

# INVITATION

Danish Water Forum proudly invites you to join the 16<sup>th</sup> Annual Water Research **Face-to-Face** Conference on **20<sup>th</sup> April 2022**, providing you with 50+ presentations within a wide spectrum of themes from both Denmark and abroad.

**Venue: University of Copenhagen, Thorvaldsensvej 40, 1871 Frederiksberg C, Denmark**

The program is outlined below!

[REGISTRATION HERE](#)

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**AWARDS:** DWF is proud to announce that our members Grundfos and NIRAS are sponsoring 2 awards of 10.000 DKK each, which will be given to two young scientists for the two best presentations. The award-winners will be announced at the end of the conference.



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## PROGRAM

**OPENING SESSION, 20 April 09:45-12:25 (All time slots given in the program are CET)**

**THEME: Water at the crossroad**

Moderator and Chair: Bjørn K. Jensen, Vice chairman, Danish Water Forum

- 09:45 Welcome, by Hans-Martin Friis Møller, Chairman, Danish Water Forum
- 09:55 Logistics, by Jesper Dannisøe, Director, Danish Water Forum
- 10:00 Water Valley Denmark; A new concept! Ulla Sparre, Director
- 10:15 The Strategic Sector Corporation Water Programs; Aims and opportunities for Danish Water Stakeholders. Tobias Kvorning, Danish EPA
- 10:30 The Danish 2030 Water Vision! A moderate success up for a boost! NN, DI-Vand
- 10:45 Central Jutland Commercial lighthouse initiative on water, based on REACT funding. Michael Johansen, CLEAN
- 11:00 Q&A and Break
- 11:25 The value of attending large-scale water events! Ilse Korsvang, Dansk Export.
- 11:45 Water Technology Alliance in Europe. Jakob Andersen, Consulate General, Hamburg.
- 12:05 Water4All, partnership for research and innovation on water in Horizon Europe. Bjørn K. Jensen, DWF.
- 12:25 Lunch break

**See next page for technical sessions**

Corporation partner:



**Technical sessions:**

Session and date	Title	Chair and co-chair
<b>Session 1:</b> 13:00 – 15:00	Advances in wastewater treatment; New approaches and techniques. Part 1	Hans-Martin Friis Møller, Danish Water Forum and Kalundborg Forsyning,
<b>Session 2:</b> 15.15 – 17.15	Advances in wastewater treatment; New approaches and techniques. Part 2	Hans-Martin Friis Møller, Danish Water Forum and Kalundborg Forsyning,
<b>Session 3:</b> 13:00-15:00	Drinking water; challenges and solutions	Hans-Jørgen Albrechtsen, DTU Envir. and Torben Lund Skovhus, Via University College
<b>Session 4:</b> 15:15-17:15	Urban water and Climate change	Ole Mark, Krüger
<b>Session 5</b> 13:00 – 15:00	The export strategy for SME's (IN DANISH)	Bjørn K. Jensen, Danish Water and Jesper Goodley Dannisøe, DWF secretariat.
<b>Session 6:</b> 15.15 – 17.15	Ground water resources and management	Anders Refsgaard, COWI, Anders Bækgaard, IWA Congress President
<b>Session 7:</b> 13:00-15:00	The Neptun project: Interactive session on Water Climate challenges across the Danish – German border; An interactive session	Lotte L. Andersen, CLEAN
<b>Session 8:</b> 15.15 – 17.15	Start-ups in water – a way to drive innovation in the sector; An interactive session	Inês Breda, Moderator, Young Water Professionals Denmark

After the sessions, the host invites you to drinks, snacks and mingling, followed by the nomination of the two prizes, from NIRAS and Grundfos.

It is possible to sign up for a post-conference dinner. See conditions in the registration at [www.danishwaterforum.dk](http://www.danishwaterforum.dk)

Registration fee incl lunch, breaks, snack, drinks (ex. VAT):

- Students: 400 DKK
- Members of DWF and CLEAN: 800 DKK
- Non-members: 1.200 DKK

The conference does NOT offer online access to the sessions.

