



NORDIWA

Welcome to NORDIWA 2023

Nordic Wastewater Conference
5–7 September | Göteborg | Sweden

Leading Nordic event for water professionals

Svenskt Vatten, FIWA, DANVA, Norsk Vann and Samorka invite all water professionals with an interest in wastewater, sewerage and climate change to join us at NORDIWA 2023.

The 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.

WWW.NORDIWA.ORG

Welcome to Göteborg for the Nordic Wastewater Conference 2023

The Nordic Wastewater Conference is being arranged for the eighteenth time. We look forward to three interesting and developing days, when we will meet, exchange ideas and learn from each other's experiences and practices. We are proud to present the beautiful city of Göteborg and the conference venue Elite Park Avenue Hotel, located at the fashionable street Avenyn. A well-suited arena for presentations, discussions, workshops, Nordiwa exhibition and the banquet dinner. Additionally, there will be possibilities to further explore the city through several arranged technical tours and at the welcome reception at the Museum of World Culture.

On behalf of the Programme Committee,
Anders Finnson and Anna Norström
Svenskt Vatten

Keynote speakers



The water sector – beyond today's mission
Pär Dalhielm, CEO Svenskt Vatten



The Urban wastewater treatment directive – proposed amendments and the process ahead
Nils Torvalds, European Parliament, Rapporteur for the Urban wastewater treatment directive



Leadership and the water sector
Tom Mollenkopf, President and Board Chair IWA



Göteborg – a water wise city
Marianne Erlandson, Göteborg Sustainable Waste and Water, Managing Director



The Urban wastewater treatment directive – proposed amendments from the Committee of the Regions
Åsa Ågren Wikström, European Committee of the Regions, Rapporteur for the Urban wastewater treatment directive



Energy strategies and priorities for the Gryaab urban wastewater treatment plant
Karin van der Salm, CEO Gryaab

Conference Venue

The conference will be held at Elite Park Avenue Hotel, located at the fashionable street Avenyn in Göteborg. Göteborg Central Station is a 20-minute walk from the hotel. From the Central Station (Drottningtorget) you can go by bus or tram to the hotel.

*Address: Elite Park Avenue Hotel,
Kungssportsavenyen 36, Göteborg.*

Conference Elements

- Opening of the conference and plenary session with keynote speakers, who will illustrate challenges and new development in the water sector
- Conference sessions with full presentations (15 minutes) and speed talks (5 minutes) highlighting key findings of projects and results. Presenters of brief presentations will be available after the session to discuss more deeply with the audience
- Workshops that facilitate knowledge sharing and discussion between the presenters and the participants of the conference
- Every day starts with a 30-minute summary of the highlights from the previous day

Workshops

- MBR technology - Challenges and opportunities for WWTPs
- Climate adaptation for the water sector, different prerequisites for financing
- Data and reporting towards climate and energy neutrality
- Addressing water industry challenges in light of global mega trends
- How are utilities taking action towards the Sustainable Development Goals?
- Capacity for asset management of municipal infrastructure
- PFAS – Challenges, actions and solutions – How wastewater utilities handle the forever chemicals
- The revised Urban wastewater treatment directive - northern Nordic challenges, priorities and solutions

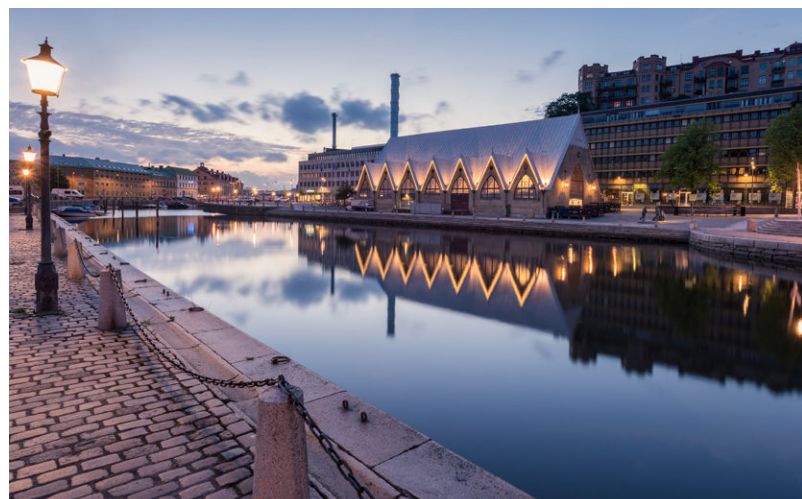


Technical Tours

Three technical tours are arranged on the afternoon of Wednesday 6 September in co-operation with Göteborg Sustainable Waste and Water and Gryaab. In addition, a sightseeing boat tour in the center of Göteborg will be arranged. The technical tours and city sightseeing tour are included in the registration fee, but pre-registration is required to attend.

A limited number of seats are available on each tour.

- On the river Göta Älv, climate adaptation of Göteborg, a city close to both sea and river
- Sustainable wastewater treatment at Rya WWTP (four alternative tracks)
- From a shipyard to a modern water close city with blue-green solutions - Lindholmen
- Guided boat tour with the 'Paddan boat'



Welcome reception

On Tuesday 5 September the City of Gothenburg and Region Västra Götaland invites you to a Welcome Reception at Världskulturmuseet (the Museum of World Culture). Finger food and non-alcoholic drinks are served. The welcome reception is included in the registration fee, but pre-registration is required to attend.

