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Global Center Opening
Monday, October 2 | 10:00 am - 10:30 am

MODERATOR
Ifetayo Venner | President, Water Environment Federation (WEF)

SPEAKERS
Radhika Fox | Assistant Administrator, U.S. Environmental Protection Agency, Office of Water
Heather Evans | Deputy Assistant Secretary for Manufacturing Industry & Analysis, International Trade Administration, U.S. Department of Commerce

WEF President, Ifetayo Venner will inaugurate the Global Center with a message from WEF followed by The Honourable Radhika Fox, Assistant Administrator, U.S. Environmental Protection Agency, Office of Water and Heather Evans, Deputy Assistant Secretary for Manufacturing Industry & Analysis, International Trade Administration, U.S. Department of Commerce.

Case Studies: How Saudi Aramco is Successfully Maximizing Wastewater Use
Monday, October 2 | 10:30 am - 11:00 am

ORGANIZER
Saudi Aramco

MODERATOR
Mohammed H. Abdulatif | Manager Utilities, Saudi Aramco/Utilities & Facilities Services Department

SPEAKER
Ibrahim Nassar | Senior Engineering Consultant, Saudi Aramco/Facilities Planning

The Kingdom of Saudi Arabia is the largest country in the world without surface water, and natural fresh water resources are limited to non-renewable groundwater. Accordingly, the Kingdom has many seawater desalination plants to supply more than 8 million cubic meters, which is expected to increase to 12 million cubic meters over the next 15 years. Aramco, one of the largest energy companies in the world, depends heavily on water for its communities and plant processes. In this paper, three diverse wastewater reuse case studies will be presented to highlight how Aramco is successfully maximizing reuse opportunities, to reduce the stress on fresh water demands.

The case studies include:
1. Expansion of wastewater treatment with full treated sewage effluent reuse in Dhahran area
2. The successful replacement of fresh water at cooling towers with treated sewage effluent, and
3. The upgrade of a sewage treatment plant and installation of an irrigation network at the Ras Tanura Community to offset the demand for fresh water.

In specific, the case studies will present the feasibility assessments, laboratory testing, scope of work of the projects, water balance, as well as savings in groundwater or fresh water supply.
Drought periods and the subsequent decrease of water resources is becoming more frequent due to the effects of the climate change. Besides, the Mediterranean region is one of the most affected in Europe. The presence of a water cluster in Catalonia, the Catalan Water Partnership (CWP), is a key asset in finding solutions, technologies and methodologies to guarantee future water sources in terms of quality and quantity. The CWP encompasses a broad range of actors representing the whole water value chain, focused in the sustainable use of water. Five European companies will take part in the panel presentation to present solutions related to the efficient use and management of water resources, through digitalisation, advanced and innovative technologies or the use of non-conventional water sources to mitigate the effects of climate change. Participants in this session will be able to interact with the speakers and ask questions related to their interventions.

Spain is within the world’s top countries that are leading the digital transformation of the water sector. The panel will showcase the latest solutions developed by three Spanish companies that are spearheading this transformation at home and abroad. We will be hearing from: GoAigua explaining their Digital Twin which is one of the only “at-scale” digital twins worldwide today. Minsait (Indra group), describing their innovative proposals to connect the physical and digital worlds. More particularly, the company will present Oblysis, a disruptive technology that optimizes the operational efficiency of wastewater treatment plants by focusing on: (i) energy consumption; (ii) sludge production; and (iii) additive consumption. Agualia, recognized as the Best Water Company of the Year” at the Global Water Awards 2023. The company will take us through their sustainability models and latest research which have contributed to place them as the third largest private water company in Europe, sixth largest in the world, and European Union’s biggest partner in water research.
Utilities as Changemakers in Global Water Security
Monday, October 2 | 1:00 pm – 2:00 pm

ORGANIZER
U.S. Water Partnership

MODERATOR
Christopher Rich | Executive Director, U.S. Water Partnership

SPEAKERS
Heather Evans | Deputy Assistant Secretary for Manufacturing for the International Trade Administration, U.S. Department of Commerce
Bernard Koh | Assistant Chief Executive, Singapore Public Utilities Board
Carlos Schauff | PNQS Technical Consultant, ABES
Paula Kehoe | Director of Water Resources, San Francisco Public Utilities Commission

This session will discuss the role of water and wastewater utilities in addressing global water security. As centers for research, education, innovation, and climate advocacy, water utilities can act as changemakers far beyond their area of operation. As they strive to meet growing demand for services and simultaneously act as stewards of diminishing resources, utilities must factor long-term sustainability against pressing current needs. This geographically diverse panel will discuss how the utilities they represent or with whom they work are using innovation and forging strategic plans for climate adaptation and water security.

