

## CONFERENCE PROGRAMME

### NORDIC WASTEWATER CONFERENCE AARHUS, 10-12 OCTOBER 2017

Leading Nordic event for water professionals – experts and practitioners, managers and operators: utility staff, city planners, researchers, engineers, advisors and others with an interest in wastewater management and climate change adaptation in the Nordic region. Special focus this year on wastewater management in the Baltic Sea Region.



DANVA, SAMORKA, FIWA, Svenskt Vatten, Norsk Vann and IWA invite all water professionals with an interest in wastewater, sewage systems and climate change adaptation to **join us at NORDIWA 10 – 12 October 2017**



# Welcome to Aarhus

- Second largest city in Denmark – the “capital” of Jutland and European Capital of Culture 2017
- Mentioned in World Energy Outlook 2016 for its leading wastewater treatment plant Marselisborg Renseanlæg. A WWTP that demonstrates the ability of the water sector to become energy neutral and beyond.
- Renowned for outstanding integrated solutions, where water management, and the opening of Aarhus River to the public, contributes to urban liveability
- A vibrant mix of youthful energy and a blast from the past, selected as a Top Destination – Best in Europe 2016 by Lonely Planet and praised by visitors including Tripadvisor for the city’s atmosphere and world-class museums including AROS – Museum of modern art, The Old Town and Moesgaard – museum of ancient history



# Who will attend

Participants in the NORDIWA conferences are water professionals – experts and practitioners. NORDIWA is an unique meeting place for utility staff, city planners, researchers, engineers and others with an interest in wastewater management and climate change adaptation in the Nordic region.



**Mayor of Aarhus,  
Jacob Bundsgaard**

We look forward to welcoming all of you to Aarhus for the Nordic Wastewater Conference 2017. In Aarhus we view water as a resource that supports our efforts to create a greener and bluer city – a city with plenty

of opportunities for healthy activities in everyday life. Liveability, open spaces, recreational areas and landscapes within reach are indispensable elements of our efforts to adapt Aarhus to climatic change.



**CEO of Aarhus Water,  
Lars Schrøder**

Aarhus Vand aims to be among the most advanced water companies in our region. Visitors get a chance to see this for themselves on technical tours at NORDIWA for instance when going to Marselisborg Wastewater Treatment Plant. This plant is in fact a power station setting new technological and operational standards for energy production from wastewater. Visitors can also experience the results when taking a walk along Aarhus River, re-opened to the public thanks to improved water quality.



**CEO of DANVA,  
Carl-Emil Larsen**

Sharing knowledge among the Nordic countries has taken place at NORDIWA conferences since 1989. Learning from advanced water companies with high ambitions and standards gives us all an opportunity to improve our solutions for the benefit of utilities and communities. This will help us all in taking water management to the next level and develop world class solutions in the Nordic region.



**CEO of Svenskt Vatten,  
Anna Linusson**

It is time to influence political leadership and consider the whole picture. The challenge of emerging substances cannot be solved only with end of pipe solutions. Focus on producers' responsibility is needed. If we want green pharmacy and eco design, we should reward this by making it long-term profitable. I hope the conference in Aarhus will contribute to a more proactive approach on this issue.

# Conference programme NORDIWA 10 – 12 October 2017

## Four main topics

**NORDIWA presents a varied and interesting conference programme with four main topics:**

**1. New approaches to Wastewater treatment – Plants, Processes and Circular Economy**

**2. Sewer systems – models, management and integrated approaches**

**3. Adapting to consequences of a changing climate**

**4. Cross-cutting topics**

## Conference elements are:

- **Plenary sessions** with presentations and limited room for discussion. These sessions will provide overview and inspiration for the coming days.
- **Conference sessions** with in-depth knowledge about projects and findings, but with little room for discussion.
- **Poster sessions** with quick presentations and room for further discussions for both posters and poster presentations. The subjects of the poster sessions are coordinated with the conference sessions, and posters related to the subject will be shown at the conference sessions.
- **Workshops** facilitate knowledge sharing across countries in the Nordic and Baltic Sea region and across disciplines such as practitioners, researchers and authorities.

There is special focus on water management in the Baltic Sea region and, as a part of the conference, workshops and events are organised by and for Young Water Professionals.