The welcome reception is hosted in collaboration with the City of Gothenburg and Region Västra Götaland.



Göteborgs
Stad



VÄSTRA
GÖTALANDSREGIONEN

Banquet Dinner

The banquet dinner will be held at the conference venue, Elite Park Avenue Hotel, on Wednesday 6 September starting at 19:00. Enjoy a three-course dinner and entertainment in the beautiful banquet hall.

Exhibition

Alongside the conference program, an exhibition is arranged with 14 confirmed exhibitors. The exhibition area, located at the heart of the conference venue where all lunches and coffee breaks will be served, provides plenty of networking opportunities for attendees and industry colleagues.

Key dates

- Registration deadline for Speakers: 6 August
- Registration deadline for Delegates: 21 August

Programme Committee

Lise Karstenskova Hughes, Aarhus Vand A/S, (IWA)
 • Miriam Feilberg, DANVA • Marina Graan, Helsinki
 Region Environmental Services Authority, (IWA) •
 Mika Rontu, FIWA • Paula Lindell, FIWA • Almar Barja,
 Samorka • Fjóra Jóhannesdóttir, Veitur (IWA) • Magnar
 Sekse, Bergen Vann, (IWA) • Arne Haarr, Norsk Vann
 • Erik Karlsson, Svenskt Vatten • Anna Norström,
 Svenskt Vatten (IWA) • Anders Finnson, Svenskt Vatten

Registration fees

Category	Fee
<i>Delegates</i>	12 575 SEK (10 060 excl. VAT)
<i>Speaker (Full presenter/Speed talk)</i>	8 675 SEK (6 940 excl. VAT)
<i>Moderator/Workshop speaker</i>	8 675 SEK (6 940 excl. VAT)
<i>Student</i>	6 060 SEK (4 848 excl. VAT)
<i>Banquet dinner – 6 september</i>	896 SEK (800 excl. VAT)

Registration includes

- Access to all sessions and workshops
- Access to exhibition
- Access to conference app including abstracts
- Lunches and refreshments in the breaks
- Welcome reception on 5 September
- Technical tours on 6 September
- Possibility to participate in the banquet dinner on 6 September (at an additional cost)

Contact

For questions, contact Svenskt Vatten at
konferens@svensktvatten.se.

Read more and register at the [conference homepage](#)



