CONFERENCE PROGRAMME

NORDIWA

NORDIC
WASTE
WATER
CONFERENCE

Helsinki, Finland
23 – 25 September 2019

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FIWA, DANVA, Norsk Vann, Samorka and Svenskt Vatten invite all water professionals with an interest in wastewater, sewarage and climate change adaptation to join us at NORDIWA2019.

www.nordiwa.org #nordiwa2019

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.

DANVA Dansk Vand- og Spildevandsforening · FIWA · Norsk Vann · SAMORKA · Svenskt Vatten

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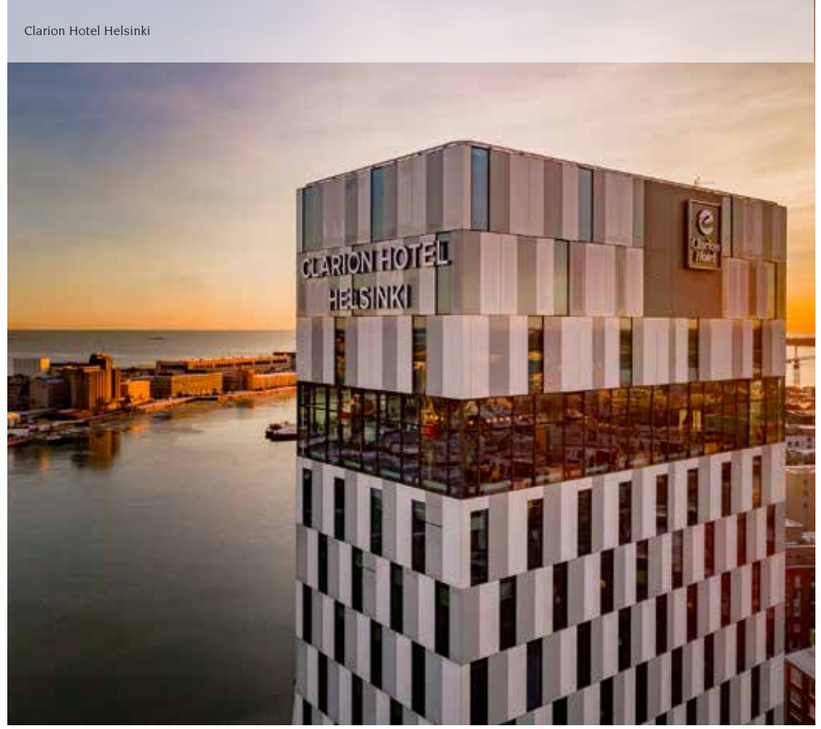


Clarion Hotel Helsinki

Welcome to NORDIWA2019

We look forward to welcoming all of you to Helsinki for the Nordic Wastewater Conference 2019. The Nordic Wastewater Conference is now being arranged for the sixteenth time.

The conference has developed over time and its contents have become broader and more diverse. Wastewater treatment is discussed in the wider context of various new challenges. Climate change adaptation, stormwater management and sewer systems are extensively accommodated in the conference programme. We hope to maintain the conference as a venue for exchanging practical knowledge and latest information, where participants have the opportunity to network and learn from each other's experiences and practices.

On behalf of the Programme Committee
Saijariina Toivikko
Finnish Water Utilities Association (FIWA)

Main Topics

NORDIWA presents a diverse conference with four main topics

1. Sustainable wastewater treament and challenge of micropollutants
2. Circular economy, resources recycling and recovery
3. Sewer systems – management, models and integrated approaches
4. Adapting to the changing climate and sustainable stormwater management solutions

Also cross-cutting topics are included to the programme.

Key Note Speakers

Future of Water

Kala Vairavamoorthy, IWA Executive Director, Professor, International Water Association

Status and Future of European Directives related to Water

Veronica Manfredi, Director, European Commission, Directorate General for Environment

How Climate Change will Impact Northern Europe?

Hannele Korhonen, Director of Climate Research Programme, Research Professor, Finnish Meteorological Institute

State of the Baltic Sea

Rüdiger Strempel, Executive Secretary, HELCOM

SDG's in the Water Utility Strategy

John Buur Christiansen, CEO, BIOFOS A/S

Young Water Professionals

Young Water Professionals will meet and have the possibility to share ideas and network with each other on Monday September 23rd.

Conference Elements

- Opening of the conference and plenary session with prominent keynote speakers, who illustrate future challenges and new development in the water sector.
- Conference sessions with normal presentations and short presentations highlight key findings of projects and results. Presenters of brief presentations will be available after the session to discuss more deeply with the audience.
- Workshops facilitate knowledge sharing and discussion between the presenters and the participance of the conference.

Technical Tours

Five tehcnical tours in co-operation with **Helsinki Region Environmental Services Authority HSY, Helen Ltd and City of Vantaa**
Wednesday September 25th 12:50–17:00

1. **Viikinmäki wastewater treatment plant**
   - Tour A Nutrient recovery process RAVITA pilot
   - Tour B Energy efficient solutions
2. **New wastewater treatment plant to Blominmäki**
3. **Katri Vala Heat Pump Plant**
4. **Three stormwater management sites in Vantaa**
   - Natural stormwater management
   - Bioretention basins
   - Stormwater management in snow disposal site
5. **Mäntymäki sewage pumping station and Sanitation Safety Plan in HSY headquarters**

Note that the participation in some excursions is limited.