# 10 OCTOBER 2017

10.00-11.00	Arrival and registration				
11.00-13.00	<b>Opening session</b> Centralværkstedet				
11.00-11.30	<b>Welcome to NORDIWA:</b> Drivers for innovation – The development in the water sector in the last 10 years, Carl-Emil Larsen, CEO, DANVA				
11.30-12.00	<b>The Challenges:</b> Involvement of the Polish water sector in the improvement of the Baltic Sea, Klara Ramm, Ph.D, Expert of the Chamber of Commerce Polish Waterworks				
12.00-12.30	<b>The Solutions:</b> IWA activities promoting UN Sustainable Development Goals and securing clean water, adequate sanitation and sustainable cities				
12.30-13.00	<b>The Actions:</b> Cooperation to improve water management in the whole Baltic Sea region. Björn Grönholm, Head of Secretariat, Union of Baltic Cities, Sustainable Cities Commission				
13.00-14.00	Lunch at Centralværkstedet				
14.00-14.20	<b>Future WWTP</b> Centralværkstedet	<b>Nordic Innovation (WS)</b> Lokale A – Comwell	<b>Water reuse (WS)</b> Lokale B – Comwell	<b>Urban Solutions (WS)</b> Lokale C – Comwell	<b>Renewal and maintenance (WS)</b> Lokale D – Comwell
14.20-14.40	<b>Roadmap to 153% energy self-sufficiency at WWTP</b> Per Overgaard Pedersen, Aarhus Vand A/S	<b>Six guiding principles for radical innovation of WWTPs</b> Mikkel A. Thomassen, Smith Innovatiom	<b>Converting wastewater into fertilizing irrigation</b> Niels Mikkelsen, Minor Change Group Aps <b>Storm water replaces ground water for industrial wash.</b> Christian Lundgaard Jensen, NIRAS <b>Recovery of water resources from wastewater</b> Herman Helness, SINTEF <b>Sequential batch passive aeration greywater treatment</b> Marina Bergen Jensen, Univeristy of Copenhagen <b>Water management, climate adaptation and reuse of rainwater</b> Carsten Fjorback, COWI	<b>Exit Utopia – Enter The Climate Laboratory Of Denmark</b> Helle Baker, The Climate City, Middelfart Wastewater Utility <b>How climate change can develop the city</b> Esben Ravn Iversen, NIRAS <b>Planning for the future through a Masterplan approach</b> Anders Skovgård Olsen, Krüger A/S <b>How climate adaptation redesigns cities</b> Astrid Kock Grusgaard, Rambøll <b>Experiences with Nordic urban climate change adaptation</b> Presentations from Norway, Iceland, Finland and Sweden	<b>Pipe Inspection</b> Thomas B. Moeslund, Aalborg University <b>Using lean to improve the handling of CCTV</b> Morten Hass Rasmussen, EnviDan A/S <b>Automated Image Learning to Improve Sewer Pipeline Inspection</b> Tiia Lampola, Helsinki Region Environmental Services Authority <b>Deterioration modelling of wastewater pipes</b> Jon Røstum, Powel
14.40-15.00	<b>Capacity development for the WWTPs in the area of Baltic sea – Case IWAMA</b> Sami Luste, Lahti University of Applied Sciences				
15.00-15.20	<b>Advanced control of WWTPs using fast DNA sequencing</b> Mikkel Stokholm-Bjerregaard, Aalborg University/Krüger A/S				