Tuesday 5 September 2023

11:30	Registration and lunch Opportunity to visit the exhibitors 11:30 - 12:30				
12:30	Opening session Room: Banquet hall 2+3 12:30 - 14:00				
	<p>The water sector - beyond today's mission Pär Dalhielm, CEO Svenskt Vatten</p> <p>Welcome to Göteborg & Region Västra Götaland Renée Bengtsson, President of the Regional Council and Lisbeth Andersson, Deputy Lord Mayor</p> <p>Leadership and the water sector Tom Mollenkopf, President and Board Chair IWA</p> <p>The Urban wastewater treatment directive – proposed amendments from the Committee of the Regions Åsa Ågren Wikström, European Committee of the Regions, Rapporteur for the Urban wastewater treatment directive</p> <p>The Urban wastewater treatment directive – proposed amendments and the process ahead Nils Torvalds, European Parliament, Rapporteur for the Urban wastewater treatment directive</p> <p>Göteborg – a water wise city Marianne Erlandson, Göteborg Sustainable Waste and Water, Managing Director</p> <p>Energy strategies and priorities for the Gryaab urban wastewater treatment plant Karin van der Salm, CEO Gryaab</p>				
14:00	Coffee break and exhibition 14:00 - 14:30				
14:30	Room: Taube room 14:30 - 15:50 Full-scale reduction of micropollutants, a Danish case <i>Jacob Kragh Andersen, EnviDan</i> Pharmaceuticals in hospital sewage effluents: Long-term surveillance & WWTP removal effectiveness <i>Merete Grung, Norwegian Institute for Water Research (NIVA)</i> A new injection method for ozone applications aiming to reduce bromate formation and capital cost <i>Tomas Alexandersson, Air Liquide</i> Micropollutant removal using PAC – impact on water and sludge, implications for plant design <i>Irene Slavik, University of Applied Science Magdeburg-Stendal</i>	Room: Banquet hall 1 14:30 - 15:50 Sustainability as a driver in Aarhus ReWater <i>Jeanette Agertved Madsen, EnviDan</i> Achieving wider uptake of water-smart solutions – the H2020 project WIDER UPTAKE in a Nordic context <i>Herman Helness, SINTEF Community</i> What can we learn from the recent European demonstration sites with source separation sanitation? <i>Hamse Kjerstadius, NSVA AB</i> Sustainability reporting requires a digital transformation of the water sector <i>Julie Skrydstrup, EnviDan A/S</i>	Room: Sandberg 14:30 - 15:50 Multiple X-band radardata for operational use in public water utility sector - new update report <i>Nicholas South, Tyréns</i> Precipitation and Melt Days Analysis at Different Geographic Locations in Northern Europe <i>Emelie Hedlund Nilsson, Luleå University of Technology</i> WWTP inflow prediction with weather radars and AI, case Viikinmäki <i>Tomi Lukkarinen, Smartvatten</i> Netatmo PWS rain sensor vs professional rain gauges <i>Tomas Wolf, Trelleborgs Kommun, Kretslopp & Vatten</i> Swedish new radar system for enhanced urban stormwater management <i>Seyyed Hasan Hosseini, Lund University</i>	Room: M/S Gripsholm 14:30 - 15:50 The key of mechanistic understanding for mitigating nitrous oxide emissions in wastewater treatment <i>Wim Audenaert, AM-Team</i> The potential of pure oxygen to mitigate N2O emissions, CFD-kinetics and onsite measurements <i>Giacomo Bellandi, AM-Team</i> Mitigating nitrous oxide emissions at the Viikinmäki and Blominmäki wastewater treatment plants <i>Anna Kuokkanen, Helsinki Region Environmental Services Authority, Wastewater Treatment</i> N2O – How to get a grip on it <i>Anna Katrine Vangsgaard, EnviDan A/S</i>	Room: Göteborg 14:30 - 15:50 Workshop: MBR technology - Challenges and opportunities for WWTPs During nine years (2013-2022), the membrane bioreactor (MBR) technology has been evaluated through pilot tests at the R&D-facility Hammarby Sjöstadsverk prior to full-scale implementation at Henriksdal WWTP in Stockholm starting in 2021. The purpose of this side-event/workshop is to summarize specific experiences, challenges and opportunities.
15:50	Break and exhibition 15:50 - 16:10				