Starting time for the excursions will vary. Excursion 1 and 2 will include lunch outside of the hotel. Bus transportation to Helsinki-Vantaa Airport is arranged from all excursion sites. Excursions 3 and 5 arrive at the airport at 15.30. Excursion 4 arrives at the airport at 15.40. Excursion 2 arrives at the airport at 16.30. Excursion 1 arrives at the airport 17.30. Drop off to Clarion Hotel Helsinki will be about 30 min later.

Monday 23 September 2019

11:30-12:30 Registration and lunch

12:30-14:00 Opening session

Future of Water
Kala Vairavamoorthy, IWA Executive Director, Professor, International Water Association

Status and Future of European Directives related to Water
Veronica Manfredi, Director, European Commission, Directorate General for Environment

How Climate Change will Impact Northern Europe?
Hannele Korhonen, Director of Climate Research Programme, Research Professor, Finnish Meteorological Institute

14:00-14:30 Coffee break and networking

14:30-15:50 Sustainable WWTP

14:30-14:50 The impact of sensor bias and influent variations on WWTP control performance
Erik Lindblom, Stockholm Vatten och Avfall

14:50-15:10 Innovative public procurement of WWTP
Maria Arjonen, Law and Water Ltd

15:10-15:30 Environmental impact of future influent scenarios to WWTPs
Sofia Lovisa Andersson,
IVL Swedish Environmental Research Institute

15:30-15:35 Water Resource Recovery Facilities of the Future:
Preparing for the Unknown
Ivan Vølund, Vandcenter Syd

15:35-15:40 The true purpose of controls models is insight;
how the process modelling effort helps VEAS WRRFs in Norway
Jonas Pettersen, VEAS

14:30-15:50 Circular economy solutions

14:30-14:35 Sweden's first beer brewed with recycled water
Staffan Filipsson, IVL Swedish Environmental Research Institute

14:35-14:55 Potable water reuse in Mörbylånga, Sweden
Peter Asteberg, Mörbylånga Municipality, Sweden

14:55-15:15 Sustainable Wastewater Reuse Solutions for Managed Aquifer R
Christian Baresel, IVL Swedish Environmental Research Institute

15:15-15:35 Circular economy in urban wastewater management
– the need for business as unusual
Elisabeth Kvarnström, RISE Research Institutes of Sweden

15:35-15:40 Reuse of treated wastewater in industrial symbiosis
Kerstin Hoyer, VA SYD

15:40-15:45 Microalgae for wastewater treatment and resource recovery
Amit Bhatnagar, University of Eastern Finland

15:45-15:50 Sustainability analysis of resource recovery systems
in the Baltic Sea Region
Erik Kärrman, RISE Research Institutes of Sweden

14:30-15:50 Future city planning

14:30-14:50 Future City Flow, a decision support system
for long term planning
Glen Nivert, Kretslopp och vatten Göteborgs stad

14:50-15:10 Holistic approach to planning and prioritizing investments
Per Hallager, VCS Denmark

15:10-15:30 Paradigm Shift in Management of Pipe Rehabilitation
Thor Danielsen, HOFOR

15:30-15:50 Pipeline to becoming a separate sewer system city
Freya Mosbæk, Aalborg Forsyning

14:30-15:50 Design criteria and guidance

14:30-14:50 Urban floods – from return period to tolerable consequence
Salar Haghighatafshar, Lund University

14:50-15:10 New guidelines and certification system
for SUDS
Stian Bruaset, SINTEF

15:10-15:30 Three Step Strategy for Stormwater Management and Design Rain Values
Kim H Paus, Asplan Viak AS

15:30-15:50 The role of stormwater and the environmental quality standards
Linnea Lundberg, Kretslopp och vatten
Göteborgs stad

15:50-16:20 Coffee break and networking

16:20-17:40 WWTP Process development and experience

16:20-16:40 Nordic experiences with hydro cyclones in the main stream
Laura Bailón Allegue, Aarhus Vand A/S

16.40-17.00 Performance of MBBR at Ruka Ski Resort
Kristian Sahlstedt, Pöyry Finland Oy

17:00-17:20 Primary treatment in Norway-10 years of experience & status
Jan Stenersen, TroVA AS

17:20-17:25 Aggressive SBR - a new way of operating SBR plants
Mark de Blois, H2OLAND AB

17:25-17:30 Wastewater from fish processing industries as carbon source
Mark de Blois, H2OLAND AB

17:30-17:35 Effectiveness of organic coagulants as solo precipitation agents in sewage treatment (NutriSludge project)
Elisangela Heiderscheidt, University of Oulu