14.00-15.20	<b>WWTP in regional perspective, drivers in Malmö/Lund aera</b> Ulf Nyberg, VA SYD				
15.20-16.00	Coffee break and networking				
16.00-17.30	<b>NEW WWTP</b> Centralværkstedet	<b>Baltic Sea (WS)</b> Lokale A – Comwell	<b>Managing data (WS)</b> Lokale B – Comwell	<b>Cross-sector Cooperation for better adaptation</b> Lokale C – Comwell	<b>Wastewater from industries (WS)</b> Lokale D- Comwell
16.00-16.20	<b>Developing tailor-made simulation and process models</b> Eppu Väänänen, Ramboll Finland Oy	<b>Pharmaceuticals in the Baltic Sea region – status report</b> Niina Vieno, Law and Water Ltd <b>Development of Wastewater Management in Finland</b> Tapio S. Katko, Tampere University of Technology <b>Development of wastewater treatment in Lithuania nad Finland</b> Pekka Pietilä, Tampere University of Technology <b>Energy audit concept reflecting energy-nutrient-nexus in BSR</b> Stefan Rettig, Technische Universität Berlin <b>Developing sludge audit concept for the Baltic Sea region</b> Markus Raudkivi, University of Tartu	<b>Present status of instrumentation at Swedish WWTPs</b> Linda Åmand, IVL Swedish Environmental Research Institute <b>Uncertain reference samples for online sensor calibration</b> Oscar Samuelsson, IVL Svenska Miljöinstitutet <b>Applying big data analytics to sewer network management</b> Tomi Lukkarinen, HSY <b>Visualization of key data for Greater CPH utilities</b> Sten Lindberg, DHI	<b>A new normal? Collaboration as the road to better adaptation</b> Søren Møller Christensen, Rain & Cities	<b>Harnessing industrial CO<sub>2</sub> emissions to neutralize water poll</b> Hans Carlsson, Ramböll Sverige AB <b>The cadmium challenge – a joint adventure</b> Marcus Frenzel and Erik Forsberg, Käppala Association and Swedavia <b>Nutrient removal and performance of microscreens for treatment of C-stage MBBR effluent wastewater from a dairy industry</b> Mikael Sjölin, Veolia Water Technologies, Sweden <b>Wastewater from fish processing industries as carbon source</b> Mark de Blois, H2OLAND AB <b>A tool to support upstream work</b> Hans Bertil Wittgren, VA SYD/Sweden Water Research
16.20-16.40	<b>Higher Environmental Performance in wastewater systems</b> Jan Eilsø Nielsen, Assens Forsyning A/S			<b>A bumpy road to climate adaptation</b> Bente Villumsen and Merle Enghoff, KLIKOVAND	
16.40-17.00	<b>Start-up of the new MBBR plant of Ruka Ski Resort</b> Kristian Sahlstedt, Pöyry Finland Oy			<b>Transcending sectors – pooling visions and surging ahead</b> Lars Nørgård Holmegaard, Lemvig Water & Wastewater, Denmark	
17.00-17.20	<b>Denmark's first fully covered wastewater treatment plant</b> Peter Underlin, Hillerød Spildevand			<b>Climate Proofing at Grundfos, Collaboration Across</b> Klaus E. Christensen and Thomas Møller Schmidt, Grundfos and Viborg Kommune	
19.00-21.00	Reception at AROS				