16:10	Room: Taube room 16:10 - 17:30 Driving forces for implementation of organic micropollutant removal in Swedish wastewater <i>Maja Ekblad, Sweden Water Research</i> Chemical hazards in the water environment – the European call for effect-based monitoring <i>Johan Lundqvist, Swedish University of Agricultural Sciences</i> Effect-based methods indicate exceedance of env. quality standards not detected by chemical analysis <i>Gisela Holm, Sweco Sverige AB</i> Mapping and treating micropollutions - developing a fast track method <i>Mikkel A. Stokholm-Bjerregaard, Krüger A/S</i> Mass balance of microplastics at Käppala wastewater treatment plan <i>Angelica Andreasson, The Käppala Association</i> Long-term trials with UF-2xGAC and O3-GAC to remove micropollutants from wastewater <i>Moshe Habagil, Vatten & Miljö i Väst AB</i> Pulverized activated carbon in combination with Membrane BioReactor (PAC-MBR) <i>Christian Baresel, IVL Swedish Environmental Research Institute</i>	Room: Banquet hall 1 16:10 - 17:30 Comparison of aerobic granular sludge and conventional activated sludge for wastewater treatment <i>Britt-Marie Wilén, Chalmers University of Technology</i> MABR and continuous flow densification to achieve “super-intensification” in activated sludge plants <i>Giuseppe Guglielmi, Veolia Water Technologies & Solutions</i> Produce your own carbon source and save space: filtration with fermentation at ambient temperature <i>Elin Ossiansson, VA SYD</i> Pilotstudy – Alternative chemicals used for Actiflo®-treatment of incoming municipal wastewater <i>Jesper Olsson, The Käppala Association</i> Biofilm processes for nitrogen removal handle high flows in a growing city – at a cost <i>Tove Rappmann, Gryaab AB</i> The use and visualization of data in a wastewater treatment operation department <i>Line Rodenkam Melchiorsen, Kalundborg Utility</i> Concrete Corrosion in Wastewater Treatment Plants: Origin, Effects and Solutions <i>Nina Poutanen, Aalto University</i>	Room: Sandberg 16:10 - 17:30 Real-time control potential tool – to quantify overflow reductions and facilitate dialogue <i>Nadia Kirstein, EnviDan A/S</i> Reduction of impacts in recipients from CSO's by use of data driven solutions <i>Michael Rasmussen, Aalborg University</i> Cost-effective monitoring of wastewater networks via IoT technology <i>Robert Andersson, Aqua Robur Technologies</i> Connecting digital twins to control catchments and water resource recovery facilities <i>Douglas Lumley, DHI Sweden AB</i> Real-time simulation of combined sewer overflows: Case Helsinki <i>Hannes Björninen, Fluidit Ltd</i> Online E. coli and Enterococci measurements linked with automated flow cytometry by machine learning <i>Isabel K. Erb, Sweden Water Research</i>	Room: M/S Gripsholm 16:10 - 17:30 Strong seasonality and variability in nitrous oxide emissions at Finnish wastewater treatment plants <i>Milla Sieranen, Aalto University</i> ARES project – A full and pilot scale study into the (un) controllability of nitrous oxide emissions <i>Morten Rebsdorf, Aarhus Vand A/S</i> Market entry projections of ARES technologies under different policy scenario settings <i>Marianne Thomsen, University of Copenhagen</i> Reduction of laughing gas emissions by complementary injection of pure oxygen <i>Tomas Alexandersson, Air Liquide</i> Guideline for nitrous oxide measurement in wastewater treatment plants <i>Jingjing Yang, Sweco Sverige AB</i> Cloud based online control with Hubgrade™ using N2O sensors in an ANITA™ Mox to reduce N2O emissions <i>Ulrika Bruylandt, Eskilstuna Strängnäs Energi och miljö</i> Organic wastes vectoring N2O reducing bacteria effectively reduce N2O emissions from farmland <i>Kjell Rune Jonassen, Veas WWTP</i> Data quality assessment and feasibility study of data-driven modelling for N2O production in WWTPs <i>Laura Debel Hansen, Krüger A/S</i>	Room: Göteborg 16:10 - 17:30 Workshop: Climate adaptation for the water sector, different prerequisites for financing There are many challenges and obstacles to achieving a climate-secure society. The measures required are often very costly and need to be prioritized and considered holistically at the societal level. The aim of this workshop is to create a map of similarities and differences in the implementation of climate change measures for the water sector across Nordic countries.
19:00	Welcome reception at Världskulturmuseet 19:00 - 21:00				