17:35-17:40 Bacterial composition in the Hias Process
Torgeir Saltnes, Hias IKS

16:20-17:40 Resources recovery and sustainable solutions

16:20-16:40 The resource recovering WWTP in full scale
Nick Ahrensberg, BIOFOS

16.40-17.00 Modelling household wastewater generation for evaluation of heat recovery potential
Christoffer Wärff, RISE Research Institutes of Sweden

17:00-17:20 Circular and non-toxic reuse of phosphorus from sewage sludge
Representative of the Swedish Government Inquiry

17:20-17:25 Co-digestion of Aquaculture Waste in Existing Biogas Plants
Hilde Hatland, Agency for Water and Sewerage Works, Bergen Norway

17:25-17:30 Reduction of heat consumption in mesophilic digestion
Johanna Andersson, Uppsala Water and Waste Ltd

17:30-17:35 Energy efficient aeration in the Swedish wastewater sector
Simon Bengtsson, Promiko AB

17:35-17:40 Biogas Upgrading benefits the Energy Balance at BIOFOS WTP
Lars Krogsgaard Nielsen, BIOFOS

16:20-17:40 Sewer network challenges Workshop

16:20-16:25 Hydrogen sulfide problems in sewer systems, case Turku
Jarmo Sallanko, Pöyry Finland Oy

16:25-16:30 Could thermal loggers help you detect inleaks and infiltration in your sewer system?
Margrét María Leifsdóttir, Veitur

16:30-16:35 Rapid problem detection in sewer networks with data analytics
Tomi Lukkarinen, Helsinki Region Environmental Services Authority HSY

16:35-16:40 Oil tracing i sewersystem – low tech, cheap and effective
Elin Kusoffsky, Uppsala Water and Waste Ltd

16:40-16:45 Microplastics discharge from sanitary sewer overflow events
Mikael Olshammar, IVL Swedish Environmental Research Institute

16:45-16:50 Climate change means challenge caused by rising groundwater
Benny Nielsen, Herning Water A/S

16:50-16:55 Increasing the outlet pipe capacity of the Turku WWTP
Guido Nuijten, Pöyry Finland Oy

16:55-17:40 Dicussions between presenters and the audience

16:20-17:40 Tools for design and decision making

16:20-16:40 Sustainability Analysis of Stormwater Solutions
Lisa A. Peterson, Drexel University &
Aftan Engineering LLC

16.40-17.00 Infiltration measurement and GIS analysis for SUDS placement
Tone M. Muthanna, Norwegian University of Science and Technology

17:00-17:20 SuDS and sewer interaction at city-scale for flood control – An optimization study
Salar Haghighatafshar, Lund University

17:20-17:25 FloodMan – A Tool for Sustainable Flood Management
Dick Karlsson, City of Gothenburg

17:25-17:30 RAINTOOL – an automated urban water management WEB-GIS for Prague city watershed
Petr Fučík, Research Institute for Soil and Water Conservation

15:50-17:40 Young Water Professionals Workshop

Envisioning the wastewater professional of the future

What are the biggest challenges facing the wastewater sector of tomorrow?

What are the key competencies needed to respond to these challenges?

This workshop provides a platform for both younger and more experienced professionals to come together, challenge their understandings and learn from each other in a supportive and relaxed environment. Participants will build a better understanding of the future challenges they will meet during their career, and ultimately, prepare the wastewater sector for the future. The Workshop is organized by Young Water Professionals from the Nordics.

19.00 -20.30 Reception in the Helsinki City Hall

Tuesday 24 September 2019

Plenary

9:00

9:00-9:40 **State of the Baltic Sea**
Rüdiger Strempel, Executive Secretary, HELCOM

SDG's in the Water Utility Strategy
John Buur Christiansen, CEO, BIOFOS A/S

9:40

9:40-10:00 **Coffee break and networking**

10:00

10:00-11:20 WWTP Process development and experience

10:00-10:20 Start-up of aerobic granular sludge
Jennifer Ekholm, Chalmers University of Technology

10:20-10:40 Comparative LCA of conventional and innovative wastewater treatment for the Norwegian context
Kamal Azrague, SINTEF

10:40-11:00 Improving sludge settling at WWTP Damhusåen
Dines Thornberg, BIOFOS

11:00-11:05 Sorption capacity of Filtralite HMR materials
Åsgeir R. Almås, Norwegian Universtiy of Life Sciences

11:05-11:10 Removal of fecal microbes from secondary treated sewage effluent by using a constructed wetland and UV LED's
Anna-Maria Hokajärvi, National Institute for Health and Welfare, Finland

11:10-11:15 Award-winning technology ready for the Scandinavian market
Jeanette Agertved Madsen, EnviDan A/S

11:15-11:20 Nitrite formation in continuous backwash filters for post-DN
Mark de Blois, H2OLAND AB

10:00-11:20 Source control

10:00-10:20 What does domestic wastewater contain?
Cecilia Press, Gryaab

10:20-10:40 Inhibition of Nitrification - Case Viikinmäki WWTP
Anna Kuokkanen, Helsinki Region Environmental Services Authority HSY

10:40-10:45 Enhanced environmental permitting of pharmaceutical plants
Jukka Mehtonen, Finnish Environment Institute

10:45-10:50 On-site reduction of pharmaceutical load at a hospital ward
Lauri Äystö, Finnish Environment Institute

10:50-10:55 Increased specific BOD-load to large Swedish WWTPs
Susanne Tumlin, Gryaab

10:55-11:00 An interactive tool to support upstream work
Hanadi Makie & Cecilia Sjöö,
Northwest Skåne Water and Wastewater AB and VA SYD

11:00-11:20 Discussions between presenters and the audience

10:00-11:20 Sustainable Development Goals Workshop

How are utilities doing and how do we get better?