# 11 OCTOBER 2017

9.00-9.40	<b>Morning Plenary – New perspectives in Nordic water management</b> Centralværkstedet Chair: Lars Schrøder, Aarhus Vand  <b>Anna Linusson</b> , Executive Director, Svenskt Vatten: Producers responsibility as a means to improve Nordic water management: It is time to influence political leadership. The challenge of emerging substances can not only be solved with end of pipe solutions. We need to focus on producers and place responsibility where changes can take place. <b>Petter D. Jenssen</b> , Professor, Norwegian University of Life Sciences: Green cities – resource hubs in a circular economy: How emerging technologies and changed institutions can transform cities from importers of water, food, and energy from rural areas to important suppliers of fertilizer and soil amendment products in greener cities.
9.40-9.50	Short break – find your next session at Comwell or Centralværkstedet

# 11 OCTOBER 2017 – CONTINUED

	Poster Presentation Centralværkstedet	Poster Only Centralværkstedet	Microplastic Lokale A – Comwell	Digester/Bio gas production Lokale B – Comwell	Flood Protection Lokale C – Comwell	Inflow and hydraulic modelling Lokale D – Comwell
9.50-10.10	<b>ICT, MONITORING</b>			<b>The Powerstep project</b> Dines Thornberg, BIOFOS	<b>A Cross-border Platform for Flood Risk Screening</b> CEO, Morten Revsbæk, SCALGO	<b>Model Predictive Control of Integrated Water Systems</b> Lisbeth Birch Pedersen, DHI
	<b>Monitoring of WWTPs performance by size-exclusion HPLC</b> Alexey Ignatev, University of Jyväskylä <b>MiDAS: database of microorganisms in AS and AD</b> Marta Nierychlo, Aalborg University <b>Process simulation as a method for strategic decision</b> Lorenzo Benedetti, Water Ways d.o.o	<b>A MODEL TO PREDICT PERFORMANCE OF DUAL-MEDIA REACTO</b> Raul Rodriguez, WSP Sverige <b>Predictive control of liquid level of WWTP inlet canal</b> Finn Aakre Haugen, University College of Southeast Norway <b>Advanced process control for biological nutrient removal</b> Åsa Henriksson, Xylem Water Solutions Global Services AB				
10.10-10.30	<b>WASTEWATER TREATMENT PROCESSES (NOVEL)</b>		<b>Beltfilter – potential of removing carbon and microplastics</b> Hanne Løkkegaard and Nerea Uri Danish Technolical Institute and VandCenter Syd	<b>Bergen municipality – Biogas – Experiences</b> Kristine Akervold and Britt Mo, Bergen Municipality	<b>Optimising SUDS ecosystems in urban environments</b> Lærke Kit Sangill, VandCenter Syd Andrew Gordon Howe & Mone Chor Bjørn	<b>Keyzones Sewer</b> David Getreuer Jensen, EnviDan A/S
	<b>Evaluation of model-based design of BNR-processes</b> Sofia Andersson, Stockholm Vatten och Avfall <b>Resource Container as a Seasonal Solution for valorification</b> Mona Arnold, VTT <b>Granular sludge to enhance settleability</b> Lise Havsteen, VandCenter Syd <b>Rotating Belt Filter (RBF) for CEPT</b> Subhash S Rathnaweera, Aquateam COWI <b>Wet Weather Trickling Filters for Improved Energy Footprint</b> Per Henrik Nielsen, VandCenter Syd <b>Phosphorus peaks in MBR effluent after membrane cleaning</b> Sofia Lovisa Andersson, IVL Swedish Environmental Research Institute	<b>Aerobic granular sludge – opportunities and challenges</b> Mark de Blois, H2OLAND <b>Modeling the Selective Retention of Biomass by Hydrocyclones</b> Nerea Uri, VandCenter Syd <b>N-SEP is challenging fundamentals in wastewater treatment</b> Stig Ovar Keller, Norwegian Technology AS <b>Intensification of Nutrient Removal and Energy Reduction</b> Fredrik Åkesson, GE Water & Process Technologies				
10.30-10.50	<b>MICROPOLLUTANTS</b>		<b>Microplastic removal in Danish wastewater treatment plants</b> Marta Simon, Aalborg University	<b>Sundet resource recovery facility – three years with thermal</b> Anneli Andersson Chan, City of Växjö, Water and Sewerage Dept.	<b>Correlating Climate Proofing Measures in DK-Ringkøbing</b> Henning Lehmann Pedersen, NIRAS	<b>Automatic data-correction of pumping stations</b> Perttu Saarinen, HSY