Wednesday 6 September 2023

08:15	Highlights from day 1 Room: Banquet hall 2+3 08:15 - 08:45				
09:00	Room: Taube room 09:00 - 10:20 Increased objectivity in sustainability assessment method – case study on removal of pharmaceuticals <i>Maria Neth, Gryaab AB</i> Upgraded granular activated carbon reactors for micropollutants removal and wastewater reuse <i>Romain Mailler, Suez International, Treatment Infrastructure</i> Micropollutant removal from wastewater using hydrodynamic cavitation <i>Dmitry Grishenkov, KTH Royal Institute of Technology</i> Ozonation of wastewater with high concentrations of bromide – risk assessment for bromate <i>Kerstin Hoyer, VA SYD</i>	Room: Banquet hall 1 09:00 - 10:20 How to choose wastewater treatment process technology in a major expansion project <i>Susanne Tumlin, Gryaab AB</i> Aerobic granular sludge, possibilities to meet strict effluent requirements – a pilot scale study <i>Therese Areskoug, Gryaab AB</i> Effect of biofilm architecture on activity & community structure of phosphorus accumulating bacteria <i>Rellegadla Sandeep, Centre for Water Technology (WATEC), Aarhus University</i> Prefiltration with drum filter, the importance of using hourly average data for dimensioning <i>Tobias Asp, Gryaab AB</i> The CELLA™ biofilm technology - a vital instrument towards sustainable wastewater treatment <i>Maria Piculell, AnoxKaldnes - Veolia Water Technologies AB</i> Practical experiences with key performance indicators for aeration diffuser monitoring <i>Emma Fälth, Nodra</i> KROBIO Increased wastewater treatment plant capacity with new technology <i>Jeppe Bregendahl, Krüger Veolia</i>	Room: Sandberg 09:00 - 10:20 Sensor system for detection of oil spill in sewage water <i>Kristina Fogel, RISE Research Institutes of Sweden</i> The hunt for unwanted water in the urban sewage system <i>John Andre Nordhus, Porsgrunn municipality</i> Dynamic population estimates for influent load assessment during capacity upsizing <i>Oscar Samuelsson, IVL Swedish Environmental Research Institute</i> Analysis of sewer heat recovery potential at city-scale using a novel thermodynamic simulator <i>Hannes Björninen, Fluidit Ltd</i>	Room: M/S Gripsholm 09:00 - 10:20 Effect-based evaluation of full scale trial of indirect potable reuse of wastewater <i>Kim Frieberg, Swedish University of Agricultural Sciences</i> Is treated wastewater our future source for irrigation or drinking water? <i>Maria Takman, Lund University</i> Assessing the impact of hazardous pollutants on reuse of treated wastewater in Sweden <i>Uzair Akbar Khan, Swedish University of Agricultural Sciences</i> Membrane filtration of collected stormwater for water harvesting <i>Tobias Hey, Lund University</i> Treatment of greywater with nanofiltration – Two years startup experience from Helsingborg. <i>Ashley Hall, Sweden Water Research</i> Decreasing water scarcity with Reverse Osmosis in a sustainable, economic, operational and safe way <i>Lisa Klockare, Air Liquide</i>	Room: Götheborg 09:00 - 10:20 Workshop: Data and reporting towards climate and energy neutrality To be able to reach climate neutrality in the Nordic water sector, resources have been spent on developing calculation methods in the water sector and collecting and reporting data. This workshop aim for a discussion about how to use data to improve our activities and how we can link data, strategy, and measures to make sure we actually move towards climate and energy neutrality in practice.
10:20	Coffee break and exhibition 10:20 - 10:50				
10:50	Room: Taube room 10:50 - 12:10 Cost of advanced treatment of sewage – pre-study calculations and costs of real implementations <i>Berndt Björleinius, B2 Processteknik</i> Pilot study combining pre-ozonation with fluidized carbon bed for removal of micropollutants <i>Rubén Juárez Cámara, EnviDan AB</i> Microplastic flows in a model city <i>Emma Fältström, Sweden Water Research</i> Ozonation feasibility, using Amozone at two WWTPs for removing micropollutants and minimize bromate <i>Giacomo Bellandi, AM-Team</i>	Room: Banquet hall 1 10:50 - 12:10 Start-Up of the New Blominmäki Wastewater Treatment Plant <i>Jenni Raatikainen, Helsinki Region Environmental Services Authority, Wastewater Treatment</i> Nitrogen removal at low temperatures with MBBR process – pilot scale studies in Sundsvall <i>Malin Tuveesson, MittSverige Vatten och Avfall</i> MABR - how does it work, where does it fit and why is it compelling - Lessons from four full-scale systems <i>Javier Garcia, DuPont Water Solutions</i> Novel CFIC® biofilm process for municipal and industrial wastewater treatment <i>Shuai Wang, Biowater Technology AS</i> Wastewater characterization in Sweden – developing a standard protocol and gathering statistics <i>Christoffer Wärff, RISE Research Institutes of Sweden</i> Determination off existing sand filter capacity – Full-scale study <i>Frida Bäckbom, The Käppala Association</i> Effects of wastewater heat recovery on nitrogen removal in Finnish wastewater treatment plants <i>Lic. Kristian Sahlstedt, Helsinki Region Environmental Services HSY</i>	Room: Sandberg 10:50 - 12:10 Compound impact of rainfall, baseflow and sea level on riverine flooding in a coastal city <i>Salar Haghighatafshar, Lund University</i> What happens during a cloudburst in Gothenburg? – A water balance study <i>Christofer Karlsson, DHI Sweden AB</i> Multifunctional climate adaptation in collaboration <i>Beatrice Nordlöf, RISE Research Institutes of Sweden</i> The “Digital cloudburst plan” for enhanced collaboration and holistic stormwater management <i>Alexander Achton-Boel, EnviDan A/S</i> Sustainability analysis as a method for sustainable stormwater management on urban catchment scale <i>Helene Sörelius, RISE Research Institutes of Sweden</i> Do we have enough flood damage? <i>Søren Højmark Rasmussen, EnviDan</i>	Room: M/S Gripsholm 10:50 - 12:10 The road towards a Nordic climate neutral water sector <i>Jacob Kragh Andersen, EnviDan</i> Monitoring and analysis of N2O and CH4 emissions for mitigation of direct GHG-emissions from Veas <i>Rune Holmstad, Veas WWTP</i> Mitigating Fugitive Methane Emissions – Utility’s Perspective <i>Per Henrik Nielsen, VCS / VandCenterSyd</i> Reducing CO2 emissions by catalytic treatment of N2O – the NACAT project <i>Anna Katrine Vangsgaard, EnviDan A/S</i> Zero Emission Construction, is it possible? <i>Andreas Normann, City of Oslo, Agency for Water and Wastewater Works</i> Easier measurement of greenhouse gas emissions at wastewater treatment plants <i>Ted Lundwall, IVL Swedish Environmental Research Institute</i>	Room: Götheborg 10:50 - 12:10 Workshop: Addressing water industry challenges in light of global mega trends This workshop will focus on five global mega trends – Shifts in economic power, Demographic shift, Accelerating urbanization, Rise in technology and Climate change – with the goals of defining how these will affect our work and lives, what opportunities and challenges there are, and what skills and changes are required to face them.
12:10	Lunch and exhibition 12:10 - 13:15				