In this workshop we will hear how SDG's have been implemented in water utilities and discuss how can working with the SDG's improve our performance.

We will discuss if and where there are challenges related to Goal 6, and whether utilities can improve their contribution to targets such as:

- 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all
- 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- 6.B Support and strengthen the participation of local communities

Some other goals and targets are highly relevant for the water utilities e.g.

11 Sustainable cities and communities,
12 Responsible consumption and production,
13 Climate action

10:00-11:20 Testing innovative solutions

10:00-10:20 Testing stormwater treatment devices – A code of practice
Matthias Borris,
RISE Research Institutes of Sweden

10:20-10:40 Performance of subsurface flow wetlands for the treatment of airport runoff
Giovanni Chaurand,
Aalto University / Sitowise Oy

10:40-11:00 Large-scale biofiltration for stormwater quality management
Juhani Järveläinen, City of Lahti

11:00-11:05 Aluminum-silicate coagulant for stormwater treatment
Morten Lykkegaard Christensen,
Aalborg University

11:05-11:10 Performance of clinoptilolite filter for copper roof runoff
Ivan Milovanovi, Luleå University of Technology

10:00-11:20 Digestion Workshop

10:00-10:05 Converting to thermophilic digestion
- a pilot scale study
David l'Ons, Gryaab AB

10:05-10:10 Enhancement of biogas production and dewaterability of wastewater by pulsed electric field treatment
Ivo Achu Nges, Arcaroma Pure AB, Lund, Sweden

10:10-10:15 Start-up of Sweden's first full-scale Temperature Phased Anaerobic Digestion (TPAD)
Elin Ossiansson, VA SYD

10:15-10:20 Problem solving bio-fertilizers: Mitigating N2O emissions from soil by growing N2O reducing bacteria in digestates
Kjell Rune Jonassen, Vestfjorden Avløpsselskap (VEAS)

10:20-10:25 Predicting dewaterability with and without THP
Oda Kjørlaug Svennevik, Cambi Group AS

10:25-10:30 Experience with anammox sludge liquor treatment in Växjö
Anneli Andersson Chan, Växjö kommun

10:30-11:20 Discussions between presenters and the audience

11:20

11:20-11:40 **Coffee break and networking**

11:40

11:40-13:00 Removal of micropollutants

11:40-12:00 Experiences from full-scale ozonation in Linköping
Robert Sehlén, Tekniska verken i Linköping AB (publ)

12:00-12:20 An innovative operation of MBBR removes micropollutants
Christina Sund, Krüger Veolia, Denmark

12:20-12:40 Capturing powdered activated carbon from wastewater
Maija Vilpanen and Paula Lindell, Pöyry Finland Oy and Helsinki Region Environmental Services Authority HSY

12:40-12:45 Demonstration of multipoint ozonation system to remove micropollutant
Tahereh Faraji, SUEZ

12:45-12:50 Using add-on filter to improve micropollutant removal in on-site wastewater treatment
Wen Zhang, Sweco Environment AB

12:50-12:55 Micropollutants removal from wastewaters at low temperatures
Antonina Kruglova, Aalto University

11:40-13:00 Greenhouse gases

11:40-12:00 Full-scale N2O emission mitigation at Slottshagen WWTPs
Christian Baresel, IVL Swedish Environmental Research Institute

12:00-12:20 Full-scale testing of N2O mitigation strategies at a WWTP
Kati Blomberg, Pöyry Finland Oy

12:20-12:40 GHG emissions from the wastewater system of Oslo
Elisabeth G. Hiis, Norwegian University of Life Sciences

12:40-12:45 Greenhouse gases on waste water treatment plants: focal points for lowering emissions
Marjoleine Weemaes, Aquafin

12:45-12:50 N2O reduction from sludge liquor treatment - Nordic outlook
Linda Kanders, Purac AB

12:50-12:55 GHG-emissions from a pilot scale MBR-process
Niclas Bornold, IVL Swedish Environmental Research Institute

11:40-13:00 Sewer network inspection

11:40-12:00 Accurate inspections of sewer pipelines
Tiia Lampola, WSP Finland Oy

12:00-12:20 SmartTV - optimizing the workflow of sewage CCTV
Mette Godsk Nicolajsen &
Morten Hass Rasmussen,
Aalborg Forsyning & EnviDan A/S

12:20-12:40 Automated Sewer Inspection Robot (ASIR) – Early results
David Getreuer Jensen &
Peter Hjortdal, Aarhus Water A/S &
EnviDan A/S