	<b>New design of the center construction of the clarifier</b> Claes Barlebo, Middelfart Spildevand <b>Removal of metals for improvement of sludge quality</b> Ida Sylwan, Mälardalen University <b>Contribution of heavy metals from clay in wastewater</b> Kyrre Halvorsen, Trondheim kommune <b>Biological removal of emerging micropollutants at 8 °C</b> Antonina Kruglova, Aalto University					
10.50-11.10	<b>PHARMACEUTICALS</b>		<b>Removal of microplastics from secondary effluent</b> Julia Talvitie, Aalto university	<b>Recovery of methane from anaerobic digester effluent</b> Hamse Kjerstadius, Lund University	<b>Making the most of Cloudburst Adaptation Strategies</b> Maria Facchin Asmussen, Rambøll A/S	<b>Design and Implementation of an Online Flood Warning System</b> Nikolaj Mølbye, Küger A/S
	<b>Fate of pharmaceuticals in sewage and sludge</b> Jörgen Magnér, IVL Swedish Environmental Research Institute <b>Removal of pharmaceuticals at wastewater treatment plants</b> Karolina Furgal, Rambøll	<b>Unique and cost-effective treatment of Hospital Wastewater</b> Bjarne Johannessen, Grundfos BioBooster A/S <b>Removal of antibiotic resistant E. coli in WWTPs</b> Carsten Ulrich Schwermer, Norwegian Insitute for Water Research (NIVA) <b>Characterization of airborne bacteria collected from a munic</b> Jaeyoun Jang, Aarhus University <b>MBBR for removal of pharmaceuticals</b> Elena Torresi, Veolia Water Technology				
11.10-11.40	Coffee break and networking					
	Poster Presentation Centralværkstedet	Poster Only Centralværkstedet	Micropollutants Lokale A – Comwell	Digester (WS) Lokale B – Comwell	Rain events and stormwater handling Lokale C – Comwell	Weather Forecast models (WS) Lokale D – Comwell
11.40-12.00	<b>ADAPTING TO A CHANGING CLIMATE</b>		<b>Organic micropollutants in household wastewater</b> Cajsa Wahlberg, Stockholm Vatten och Avfall	<b>Online monitoring of Anaerobic Digesters</b> Nicholas Mcleod Balsgart, NanoNord A/S <b>Alternative temperature control structures of an AD reactor</b> Shadi Attar, University College of Southeast Norway <b>Nitrogen harvesting from reject water – A new energy efficient technology</b> Juho Kaljunen, Aalto University, Finland	<b>New cloudburst roads</b> Julie Linke Bank, VANDVEJEN	<b>Experiences with X-band weatherradar quality in Copenhagen</b> Peter Rasch, InforMetics <b>Urban runoff forecasting with ensemble weather predictions</b> Jonas Wied Pedersen, Department of Environmental Engineering, Technical University of Denmark <b>www.aalborgvejrradar.dk – Cloudburst Documentation</b> Mette Godsk Nicolajsen, Aalborg Kloak
	<b>A climate resilient NYC with Blue-Green Infrastructure</b> Maria Facchin Asmussen, Rambøll A/S <b>SPARK-project, Development of the Marselisborg Center</b> Anne Laustsen, Aarhus Vand A/S <b>Soul of Nørrebro – Innovative urban storm water management</b> Michael Fabritius Tengnagel, Rambøll Water <b>Masterplan Fovrfeld Ådal</b> Ulla Lyngs Ladekarl, Niras	<b>Coastal and Climate Mitigation with the Water Family Tree</b> Linne Lauesen, HydroSystems Aps				
12.00-12.20	<b>ADAPTING TO A CHANGING CLIMATE</b>		<b>How Efficient is our Upstream Management? Case study Gryaab</b> Ann Mattsson, Gryaab	<b>Influence of calcium nitrate dosage on anaerobic digestion</b> Mehrdad Torabzadegan, Yara International ASA <b>Methane gas production in relation to an extended SRT in AS</b> Niclas Åstrand, Sweco Environment AB	<b>Types of Rain Implemented in Hydraulic Modelling Evaluation</b> Sabah Al-Shididi, MT Højgaard	<b>Vejlby/Risskov – Probability for occurrence of extreme rain</b> Anders Gade, EnviDan A/S <b>Review of spatial rainfall measurements for decision making</b> Peter Rasch, InforMetics
	<b>Separating rainwater from wastewater</b> Anne Laustsen, Aarhus Vand A/S <b>Estimating co-benefits of preventing cities from flooding</b> Camilla K. Damgaard, Niras					