<b>Session 1 and 2:</b> 13:00 – 17:15	Advances in wastewater treatment; New approaches and techniques. Part 1+Part 2	Hans-Martin Friis Møller, Danish Water Forum and Kalundborg Forsyning,
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Speaker	Topic
Vaidotas Kisielius	Predicted no-effect concentration (PNEC) – based design for removal of pharmaceuticals in wastewater treatment plant
Kai Bester	The CW Pharma 2 monitoring of Danish Wastewater Treatment plants and implications for advanced treatment for Pharmaceuticals
Guochen Wang	Efficient removal of micropollutants in an anaerobic-aerobic two-stage moving bed biofilm reactor coupling with manganese redox cycling
Carlos A. Ramírez-Vargas	Assessment of real-scale Microbial electrochemical assisted treatment wetlands (METland) for wastewater treatment
Adam Kovalovszki	Strategic food waste disposal to improve the C:N ratio and process economy within Danish wastewater treatment plants
Morten Haugaard Nielsen	A novel membrane process to achieve zero liquid discharge in desalination and wastewater treatment
Xavier Flores Alsina	Plant-wide assessment of alternative activated sludge configurations for biological nutrient removal under uncertain influent characteristics
Christian Lunøe Holmboe	Long-term model based evaluation of flexible Model Predictive Control in Kolding WRRF
Aamer Ali	Magnetic micro vehicles to pickup small oil droplets from water
Ravi Kumar Chhetri	Disinfection of antibiotics resistant bacteria from wastewater at the hospital
Borja Valverde Pérez	Membrane-aerated biofilm reactors (MABRs) for high-rate nitrification: potential benefits of intermittent aeration
Henrik Rasmus Andersen	Offshore biological treatment of oil and gas produced water
Adisak Manaying	Minimization of plastic emissions from WWTP through development of biodegradable flocculants
Vasileios Chrysochoidis	Impact of gas transfer models on the prediction of N <sub>2</sub> O emissions during wastewater treatment operations
Lasse Ahrenkiel Thyssen	Bacterial community structure and degradation kinetics in relation to cyanotoxin bioremediation in constructed wetland mesocosms
Cristina Cvitanich	Elimination of H <sub>2</sub> S in sewer systems using data driven electrocoagulation

<b>Session 3:</b> 13:00-15:00	Drinking water; challenges and solutions	Hans-Jørgen Albrechtsen, DTU Envir. and Torben Lund Skovhus, Via University College
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Speaker	Topic
Natasa Skrbic Mrkajic	Removal of phytotoxins in filter sand used for drinking water treatment
Daniel B. G. Jorgensen	Modeling the environmental fate of the natural toxin ptaquiloside: production, release and leaching to groundwater
Martin Bymose	Advanced Water treatment for N, N dimethylsulfamid (DMS) in drinking water
Martin Rygaard	Some observations on Danish drinking water mineral composition
Torben Lund Skovhus	Effect of early biofilm formation on water quality during commissioning of new PE (polyethylene pipes) at Mosevangen, Aarhus, Denmark
Julie Bruun Jensen	Pesticide removal using microbes
Xingao Yuan Xiong	Effective fluorine elimination of PFOA by ultrasound
Hans Chr. Bruun Hansen	Plant toxins as water contaminants - which are the controlling factors?
Mulatu Yohannes Nanusha	Occurrence of phytotoxins fingerprint in waters from Vejle river
Jawameer R Hama	Occurrence and Leaching of Alkaloids from Blue Lupin ( <i>Lupinus angustifolius</i> L.)

<b>Session 4:</b> 15:15-17:15	Urban water and Climate change	Ole Mark, Krüger
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Speaker	Topic
Song Wang	Electrochemical and Microbiological Response of Exoelectrogenic Biofilm to Polyethylene Microplastics
Pedro Carvalho	Treatment of organic micropollutants by nature-based solutions: one of the scopes of the MULTISOURCE project
Kristine Engemann Jensen	Water or waste - Integrating biodiversity and communities towards urban sustainability in South Africa
Alba Martinez I Quer	Constructed wetlands for the treatment of cyanotoxins: Initial results
Zhenyu Yang	Management of microplastics in urban aquatic systems using vortex-based cyclone separation: what we learn from de-oiling hydrocyclone technology used in offshore oil & gas produced water treatment
Solvei Mundbjerg Jensen	Evaluation of seasonal dynamics in the water balance and vegetation for an evapotranspirative willow system
Fenjuan Rose Schmidt Hu	Going beyond data-centric—digital models for water cycle management and water facilities
Magnus Bjerrum Johansen	Fully automatic creation of urban drainage surrogate models for smart water applications

<b>Session 5</b> 13:00 – 15:00	The export strategy for SME's (IN DANISH)	Bjørn K. Jensen, Danish Water and Jesper Goodley Dannisøe, DWF sekretariat.
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Sessionen er et led i Innovationsforløbet WATER TECH BOOST med deltagelse af CLEAN, DTU Water, WATEC (Aarhus Universitet), Teknologisk Institut, CALL Copenhagen (HOFOR), se <https://www.cleancluster.dk/project/vandklynge-konsolidering/>. Eksportfremmesessionen er det sidste af tre DWF events med fokus på offentlig og privat finansiering af forretningsudvikling i SMV.

Speaker	Topic
Jeppe Falck, DI	Hvordan ser SMV'er på eksportmarkedet, og hvor ser de udfordringerne.
Ilse Korsvang, Exportforeningen	Skal vand SMV'er satse på nærmarkeder eller fjernmarkeder (Asien og Afrika) – hvad siger erfaringerne?
Søren Schou, AquaReg	Regulering som driver for eksport af danske vandløsninger
Peter Heydorn, Trade Council	Hvordan kan eksportrådet/eksportrådgiverne på ambassaderne hjælpe SMV – og på hvilke vilkår?
Sune Kaur-Pedersen Infrastructure Finance	Er der hjælp at hente i Innovationscenter Danmark i forhold til at støtte SMV eksportinitiativer.
Lars Skov Andersen, ChinaRM	Er systemløsninger/multistakeholder konsortier en gangbar løsning for SMV til at få fodfæste på eksportmarkeder
Bjørn Kaare Jensen, DWF	Afsluttende bemærkninger.