12:40-12:45 Efficient rehabilitation process
Sari Pietilä, WSP Finland Oy

12:45-12:50 Picote enables pipeline rehabilitation using waterless High Speed Cleaning
Lauri Kellokumpu / Richard Swan,
Picote Solutions Oy Ltd

11:40-13:00 Water quality monitoring

11:40-12:00 Performance monitoring of a nature-based stormwater management system in Tampere Finland
Salla Leppänen, City of Tampere

12:00-12:20 Traditional and advanced monitoring of biofiltration
Joel Kerkkänen, Aalto University

12:20-12:40 Can turbidity be used as a proxy for pollutants in storm water?
Maria Khalili, Uppsala Water and Waste Ltd

12:40-13:00 On-site analysis of metal concentrations of natural waters
Tommi Tiihonen, University of Eastern Finland

11:40-13:00 Small WWTP Workshop

11:40-11:45 Governance, efficiency, resources recovery and impacts of small wastewater treatment systems (ON-SITE)
Pekka M. Rossi, University of Oulu

11:45-11:50 Passive hybrid solutions to remove nitrogen from sewage
Heini Postila, University of Oulu

11:50-11:55 Removal of nutrients and microplastics in treatment wetlands purifying sewage water in cold climate regions (RaMiKo project)
Elisangela Heiderscheidt, University of Oulu

11:55-12:00 Direct membrane filtration of municipal wastewater in Norway
Tobias Hey, COWI Aquateam, Norway

12:00-12:05 Ecological sanitation in the area of Lake Mývatn in Iceland
Ragnhildur Gunnarsdóttir, EFLA Consulting Engineers, Iceland

12:05-12:10 New Swedish guidelines for permitting small-scale wastewater treatment systems
Bodil Forsberg & Åsa Gunnarsson, Swedish Agency for Marine and Water Management Sweden

12:10-13:00 Discussions between presenters and the audience

13:00

13:00-14:00: **Lunch**

Tuesday 24 September 2019

13:00 **13:00-14:00: Lunch**

14:00

14:00-15:20 MBR and MABR

14:00-14:20 Membrane Bioreactors (MBR) in municipal WWTPs
Christian Baresel, IVL Swedish Environmental Research Institute

14:20-14:40 Full-Scale MABR Demonstration at Ejby Mølle WRRF
Lise Havsteen, Vandcenter Syd Denmark

14:40-15:00 MBR at the Taskila WWTP: Findings from the first year of operation
Henri Haimi, FCG Design and Engineering Ltd

15:00-15:05 Actions at Syvab during the transition to MBR
Victor Kårelid, SYVAB

15:05-15:10 Citric vs Oxalic Acid for Membrane Cleaning in MBRs
Klara Westling, IVL Swedish Environmental Research Institute

14:00-15:20 Microplastics

14:00-14:20 Micropollutants and Microplastics in MBR
Klara Westling, IVL Swedish Environmental Research Institute

14:20-14:40 The fate of microplastics at a large WWTP
Susanne Tumlin, Gryaab

14:40-15:00 Measurement of Microplastics in Rainwater
Michelle Lison Rebsdorf, Danish Technological Institute

15:00-15:05 Microplastics and traffic related particles in stormwater
Helen Galfi, Sustainable Waste and Water,
City of Gothenburg, Sweden

15:05-15:10 Full scale mass balance of microplastics at Bekkelaget WWTP
Christian Vogelsang, Norwegian Institute for Water Research

15:10-15:15 Replicable, inexpensive methods for microplastics monitoring
Jamie McQuilkin, ReSource International

15:15-15:20 Chemical enhanced removal of microplastics
Katriina Rajala, Kemira Oyj

14:00-15:20 Reducing sewer overflow

14:00-14:20 CSO Modelling HSY
Leena Sänkiaho, The Helsinki Region Environmental Authority HSY

14:20-14:40 Holistic modelling of pump performance by utilizing real-time SCADA data, case Bergen and Tromsø
Jon Røstum, Powel Environment

14:40-15:00 Strategic redevelopment of Reykjavik´s combined sewers
Sigurdur Gretar Sigmarsson, Verkis

15:00-15:20 Separation of stormwater from combined sewers using LID-techniques on private properties
Bent C. Braskerud, Agency for Water and Wastewater Services, City of Oslo

14:00-15:20 Digitalization in WWTP

14:00-14:20 Use of process modelling for WWTP redesign
Maria Neth, Gryaab/Chalmers University of Technology

14:20-14:40 Experiences with AI in wastewater treatment
Anna Sipilä, Ramboll Finland Oy

14:40-15:00 Instrumentation at WWTP - how to get it right?
Sofia Lovisa Andersson,
IVL Swedish Environmental Research Institute

15:00-15:05 Active fault detection in DO sensors
- automated tuning
Oscar Samuelsson, IVL Swedish environmental research institute / Uppsala university

15:05-15:10 In CFD* we trust, but you better bring data; the unescapable model validation
Luca A. Piciaccia , VEAS

15:10-15:15 Automated anomaly detection in wastewater processes,
Pedram Ramin, DHI, DKURB

14:00-15:20 Protection and co-operation around the Baltic Sea Workshop

The coasts and seas in the Baltic Sea Region are still threatened by pollution and eutrophication. Improving cooperation between all stakeholders and knowledge sharing across the region may be important to overcome the challenges.