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# 11 OCTOBER 2017 – CONTINUED

	Poster Presentation Centralværkstedet	Poster Only Centralværkstedet	Micropollutants Lokale A – Comwell	Digester (WS) Lokale B – Comwell	Rain events and stormwater handling Lokale C – Comwell	Weather Forecast models (WS) Lokale D – Comwell
12.20-12.40	<b>SEWAGE SYSTEMS AND MANAGEMENT</b>		Contaminants in sewage and recipients of four Nordic cities Gudjón Atli, Innovation Center Island	High loaded anaerobic digestion with short HRT – pilot trial Erik Lindblom, Stockholm Vatten och Avfall  Performance survey of 46 Danish anaerobic digesters Martin Hjorth Andersen, Aalborg University  Organic waste to WWTP – is it a good idea? Jacob Kragh Andersen, EnviDan A/S	Discharge to Already Hydraulic Overloaded Streams Alex Torpenholdt Jørgensen, Krüger	
	Strategic reduction of inflow/infiltration to sewage systems Jan Scheel, NIRAS  Using management systems the smart way Marcus Müller, COWI  Forecasting inflow using neural networks on rain gauges Peter Rasch, InforMetics  Future-protection of stormwater management in Tarm Julie Lisa Magnusen and Charlotte Sinkbæk Schow, Ringkøbing-Skjern Forsyning and Rambøll	Managing Big Data in future utilities Anja Veldt, ARTOGIS a/s  Optimising KPIs, Risk and Cost for Sewer Infrastructure Christian Schmidt Berthelsen, SEAMS  Overview of Investment requirements in Næstved Carsten Jakobsen, Krüger A/S				
12.40-13.00	<b>SEWAGE SYSTEMS AND MANAGEMENT</b>		Toxicity removal during wastewater treatment Pia Väitalo, Aalto University		Water retention on non-vegetated roofs in nordic climates Vladimir Hamouz, NTNU	
	Modeling and control of pumps with flow equalization Rasmus Jemander, Uppsala University  Performance Benchmarking as a tool to improve dialogue Jóannes Jørgen Gaard and Christian Rosen Balder, Miljøstyrelsen and NIRAS  Use of a screening method to boost information from CCTV-ins Tiia Lampola, Helsinki Region Environmental Services Authority  Quantifying green surface rain runoff in urban catchments Kristoffer Nielsen, Aalborg University	Cross border optimization of wastewater structures Ole Godsk Dalgaard, COWI A/S				
13.00-14.00	Lunch at Centralværkstedet					
	Poster Presentation Centralværkstedet	Poster Only Centralværkstedet	Pharmaceuticals Lokale A – Comwell	Phosphorus recovery Lokale B – Comwell	Pollutants in ecosystems and stormwater Lokale C – Comwell	Decision support Lokale D – Comwell
14.00-14.20	<b>ENERGY AND GHG</b>		Pharmaceuticals and micro plastics in waste water treatment Anna Maria Sundin, Swedish Environmental protection agency	Danish phosphorus strategy and P-recovery Linda Bagge, Miljøstyrelsen	Controlling storm water discharge respecting stream capacity Anja Thrane Hejlsbæk Thomsen, Orbicon and Aalborg University	Implementation and Experiences of the SSP in Helsinki Region Johanna Castrén, Helsinki Region Environmental Services Authority HSY
	Power-to-Gas integrations at wastewater treatment plants Robert Weiss, VTT Technical Research Centre of Finland  Low nitrous oxide production in nitrification reactors Qingxian Su, Department of Environmental Engineering, Technical University of Denmark  Circular economy in sustainable wastewater management Mia O'Neill, Environmental School of Finland SYKLI  Energy savings at a WWTP operated with intermittent aeration Niclas Åstrand, Sweco Environment AB	N2O dynamics: experimental and modelling lab-scale results Carlos Domingo-Felez, DTU – Environment  Achieving Energy Savings and More with VFDs James Chalmers, ABB A/S				
14.20-14.40	<b>SLUDGE AND CIRCULAR ECONOMY</b>		Mermis Niels Møller Jensen, Herning Vand	RAVITA- A new method for phosphorus recovery from wastewater Laura Rossi, Helsinki Region Environmental Services Authority HSY	Effects of delayed stormwater on biodiversity in streams Lukasz Koziel, University of Southern Denmark	Pin-sharp prioritizing of sewer rehabilitation tasks Lotte Neve, NIRAS
	The Circular Economy Approach to Wastewater Treatment Bjarne Bro, Billund Vand  Results from Hydro Thermal Carbonisation (HTC) of sludge Erik Odén, C-Green  A novel gasification strategy for wastewater sludge Torben Lund Skovhus, VIA University College					
14.40-15.00	<b>ANAMMOX</b>		Clear Waters from Pharmaceuticals, CWPharma Robert Sehlén, Tekniska verken i Linköping AB	Side Stream Hydrolysis and EBPR at Swedish WWTPs Tobias Salomonsson, Stockholm Vatten och Avfall & Stefan Erikstam, Käppalaförbundet	Separation of microplastics in road runoff Daniel Venghaus, TU Berlin, Department of Urban Water Management	Data driven asset management: Operate, maintain or invest? Michael Sønder Jensen, Randers Spildevand
	N2O production and mitigation in Partial Nitrification-Anammox Jan-Michael Blum, Technical University of Denmark, Department of Environmental Engineering  Mainstream Deammonification with ANITA Mox Process Dora Stefansdottir, Veolia Water Technologies – AnoxKaldnes  Anammox process nitrite inhibition and nitrite-adaption Ivar Zekker, University of Tartu					
15.00-15.20	<b>MICROPLAST</b>		Full-scale treatment of hospital wastewater Ulf Nielsen, DHI	Full scale P-recovery based on struvite production Peter Balslev, Aarhus Vand A/S	Microplastic in Danish storm water ponds Kristina B. Olesen, Department of Civil Engineering, Aalborg University, Denmark	
	Plastic free fjords in Denmark Stine Lundbøl Vestergaard, EnviDan A/S and Claudia Sick, Plastic Change  Instruments, methods and results for microplastic analysis Sebastian Antonsen, Danish Technological Institute					
15.20-15.50	Coffee break and networking					

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# 11 OCTOBER 2017 – CONTINUED