Wednesday 6 September 2023 continued

13:15	Room: Taube room 13:15 - 14:35	Room: Banquet hall 1 13:15 - 14:35	Room: Sandberg 13:15 - 14:35	Room: M/S Gripsholm 13:15 - 14:35	Room: Götheborg 13:15 - 14:35
	<p>Bromate formation from ozonation of wastewater – risk assessment <i>Jacob Kragh Andersen</i>, EnviDan</p> <p>Pilot study combining ozonation with powdered activated carbon for removal of micropollutants <i>Petter Lind</i>, VA Ingenjörerna Renare Vatten RV AB</p> <p>Removal of nutrients and micropollutants in pilot-scale granulated activated carbon filters <i>Dag Lorick</i>, Gryaab AB</p> <p>Micropollutant removal through large-scale pilot tests with an MBR-GAC configuration at Syvab WWTP <i>Stefan Berg</i>, Sydvästra stockholmsregionens va-verksaktiebolag - Syvab</p>	<p>A cloud-based infrastructure to deploy predictive models for optimal coagulant dosing control, <i>Abhilash Nair</i>, DOSCON AS</p> <p>Virtual sensors for nutrient monitoring in MBBR process <i>Tiina Komulainen</i>, Oslo Metropolitan University</p> <p>A grey-box predictive model to forecast effluent water-quality in a wastewater treatment plant <i>Abhilash Nair</i>, DOSCON AS</p> <p>Using temperature sensors to map inflow and infiltration <i>Fredrik Sahl</i>, FlowBelow</p> <p>Operational use of AI for sewer management and wastewater treatment at Veas. <i>Bertil Helseth</i>, Intelecy</p> <p>Creating a wastewater treatment plant real-time digital twin: Insights from the development process <i>Christoffer Wärrff</i>, RISE Research Institutes of Sweden</p>	<p>Assessing the challenges that rising sea levels will pose for water and waste water infrastructure <i>Tim Delshammar</i>, VASYD</p> <p>Climate adaptation of vital societal functions – a deep dive into the legal issues <i>Jenny Lundahl</i>, RISE Research Institutes of Sweden</p> <p>Time to re-think the planning and design of water and sewer systems in the context of climate change <i>Annelie Hedström</i>, Luleå University of Technology</p> <p>The coupling between urban floodings and soil moisture in green areas for present and future climate <i>Johan Kjellin</i>, Tyréns AB</p> <p>Accelerating Innovation in Water and Climate Adaptation: Learnings from a global start-up initiative <i>Cecilie Thrysoe</i>, COWI, Department of Water and Climate Adaptation</p> <p>The potential of blue-green roofs for climate change adaptation <i>Lukas Farquharson</i>, RISE Research Institute of Sweden</p> <p>SCALGO's national flash flood map: now taking infiltration and drainage into account <i>Sara Lerer</i>, SCALGO</p>	<p>Using Thermal Hydrolysis to Reduce the Carbon Footprint of Biosolids Management <i>William Barber</i>, Cambi Inc</p> <p>Strategic Implications Enabling Improved Sludge Valorisation using SolidStream Technology <i>Rune Holmestad</i>, Veas, Strategy and Development dept.</p> <p>Asset and Energy Optimisation Using Thermal Hydrolysis Process at Damhusåen <i>Gert Petersen</i>, 1-Gert P Environmental</p> <p>Evaluation of HTC-treatment of municipal sewage sludge with pilot trials <i>Christian Baresel</i>, IVL Swedish Environmental Research Institute</p> <p>Can thermal hydrolysis improve VFA-based carbon source production from sludge fermentation? <i>Andrea Carranza Muñoz</i>, IVL Swedish Environmental Research Institute</p> <p>Sewage sludge from different wastewater treatment processes as a feedstock for biochar production <i>Renata Tomczak-Wandzel</i>, Aquateam COWI</p> <p>Hygienization of sewage sludge – mapping and evaluation of technologies <i>Solveig Johannesdottir</i>, RISE Research Institutes of Sweden</p>	<p>Workshop: Workshop: How are utilities taking action towards the Sustainable Development Goals?</p> <p>In collaboration with private actors and national water associations, utilities are operationalising the SDGs with new tools, approaches and other initiatives. There is much to learn from each other and initiatives to link. The overall goal of this workshop is to bring people together to accelerate our work as a Nordic water sector towards the SDGs.</p>

14:35	Coffee break and exhibition 14:35 - 15:00
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15:00	Technical tours Note: please see start time for each tour on the conference web page 15:00 - 17:30
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19:00	Banquet dinner 19:00 -
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Thursday 7 September 2023

08:15	Highlights from day 2 Room: Banquet hall 2+3 08:15 - 08:45
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09:00	Room: Taube room 09:00 - 10:20	Room: Banquet hall 1 09:00 - 10:20	Room: Sandberg 09:00 - 10:20	Room: M/S Gripsholm 09:00 - 10:20	Room: Götheborg 09:00 - 10:20
	<p>Does fertilization with sewage sludge lead to pharmaceutical pollution of soil and water? <i>Sahar Dalahmeh</i>, Uppsala University</p> <p>Anaerobic co-digestion with sludge biochar – A way to improve carbon sequestration in soils? <i>Elina Tampio</i>, Natural Resources Institute Finland</p> <p>Operational experiences and climate benefits from vacuum degassing of digested sludge in Denmark <i>Maria Dittmann</i>, ELIQUO Technologies</p> <p>Solar desiccation as a sustainable solution for sludge management to boost the circular economy <i>Matia Mainardis</i>, Polytechnic Department of Engineering and Architecture</p> <p>Future sludge management from a sustainability perspective <i>Ebba Simensen</i>, KTH Royal Institute of Technology</p> <p>The importance of empirical scale-up trials for relevant decision support <i>Jesper Olsson</i>, The Käppala Association</p> <p>Trials with combination of activated carbon and ion exchange for removal of micropollutants and PFAS <i>Lovisa Olofsson</i>, Uppsala Water and Wastewater AB</p>	<p>The Finnish nutrient recycling program - 10 years of government support on nutrient recycling <i>Riikka Malila</i>, Ministry of the Environment</p> <p>Comprehensive nutrient recovery at wastewater treatment plant by RAVITA™ process <i>Sini Reuna</i>, Helsinki Region Environmental Services Authority HSY</p> <p>Aqua2N - efficient removal and recovery of nitrogen <i>Anna Lundbom</i>, EasyMining Service Sweden AB</p> <p>A novel method for recovery of nitrogen from reject water with aid and reuse of lime <i>Rune Holmstad</i>, Veas, Strategy and Development dept.</p>	<p>Towards a water smart society: what is it and how to assess it? <i>Rita Ugarelli</i>, SINTEF</p> <p>Partnering – Sustainability through collaboration <i>Julie Skrydstrup</i>, EnviDan A/S</p> <p>Water smartness and sustainability of symbiotic solutions for water reuse and resource recovery <i>Karen Nessler Seglem</i>, SINTEF Community</p> <p>Free nitrous acid for increased biogas production and contribution to the circular economy <i>Renata Tomczak-Wandzel</i>, Aquateam COWI</p> <p>The first eco-design Water & Resource Recovery Facility producing bio and e-methane at once <i>Eric Judenne</i>, Suez International</p> <p>Nitrogen removal requirement in EU urban wastewater directive – consequences for Sweden <i>Andriy Malovanyy</i>, IVL Swedish Environmental Research Institute</p>	<p>A new model to evaluate the impact of SUDS on water quality. <i>Evi Vinck</i>, Aquafin NV</p> <p>An evaluation of sources of stormwater micropollutants: releases from drainage surfaces and traffic <i>Alexandra Müller</i>, Luleå University of Technology</p> <p>Microplastics in a multifunctional raingarden <i>Helen Galfi</i>, Sustainable Waste and Water, City of Gothenburg</p> <p>Zediment – advanced technology paves the way for sustainable solutions <i>Flemming Møller</i>, Aarhus Vand A/S</p>	<p>Workshop: Capacity for asset management of municipal infrastructure</p> <p>The need for reinforcements within infrastructure maintenance is huge and growing, as the infrastructure ages. Key research outcomes from the research programme Mistra InfraMaint will be presented under three themes: i) decision support; ii) business models and organization; and iii) competence building; followed by interactive discussions.</p>
10:20	Coffee break and exhibition 10:20 - 10:50				