In this workshop, we will discuss:

1. What are the most burning water and coast related challenges in our region?
2. How do we cooperate at local, national and transboundary level?
3. What is the role of cities, utilities, companies and other stakeholders?
4. How can we improve cooperation between utilities, cities, industries and countries towards meeting SDG 14?
5. What can others learn from us – and we from them.

This workshop is thought as a preparatory workshop for IWA-2020 in Copenhagen. It will aim at gathering various stakeholders to discuss our experiences. We will do so with the aim to identify key lessons learned to take forward to Copenhagen.

15:20 **15:20-15:50 Coffee break**

15:50

15:50-17:10 Micropollutant Workshop

15:50-15:55 Monitoring efficiency of wastewater effluent post-treatment
Tuula Tuhkanen, University of Jyväskylä

15:55-16:00 Application of AOPs for wastewater treatment
Irina Levchuk, Aalto University

16:00-16:05 Degradation of pharmaceuticals with UV/H2O2
Karin Walter, Nouryon

16:05-16:10 Micropollutant abatement and wastewater reuse
Simon Gidstedt, Sweden Water Research/Lund University

16:10-16:15 Presence of pharmaceuticals residues in the aquatic environment and in wastewater treatment plants in Norway. Challenges and technology needs.
Renata Tomczak-Wandzel, Aquateam COWI AS

16:15-16:20 Micropollutant Removal on large Scale - with Ozone in Zurich
Thomas Franz, Xylem Services GmbH

16:20-16:25 MBBRs for degradation of organic micropollutants and transformation products from ozonation
Ellen Edefell, Sweden Water Research, Lund University

16:25-16:30 Strict biological removal of pharmaceuticals in wastewater effluent
Christina Sund , Krüger, Veolia

16:30-17:10 Discussions between presenters and the audience

15:50-17:10 Nutrient recycling and recovery

15:50-16:10 Running-in of the P-recovery plant in Marselisborg WWTP
Peter Balslev, Aarhus Vand A/S

16:10-16:30 Phosphorus recovery by RAVITA process- 1000 PE piloting
Laura Rossi, Helsinki Region Environmental Services Authority HSY

16:30-16:50 Phosphorus Recovery Strategy for BIOFOS WWTPs
Lars Krogsgaard Nielsen, BIOFOS

16:50-16:55 P-Recovery as Struvite from Digested Sludge
Bart Saerens, Aquafin NV

16:55-17:00 Sustainable Fertilizers from Reject Waters with NPHarvest
Irene Konola, Aalto University

17:00-17:05 Ecosystem and partnerships for viable nutrient recycling business
Mari Saario, Gaia Consulting

17:05-17:10: Circular economy with sludge - a novel solution
Prem Verma, Swedish Exergy AB

15:50-17:10 Future Nordic plastics sewage and drainage systems

15:50-16:00 New value chains for plastics products
Vesa Kärhä, FIPIF

16:00-16:20 INSTA-CERT and NPM –
15 years of Nordic certification system and quality mark
Anders Andtbacka, Uponor, Finland

16:20-16:40 Plastics sewage and drainage systems product environmental footprint (PEF)
Zoran Davidovski,Pipelife

16:40-16:50 Future Nordic quality – what is it?
Osmo Seppälä, FIWA

16:50-17:10 Discussions between presenters and the audience

15:50-17:10 Planning and implementation of stormwater system Workshop

15:50-15:55 When stormwater management interferes with flight safety
Anja Sloth Ziegler (YWPDK), Aalborg Forsyning

15:55-16:00 The Collaboration Process of Biofilter Implementation in a Cold Climate Cityscape
Sara Eklund, ÅF Infrastructure AB, Water & Environment

16:00-16:05 Cloudburst resiliency in an urban district scale -Copenhagen
Henrik Sønderup, Rambøll Water

16:05-16:10 From cobined sewer to SUDS-solutions in a large residential area (Risvangen,Aarhus)
Mads Uggerby, EnviDan A/S

16:10-16:15 Stromwater management on construction sites in Nordic clay soils
Piia Leskinen, Turku University of Applied Sciences

16:15-16:20 Multi-use Areas for Stormwater Management and S. I.
Emmi Vesala, Sitowise Oy

16:20-17:10 Discussions between presenters and the audience

19:00 **19:00 Dinner**

Wednesday 25th of September 2019

9:00

09:00-10:20 Removal of Micropollutants

09:00-09:20 Advanced wastewater treatment – update from SEPA
Maximilian Lüdtke, Swedish Environmental Protection Agency

09:20-09:40 Discharge of antibiotic resistance genes from three WWTPs
Carsten Ulrich Schwermer, Norwegian institute for water research