	Small treatmentplants (WS) Centralværkstedet	Hydrogen sulphide (WS) Centralværkstedet	Recruiting and managing the work force of tomorrow Balcony – Centralværkstedet	Anammox Lokale A – Comwell	P-recover workshop (WS) Lokale B – Comwell	Streamlining sustainable stormwater management – data, tools, pollutants and legislation (WS) Lokale C – Comwell	Hydraulic modelling (WS) Lokale D – Comwell
15.50- 16.10	<b>Reduced environmental impact from small wastewater treatment</b> Ingrid Palmblad Örlander, City of Växjö, Dept. of Water and Sewerage	<b>Novel sensor technology for sulphide monitoring in sewers</b> Ebbe Kruse Vestergaard, Unisense A/S	How do we secure the workforce of tomorrow? How do we convince young people to pursue a career in the water sector? And how do we create attractive workplaces to retain employees?	<b>Four years of piloting-mainstream nitrification-anammox</b> Frank Persson, Chalmers University of Technology	<b>Ash2®Phos – Clean commercial products from sludge ash</b> Yariv Cohen, EasyMining Sweden	<b>Sustainability assessment of stormwater management systems</b> Sarah Brudler, DTU Environment/VCS Denmark	<b>Analysis/Plan of Separat- &amp; Centralising of Drainage systems</b> Sabah Al-Shididi, MT Højgaard
16.10- 16.30	<b>MBBR and activated sludge: 1 + 1 = 3?</b> Mark de Blois, H2OLAND AB	<b>Hybrid filter technology for treating sewer odor</b> Asbjørn Haaning Nielsen, Aalborg University	Kick off talk, followed by group discussions among junior and senior water professionals. Outcomes will be highlighted and summarized in a final panel discussion.	<b>Anammox Activity in the Main- and Sidestream at Marselisborg</b> Mikkel Holmen Andersen, DHI	<b>A robust alternative to sustainable phosphorus recycling</b> Mette Dam Jensen, Krüger A/S	Other speakers will be announced later	<b>Continuous measurement of elements for wastewater monitoring</b> Heini Postila, University of Oulu
16.30- 16.50	<b>Effect of screened domestic sewage on receiving waters</b> Guðjón Atli Auðunsson, Innovation Center Iceland	<b>Kinetics of sulfide precipitation using iron salts</b> Bruno Kiilerich, Aalborg University/Grundfos Holding A/S	This workshop presents a unique platform for junior and senior water professionals to come together, discuss these and other questions and to learn from each other in an informal environment. Ultimately, this workshop will foster exchange and facilitate conversation in order to prepare the water sector to meet its future challenges – together.	<b>Full scale operation of DeAmmon® N-removal from reject water</b> Morten Rostad Haugen, Bekkelaget Vann AS	<b>Phosphorus recovery from sludge – a new technology</b> Hanne Løkkegaard and Morten Lykkegaard Christensen, Danish Technolical Institute and Aalborg University		<b>Isolating infiltration using neural networks</b> Lasse Børresen, InforMetics
16.50- 17.10	<b>Trickling filter disasters at the west coast of Sweden</b> Mark de Blois, H2OLAND AB	<b>In situ assessment of surface pH of corroding sewer pipes</b> Asbjørn Haaning Nielsen, Aalborg University	Organized by Young Water Professionals from the Nordics.	<b>Piloting the ANITAMox – process for reject water treatment</b> Anna Kuokkanen, Helsinki Region Environmental Services Authority HSY	<b>Slamförbränning med fosfor återvinning</b> Rafea Naif Majeed Al-Sabti, Sandviken Energi Vatten AB		<b>A Novel Approach to Tracking Sewer Inflow and Infiltration</b> Morten Grum, WaterZerv
19.00	Dinner at Centralværkstedet						

