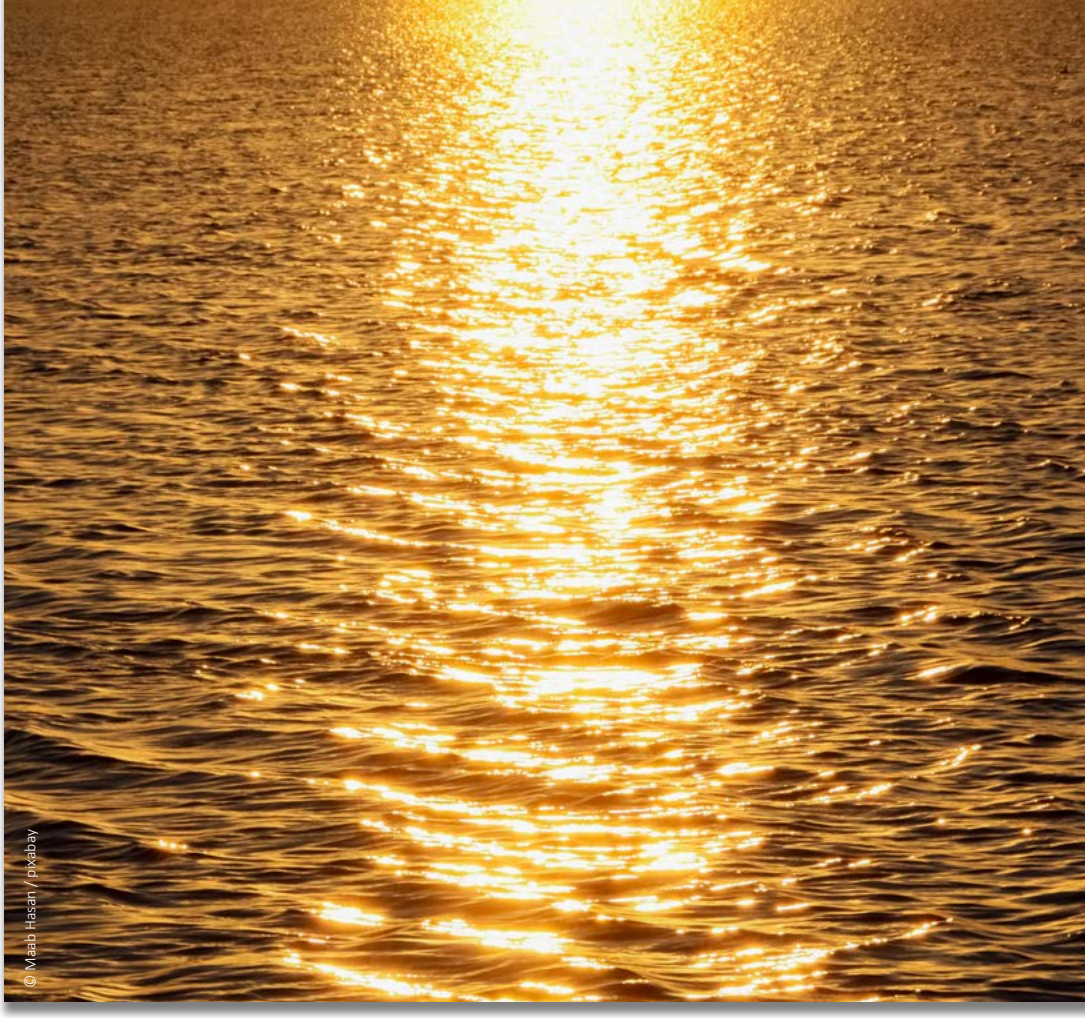
Value of membership

Become part of the network!

EWA's members reflect the professional and European geographic diversity of the Association. EWA consists of 23 European leading professional organisations in their respective countries, each representing professionals and technicians for wastewater and water utilities, academics, consultants and contractors as well as a growing number of corporate member firms and enterprises. EWA thus represents about 50,000 professional individuals working in the broad field of water and environmental management.

The EWA offers different type of membership: National Membership, Sponsor Membership, Corporate Membership and Research Membership. Become part of the network now!

As a **National Member**, you will receive the latest information and technical papers from the European Commission, information on the preparatory work for European standards from the CEN Technical Committees, technical information about the EWA member's countries and their national associations, assistance and support in the organization of conferences as well as their promotion. Members will also benefit from co-operation with other international associations such IWA (International Water Association), WEF (Water Environment Federation), EUREAU (European Union of National Associations of Water Suppliers and Waste Water Services) and JSWA (Japan Sewage Works Association). Our members can also participate and contribute to the technical and scientific work and other activities organized by the different Committees and Task Groups. The membership always evolve and we look forward to your contribution.



The advantage to become a **Corporate Member** is a more evident exposure of your membership and the opportunity to participate in the governance of the EWA. You will receive information about European legislation and standardisation in the water sector. Participate in interesting, up-to-date and high- focused conferences and workshops about European water issues. Get in contact with water professionals from various fields and countries, including the Central and Eastern European Countries, at conferences, workshops, and EWA's Annual Meetings. You can also develop contacts with the European Commission and the European Environment Agency. By being a member, you can work together with other experts to influence the European water agenda, legislation and standardization in EWA's European Technical and Scientific Committee (ETSC) and its Working Groups.

Make yourself known and join the EWA.

The EWA invites research institutions to join the organisation as a **Research Member**. By being a member, you, as an institution are given a platform for research and innovation in the water sector. You will have access to information from Brussels; you expand your network with the help of the EWA! Knowledge transfer will enhance all stakeholders in the water cycle.

The relationship with EWA's scientific basis has always been strong. The EWA working groups and scientific committees connect science with technology. But we would like to strengthen this relationship by giving the researchers a voice within the organisation to show their scientific research and transfer their findings and apply the outcomes of the research to the European water sector. Research Membership of the EWA is open to any non-profit making research unit, such as university, research institution, department, laboratory, or any another appropriate unit, in the field of water. We look forward to meeting you.

You can find more information on all of our membership offer and price on our website:
www.ewa-online.eu/membership.html

Click here to become a member

I would like to receive more information

EUROPEAN WATER ASSOCIATION

Imprint

Published and distributed by:
European Water Association
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EWA, Hennef