09:40-10:00 Antibiotic resistance dissemination via wastewater treatment
Antonina Kruglova, Aalto University

10:00-10:05 CWPharma tests in Kalundborg: Full Stream API Removal with Ozonation
Preben Thisgaard, Kalundborg Utility

10:05-10:10 Removal of antibiotic resistant bacteria from hospital WW
Michelle Lison Rebsdorf, Danish Technological Institute

10:10-10:15 High-dosage UV treatment to degrade antibiotics in hospital wastewater
André Olafssøn, BlueShift AS

09:00-10:20 Looking for sustainable sewage sludge utilization

09:00-09:20 Effects of long-term application of sewage sludge to arable land in southern Sweden
Hans Bertil Wittgren, VA SYD

09:20-09:40 Risk assessment of harmful substances and pathogens in sewage sludge-based fertilizers applied on Finnish soils
Niina Vieno, Law and Water Ltd

09:40-10:00 LCA-study on future sludge strategies
Catharina Grundestam, IVL Swedish Environmental Institute

10:00-10:05 The occurrence of Legionella bacteria in circular economy products
Liisa Maunuksela, Finnish Food Authority

10:05-10:10 Tool for promoting safe circular economy of sludge biosolids
Katri Senilä, Finnish Environment Institute and University of Eastern Finland

10:10-10:15 Thermal Sludge Treatment Methods - Applicability in Finland
Petri Nissinen, Pöyry Finland Oy

10:15-10:20 Pyrolysis in sludge treatment: plans for a pilot scale plant
Christoph Gareis, Helsinki Region Environmental Services Authority HSY

09:00-10:20 Sewer network management

09:00-09:20 The impact of data availability on the estimated need for network renovations
Tuija Laakso, Aalto University

09:20-09:40 Smart platform for smart network management
Kia Aksela, Helsinki Region Environmental Services Authority Services

09:40-10:00 Using operational data to improve sewer asset management
Morten Grum, WaterZerv

10:00-10:20 Serito: Accelerating the right investments by connecting risc and economy.
Peter Hartwig, Middelfart Wastewater A/S and Kouno

09:00-10:20 High resolution rainfall

09:00-09:20 Weather radar open source data processing chain and tools
David Getreuer Jensen, EnviDan A/S

09:20-09:40 Experiences of X-band radar in Skåne
Nicholas South, VA SYD

09:40-10:00 Urban modelling with high resolution weather radar data
Peter Rasch, InforMetics

10:00-10:20 Improved on-line catchment simulation with new rain forecast tools
Douglas Lumley, Gryaab AB

10:20

10:20-10:50 Coffee break and networking

10:50

10:50-12:10 Planning for the future WWTP

10:50-11:10 A systematic concept for extension of Copenhagen WWTP's
Jeanette Agertved Madsen, EnviDan A/S

11:10-11:30 A sustainable concept for the new Sjölunda WWTP
Maria Jonstrup, VA SYD

11:30-11:50 Collaborative planning for sustainable wastewater treatment in Gothenburg 2030-2070
Maria Neth, Gryaab/Chalmers University of Technology

11:50-12:10 Green field plant with ambitious goals,
Peter Underlin, Hillerød Forsyning

10:50-12:10 Recycling and recovery of resources Workshop

10:50-10:55 Ammonium recovery from municipal reject water using various adsorbents
Aubrey Beckinghausen, Mälardalen University

10:55-11:00 From bio-sludge to bio-carbon using zero-energy hydrothermal carbonization
Peter Axegård, C-Green Technology AB

11:00-11:05 Biodegradable polymers as by-products from wastewater treatment
Simon Bengtsson, Promiko AB

11:05-11:10 Biological upgrading of biogas and production of Single Cell Proteins
Jacob Kragh Andersen, EnviDan A/S

11:10-11:15 Changes of water infrastructure in building stock
Alexander Wriege-Bechtold and Stefan Rettig, Technical University of Berlin

11:15-11:20 Concentration of municipal wastewater by FO for recovery of nutrients
Willy Røstum Thelin, SINTEF

11:20-11:25 Nutrient recovery from wastewater in urban environment – Case Hiedanranta in the city of Tampere
Eeva-Liisa Viskari, Tampere University of Applied Sciences

11:25-12:10 Discussions between presenters and the audience

10:50-12:10 Digitalization Workshop

10:50-10:55 Water industry facing cyber security challenges
Anni Karinsalo, VTT Technical Research Centre of Finland

10:55-11:00 Fishing for values in the local data-lake in Bergen
Kristine Akervold, Agency for Water and sewerage Works, Bergen Norway

11:00-11:05 Making water infrastructure smart with the Internet of Things (IoT)
Kristine Akervold, Agency for Water and sewerage Works, Bergen Norway

11:05-11:10 Machine Learning for Value Creation in the Water Sector
Bolette Dybkjær Hansen, EnviDan A/S

11:10-11:15 Machine Learning for Better Descriptions of Flow Paths
Hampus Åkerblom, SCALGO

11:15-11:20 Autonomous cyber security solution for water supply and sewer network
Jouko Koskinen, Emtele Oy

11:20-11:25 Towards watermass balance as a service across catchments
Peter Rasch, InforMetics

11:25-12:10 Discussions between presenters and the audience

10:50-12:10 Stormwater management and climate change adaptation

10:50-11:10 The performance and role of green roofs during extreme event
Tone Muthanna, Norwegian University of Science and Technology

11:10-11:30 Nature-based solutions to restore or maintain hydrologic connectivity
Maria Dubovik, VTT Technical Research Centre of Finland Ltd.