# 12 OCTOBER 2017

	Wastewater treatment process Lokale A – Comwell	Managing our wastewater system Lokale B – Comwell	Managing & analyzing climate solutions Lokale C – Comwell
9.00- 9.20	<b>Improving the capacity of Käppala WWTP by using cyclones</b> Sari Vienola, Käppalaförbundet	<b>Practical approach to set-up an asset management system</b> Christian Schmidt Berthelsen, BIOFOS	<b>Holistic stormwater and climate adaptation management</b> Charlotte Sinkbæk Schow, Ramboll
9.20- 9.40	<b>Long-time experiment with biological active filter (BAF)</b> Christian Baresel, IVL Swedish Environmental Research Institute	<b>Asset Management for 1,500 km Sewer System</b> Benny Nielsen, Herning Water A/S	<b>Assessing profitability of cloudburst management investments</b> Helena Åström, Orbicon A/S
9.40- 10.00	<b>Continuous Biofilm Nutrient Removal Process – One Year Of Full Scale Operation</b> Torger Saltnes, Hias IKS	<b>Asset Management in VCS Denmark</b> Arne Svendsen, VCS Denmark	<b>Cloudburst management plan – experience from Herlev</b> Jørn Bjarke Torp Pedersen, Orbicon A/S
10.00- 10.20	<b>Applying a Disruptive Technology: Practical Considerations</b> Per Henrik Nielsen, VandCenter Syd	<b>Managing our wastewater system – the Sustainability Index</b> Magnus Montelius, Svenskt Vatten	<b>CBA for deciding local flood protection levels</b> Jan Jeppesen, EnviDan A/S
10.20- 11.00	Coffee break and networking		
	Energy efficient/GHG emission Lokale A – Comwell	Partnering and cooperation Lokale B – Comwell	Designing innovative water sensitive urban solutions (WSUD)/LAR Lokale C – Comwell
11.00- 11.20	<b>Käppala WWTP future – Carbon neutral and Energy positive</b> Catharina Grundestam, Käppala Association	<b>Partnering – a new way of working and innovating</b> Karina Topp, Aarhus Water Ltd.	<b>Safe recreational lake waters</b> Lotte Bjerrum Friis-Holm, Danish Technological Institute
11.20- 11.40	<b>Towards GHG-emission compensating WWTPs</b> Jannice Örnmark, Syvab, Himmerfjærdsverket	<b>Wastewater treatment 2040 – How to get there?</b> Tor Gunnar Jantsch, Frevar KF	<b>Detention basins in Virum</b> Nina Caspersen, Lyngby Taarbæk Forsyning A/S
11.40- 12.00	<b>Modelling nitrous oxide emissions at a full-scale WWTP</b> Kati Blomberg, Aalto University	<b>MinKloak.dk – a separate sewerage website for citizens and sewer professionals in Aalborg</b> Mette Godsk Nikolajsen, Aalborg Kloak A/S	<b>Future holistic storm water and sewage handling in Aarhus</b> Lene Bassø Duus, Aarhus Vand
12.00- 12.20	<b>Climate neutral sidestream control strategies and models</b> Mikkel Holmen Andersen, DHI		<b>Climate adjustment and CO<sub>2</sub> savings goes hand-in-hand</b> Stella Jensen, Kolding Kommune/BlueKolding
11.20- 12.45	<b>Closing of the conference – and welcome to next NORDIWA conference</b> Lokale A – Comwell		
12.45- 13.00	Lunch to go		
13.00- 16.00	<b>Technical tours</b> Billund Biorefinery • Aalborg WWTP East • Climate change adaptatin tour in Aarhus • Marselisborg WWTP in Aarhus		

# Practical information including price

- Conference Fee – Early Bird Discount until 31 August – 7.493,75 DKK (incl VAT)
- Standard Conference fee – 8.118,75 DKK (incl VAT) – Conference fee for presenters – 4.993,75 DKK (incl VAT)
- Conference registration: [www.nordiwa.org](http://www.nordiwa.org)
- Conference fee includes Opening Reception and Conference Dinner.
- Information about hotel booking and being a tourist in Aarhus: [www.visitaarhus.dk/turist-i-aarhus](http://www.visitaarhus.dk/turist-i-aarhus)
- Conference language is English

## Conference Venue

The conference will be held at the four-star hotel Comwell Aarhus, close to the city centre and central station and Centralværkstedet, former train workshop, praised for its atmosphere and wonderful food. Conference dinner will take place at Centralværkstedet.



## Technical tours & Social programme

- On Oct. 12 we organise technical tours with the opportunities to visit wastewater treatment plants in Billund, Aarhus or Aalborg or a Climate tour to different sites in Aarhus.
- Reaching international flights can be combined with a visit to Billund Biorefinery and Aalborg, where busses will take you from the technical tour sites to the nearby airports.
- Marselisborg Wastewater Treatment Plant.
- Billund Biorefinery.
- Aalborg Øst Wastewater Treatment Plant, Environment and Energy Project.
- Climate tour Aarhus.
- Social programme consists of:
  - Day 1: Opening Reception at AROS Art Museum
  - Day 2: Conference Dinner at Centralværkstedet

### PROGRAMME COMMITTEE

Daniel Hellström	IWA (Svenskt Vatten)
Anders Finnson	Svenskt Vatten
Helle Kayerød	DANVA
Dorte Skræm	DANVA
Miriam Feilberg	DANVA
Lise Hughes	IWA (Aarhus vand)
Sajariina Toivikko	FIWA
Tommi Fred	IWA
Sigurjón Norberg Kjærnested	Samorka, Island
Gjertrud Eid	Norsk Vann
Magnar Sekse	IWA (Bergen kommune)
Peter Steen Mikkelsen	DTU, Denmark
Per Halkjær Nielsen	Aalborg University
Niels Peter Revsbech	Aarhus University

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For more information [www.nordiwa.org](http://www.nordiwa.org)