Thursday 7 September 2023 continued

<p>10:50</p>	<p>Room: Taube room 10:50 - 12:10</p> <p>The Development of Antimicrobial Resistance in Three Different Activated Sludge Processes <i>Maria Valtari, Aalto University</i></p> <p>Know Your Activated Sludge Community through Time Series: Ready for Fast Monitoring and Control <i>Susan Hove Hansen, Aalborg University</i></p> <p>Linking nitrite accumulation and high nitrous oxide emissions to activated sludge microbiomes <i>Oona Kinnunen, Aalto University</i></p> <p>Microbial Community Dynamics in Danish and Swedish Wastewater Treatment Plants <i>Marta Nierychlo, Aalborg University</i></p> <p>DNA nitrifier abundance is the key to mitigating N2O in WWTPs - a full-scale proof of concept <i>Mikkel A. Stokholm-Bjerregaard, Krüger A/S</i></p> <p>Time series of microbial communities in digesters show surprisingly high stability <i>Chenjing Jiang, Aalborg University</i></p>	<p>Room: Banquet hall 1 10:50 - 12:10</p> <p>Nitrogen recovery from reject water – evaluation of available technologies <i>Andriy Malovanyy, IVL Environmental Research Institute</i></p> <p>NPHarvest – efficient nutrient recovery technology for making clean and safe fertilizers <i>Juho Uzkuurt Kaljunen, Aalto University</i></p> <p>Main line impact of side stream nutrient recovery - NPHarvest pilot tests and life cycle assessment <i>Sofia Högstrand, Lund university</i></p> <p>Recovered fertilizer pellets - practical results from field trials in Scania, Sweden <i>Hamse Kjerstadius, NSVA AB</i></p> <p>Risks assessment of pfas in a biological phosphorus recovery sludge used for agriculture <i>Rizza Ardiyanti, Norwegian University of Science and Technology</i></p> <p>Quality assessment of products generated from wastewater-recovered resources <i>Pawel Krzeminski, Norwegian Institute for Water Research (NIVA)</i></p> <p>A full-scale phosphorus recovery process in the Seinäjoki WWTP: the first results and lessons learnt <i>Henri Haimi, FCG Finnish Consulting Group Oy</i></p>	<p>Room: Sandberg 10:50 - 12:10</p> <p>Maintaining an unmaintainable Wastewater Facility – Faxaskjól Pumping Station renovation project <i>Reynir Snorrason, EFLA Consulting Engineers</i></p> <p>With smart systems, grease is a resource and not a problem. Where? In Bergen, of course. <i>Yvonne Hetlevik, Bergen Water</i></p> <p>Protection water critical infrastructure against cyber and physical threats: the STOP-IT approach <i>Gema Sakti Raspati, SINTEF Community</i></p> <p>Enhancing cybersecurity at Finnish utilities – survey and recommendations <i>Tuija Laakso, Ramboll Finland</i></p> <p>Digital Transformation for Efficiency and Resilience in Water & Wastewater <i>Ramon Lopez, Schneider Electric</i></p> <p>Development of holistic management solution for the decentralised wastewater sector <i>Willy Røstum Thelin, SINTEF Community</i></p> <p>Targeted asset management can reduce greenhouse gas emissions by up to 50% <i>Sarah Brudler Friis, EnviDan</i></p>	<p>Room: M/S Gripsholm 10:50 - 12:10</p> <p>The missing link for blue-green stormwater infrastructure – documentation and maintenance of assets <i>Jon Røstum, Volue Technology</i></p> <p>Pilot test of high-speed simulation tool for detailed flood simulations in Gothenburg <i>Erik Mårtensson, DHI Sweden AB</i></p> <p>A municipal guide to identify best-fitted small-scale stormwater measures for developed properties <i>Manuel Franco-Torres, Multiconsult</i></p> <p>Current Challenges in Stormwater Management in Two Types of Sewer Systems <i>Freya Mosbæk, Aalborg Utility</i></p>	<p>Room: Götheborg 10:50 - 12:10</p> <p>Workshop: PFAS – Challenges, actions and solutions – How wastewater utilities handle the forever chemicals</p> <p>This workshop aims to share the knowledge, challenges and best practices between wastewater utilities, researchers and other stakeholders across the Nordic countries. Participants will leave the workshop with an increased knowledge of sources of PFAS, and new ideas on how to avoid PFAS in the sewage systems and wastewater.</p>
<p>12:10 Lunch and exhibition 12:10 - 13:40</p>					