11:30-11:50 Guide on how to invest in climate adaptation
Mads Uggerby, EnviDan A/S

11:50-11:55 How can blue-green/grey roof solutions contribute to runoff reductions in urban catchments?
Vladimir Hamouz, Norwegian University of Science and Technology

11:55-12:00 Benefits from climate adaptation projects
Helena Åström, Orbicon A / S

12:10

12:10-12:40 Closing of the conference

12:40

12:40-13:30 Lunch

12:50

12:50-17:00 Excursions - Note: Timetable for the start of excursions will vary

CONFERENCE PROGRAMME

NORDIWA

NORDIC WASTE WATER CONFERENCE

Helsinki, Finland
23 – 25 September 2019

Conference Venue

The conference will be held at the Clarion Hotel Helsinki, located in the new Jätkäsaari (Busholmen) urban investment district in the central West Harbour area.

Helsinki's city centre, shops and metro station are just a short walk away. Alternatively, you can hop on a tram right next to the hotel.

Participants who wish to book accommodation should contact the conference hotel directly. reservations.cl.helsinki@choice.fi or via tel. +358 10 850 3820. When booking hotel rooms, remember to refer to the allocation name NORDIWA.

Social Program

There will be a Helsinki City reception at The Helsinki City Hall on Monday 23rd September 2019.

The conference dinner will be held at the conference venue, Clarion Hotel Helsinki on Tuesday 24th September 2019.

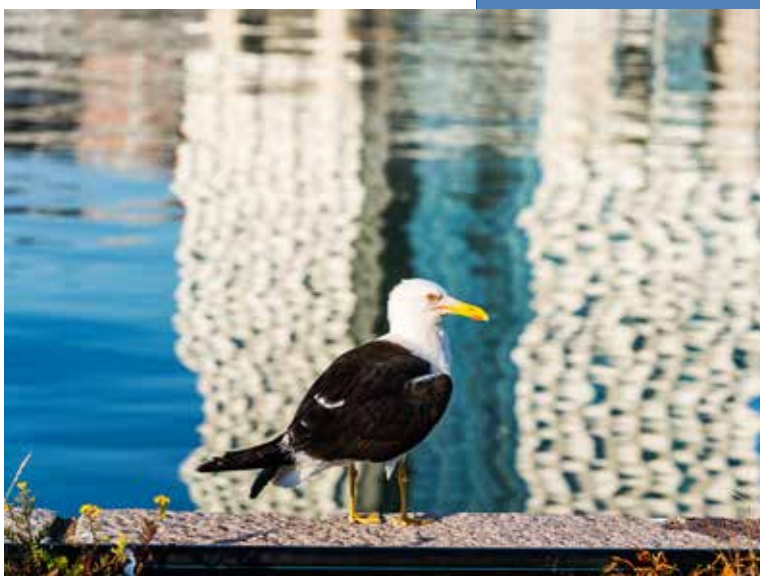
Hotels and Tourism

Information about hotel booking and being a tourist in Helsinki: https://www.myhelsinki.fi/en

Please register online
https://www.nordiwa.org/

Programme Committee

Lise Hughes, Aarhus Vand A/S, (IWA)
Helle Kayerød, DANVA
Marina Graan, Helsinki Region Environmental Services Authority, (IWA)
Mika Rontu, FIWA
Saijariina Toivikko, FIWA
Sigurjón Norberg Kjærnested, Samorka
Fjóla Jóhannesdóttir, Veitur Utilities (IWA)
Magnar Sekse, Bergen (IWA)
Arne Haarr, Norsk Vann
Anders Finnson, Svenskt Vatten
Anna Norström, Svenskt Vatten (IWA)
Pille Aarma, Estonian Waterworks Association



Conference Fee

all prices include VAT

Early Bird Discount until 1st August	1023 €
Standard Conference fee	1122 €
Early Bird Conference fee for platform presenters	682 €
Standard Conference fee for platform presenters	748 €
Early Bird Conference fee for brief and workshop presenters	920 €
Standard Conference fee for brief and workshop presenters	1010 €
Early Bird Conference fee for full- time students	460 €
Standard Conference fee for full-time students	540 €

The conference fee includes lunches, coffee, Helsinki city reception and conference dinner as well as excursions.

Further Information

For more information, see www.nordiwa.org or contact nordiwa2019@vvy.fi

DANVA Dansk Vand- og Spildevandsforening · FIWA · Norsk Vann · SAMORKA · Svenskt Vatten