<b>Session 6:</b> 15.15 – 17.15	Ground water resources and management	Anders Refsgaard, COWI, Anders Bækgaard, IWA Congress President
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Speaker	Topic
Yrsa Josefina Larsson	Fate of Cyanotoxins in Treatment Wetlands: Transformation Products
Ronja Cedergreen Forchhammer	When the water rises from the ground-The relations between groundwater and sea level in Juelsminde
Rikke Markfoged	Water pre-treatment for optimization of PFAS-removal
Mathias Østbjerg Vang / Niels Skindhøj	Updates on the Apsu Surface NMR system - Examples from Danish Field Cases
Carlos Alberto Arias	Influence of Delta-hexachlorocyclohexane ( $\delta$ -HCH) to Phytophthora xalni resistant Alnus glutinosa genotypes - evaluation of physiological parameters and remediation potential of HCH contaminated soils and waters
Henrik Madsen	Integration of Earth observation data in a global hydrological modelling and forecasting system
Klaus Hindsby	The digital European groundwater information platform – supporting the UN SDGs and the European Green Deal
Denitza Voutchkova	Natural background levels of trace elements in groundwater: concept, purpose, important factors
Tina Bundgaard Bech	Degradation of MCPA, Metolachlor and Propiconazole in the hyporheic zone of an agriculturally impacted stream

<b>Session 7:</b> 13:00-15:00	The Neptun project: Interactive Sessions on Water Climate challenge in CLEAN projects: Early Warning, Modelling Groundwater level and Intelligent Wells	Trine S. Jensen and Lotte Lindgaard Andersen, CLEAN
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In the Danish- German **Interreg project** NEPTUN led by CLEAN, the Danish Environmental Cluster, two innovations projects address the challenges with too much urban water and climate changes possible effect on the groundwater level.

Both projects are facilitated by Kiel University and involve problem owners and water utilities on both sites of the Danish-German border in developing new innovative solutions. The projects are aiming to develop digital warning systems/models, that can foresee the effect of extreme rainfall on either the water infrastructure in the city of Flensburg or the groundwater formation in a catchment area of a waterwork in Norderstedt

- **Early Warning systems:** Development of a digital hydraulic model, that combines flow i the sewer systems and on the surface (Partnership: Hydro and Meteo GmbH, TBZ, LNH Water, Kjartan Ravn Consult ApS and Kiel University)
- **Decreasing groundwater level:** Methods for understanding decreasing groundwater level and ensure adequate future groundwater formation (Partnership: HGSim, Norderstedt Waterworks, Mattle and Kiel University)

The two climate adaptations projects are targeting to develop model-based solutions to solve:

1. the congestion of the lack of capacity in sewer systems during large rainwater masses through an ‘early warning system’ and
2. Solutions/actions to handle falling groundwater levels and why this phenomenon happens in Slesvig - Holstein but not in the Region of South Denmark.

The session will be **interactive**. First there will be two pitches about early warning system, Kiel University (CAU) and involved companies (represented with LNH water) presenting the problem-owner challenge, the purpose and the results so far, the LNH water will tell about the modelling work so far and the expected prototype.

In the second section Kiel University (CAU) and involved companies (represented by Mattle) the university of Kiel telling about the challenges from will tell about the modelling work so far and the expected prototype.

These pitches will serve as an introduction to an interactive session – where the audience at tables will discuss:

1. suggestion for improvements to the suggested solutions
2. Is the solution applicable in a wider context – what are the possibilities.

Speaker	Topic
Agnes Sachse	Declining groundwater levels
H. Baumann	Integrated assessment modelling and flood forecasting for urban rainwater systems

<b>Session 8:</b> 15.15 – 17.15	Start-ups in water – a way to drive innovation in the sector	Inês Breda, Moderator, Young Water Professionals Denmark
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The session will present two cases of Danish start-ups selected from the Next Generation Water Action 2021 programme. The discussion will include: How to create a business case? How to create a start-up? How to grow a business? We are looking forward to inspiring you to pursue your ideas and find ways to integrate social needs with technical knowledge.

1. 10 min – Intro: What is a start-up? The importance of innovation in the water sector. What are your business ideas? (Inês Breda)
2. 15 min – Case 1: [Tollson](#) - presentation of the business and possible overview in Canvas (Christoffer)
3. 15 min – Case 2: [4Life](#) - presentation of the business and possible overview in Canvas (Julia)
4. 10-15 min Open panel (Christoffer, Julia and participants – Inês as facilitator)
5. 5 min Closing remarks