<p>13:40</p>	<p>Room: Taube room 13:40 - 15:00</p> <p>Antimicrobial resistance monitoring and mitigation - are WWTPs ready for the future? <i>Pawel Krzeminski, Norwegian Institute for Water Research (NIVA)</i></p> <p>Comparative genomics and phenotypic characterization of E. coli isolated from marine sediments <i>Isabel K. Erb, Sweden Water Research</i></p> <p>Health risk assessment of sea bathing exposed to treated wastewater: a QMRA-based approach <i>Johan Åström, Tyréns AB</i></p> <p>Antibiotic Smart Sweden - A society where everyone helps to keep antibiotics working and save lives <i>Elin Flodin, RISE Research Institutes of Sweden</i></p> <p>A smart wastewater treatment approach to reduce the spread of antimicrobial resistance at sources <i>Carsten Ulrich Schwermer, Norwegian Institute for Water Research (NIVA)</i></p>	<p>Room: Banquet hall 1 13:40 - 15:00</p> <p>Potential effects of recovering nitrogen from reject water in WWTP with post denitrification <i>Håkan Jönsson, Swedish University of Agricultural Sciences</i></p> <p>Vivianite (Iron phosphate) formation potential: Sampling two full-scale wastewater treatment plants <i>Lobna Amin, Aalto University</i></p> <p>Phosphorus recovery trials with the ViviMag® technology <i>Outi Grönfors, Kemira Oyj, Industry & Water, EMEA</i></p> <p>Recovering Nitrogen from municipal sludge – advanced procurement and process development <i>Rauni Karjala, Gasum Oy</i></p> <p>Fungal cultivation in food processing waste streams for nutrient capture and biomass production. <i>Danielle Bansfield, Marine Research Centre, Finnish Environment Institute</i></p> <p>The status of urine recycling system and pathways for development and diffusion <i>Abdulhamid Aliahmad, Swedish University of Agricultural Sciences</i></p>	<p>Room: Sandberg 13:40 - 15:00</p> <p>Energy cost as a disruptive variable <i>Lars Lading, EnviDan A/S</i></p> <p>Condition-based maintenance of aeration diffuser systems for improved energy efficiency <i>Oscar Samuelsson, IVL Swedish Environmental Research Institute</i></p> <p>Energy neutrality, by innovative solutions or choice of calculation method and system boundaries? <i>Maria Neth, Gryaab AB</i></p> <p>Getting to Net Zero <i>Per Edoff, Atos technology</i></p> <p>Kemira KemConnect™ platform: an advanced digital tool to improve energy and resource efficiency <i>Jean-Christophe Ades, Kemira Chimie SASU</i></p> <p>Renewable chemistry to help reducing carbon footprint in wastewater treatment <i>Patricia Aubeuf-Prieur, Kemira Chimie SASU</i></p>	<p>Room: M/S Gripsholm 13:40 - 15:00</p> <p>Construction site stormwater management - challenges, guidelines, and recent developments in Finland <i>Nora Sillanpää, Sitowise Oy, Water Services</i></p> <p>Costs for construction, operation and maintenance of stormwater ponds <i>Jesper Persson, Göteborg Sustainable Waste and Water</i></p> <p>Collaboration for sustainable stormwater management in development districts <i>Helene Sörelius, RISE Research Institutes of Sweden</i></p> <p>Water quality assessment for construction sites – enhancing construction site stormwater management <i>Heidi Vilminko, Turku University of Applied Sciences</i></p> <p>The Turbinator: Low-cost contactless turbidity sensor for stormwater system monitoring <i>Jens Wilhelmsson, IVL Swedish Environmental Research Institute</i></p> <p>Hydraulic design using CFD for the Svannemøllen Cloud Burst tunnel in northern Copenhagen <i>Martin Reinhold, COWI A/S</i></p>	<p>Room: Götheborg 13:40 - 15:00</p> <p>Workshop: The revised Urban wastewater treatment directive - northern Nordics challenges, priorities and solutions</p> <p>In October 2022, the European Commission proposed their revised Urban wastewater treatment directive which will probably be decided in the beginning of 2024. The aim of the workshop is to raise the awareness of the northern Nordic perspectives, and to discuss possible solutions, both legal and technical, to meet the challenges in the revised Directive.</p>
<p>15:00 Coffee break and exhibition 15:00 - 15:30</p>					