Mexico’s Water and Wastewater Opportunities
Monday, October 2 | 2:00 pm – 3:00 pm

ORGANIZER
U.S. Commercial Service, U.S. Embassy, Mexico City, ANEAS, BANOBRAS

MODERATOR
Francisco Cerron | Senior Commercial Specialist, Commercial Service US Embassy Mexico City

SPEAKERS
Jose Lara | President, ANEAS
Carlos Andres Puente | Director, Water, Energy and Environment Projects, BANOBRAS

According to Mexico’s National Water Commission (CONAGUA), Mexico has ten major rivers, more than 180 dams and 4,820 small reservoirs: a total of 984 potable water treatment plants, 2,540 municipal wastewater treatment plants and 3,144 industrial wastewater treatment plants. CONAGUA officials and water authorities in major urban centers recognize that there is a need to upgrade the existing infrastructure that has been operating at 45 percent capacity over the last two years due to the lack of projects. CONAGUA’s authorized budget for 2022 was $2 billion, ten percent of which has been allocated to small projects to improve the existing infrastructure in major cities such as Monterrey, Guadalajara, Tijuana, Reynosa, Ciudad Juarez, Tampico, Veracruz, Villahermosa, Merida, Hermosillo, Morelia, and others. Sources in the private sector recently commented that major manufacturing companies are contemplating to invest over $500 million in equipment and services for industrial wastewater treatment plants between 2023 and 2025 to meet new industrial effluent discharge standards.

Collaborative Procurement - Model Impacts on Utility Managers and Operators
Monday, October 2 | 3:00 pm – 4:00 pm

ORGANIZER
WSP USA

MODERATOR
Brian Shell | Assistant Vice President, Water Alternative Delivery Advisory Services, WSP USA

SPEAKERS
Lynnell Crone | President, Integrated Delivery Alliance and Bird Construction
Cheryl Nelms | General Manager, Project Delivery, Metro Vancouver
Lalith Liyanage | National Technical Director, Wastewater, WSP Canada

Collaborative procurement is being utilized by owners around the world to deliver projects with greater schedule and budget reliability. It is an innovative approach being advocated by investors and senior management professionals but what does it mean to “on the ground” project delivery and operations. This panel will discuss the skills needed by engineers, plant managers and operators to get the most from collaborative procurement. The panel will address:

- Forms of collaborative procurement ranging from design-build to construction management at risk to public private partnerships/design-build-finance-operate-maintain.
- Successes globally in wastewater including distinctions in implementation abroad vs. in US.
- Impacts on operations
- Specific tools utilized (early procurement engagement via one-on-one meetings, pull planning, big room, weekly work plan, Project Implementation Teams)
- Conditions of Satisfaction
- Training

International Reception
Monday, October 2 | 4:00 pm – 5:30 pm

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Solutions for PFAS Management
Tuesday, October 3 | 9:00 am - 10:00 am

ORGANIZER
Freese and Nichols

MODERATOR
Viraj deSilva | Freese and Nichols, WEF PFAS Task Force Chair

SPEAKERS
Viraj deSilva | Sr. Treatment Process Leader, Freese and Nichols
Trevor Whitson | Product Portfolio & Marketing Director, Revive Environmental

Per- and polyfluoroalkyl substances (PFAS) pose a significant threat to the environment and human health due to their persistence and associated risks. This session will cover PFAS management strategies and success stories of PFAS destruction.

The first presentation will cover PFAS treatment systems operating in the US: Treatment Plants currently operating in Florida, Alabama, North Carolina, Michigan, and California.

The second presentation will focus on PFAS destruction: A full-scale facility utilizing foam fractionation (FF) and supercritical water oxidation (SCWO) to concentrate and destroy PFAS from contaminated wastewater, landfill leachate, and Aqueous Film Forming Foam (AFFF), rendering them non-detect, with PFAS-free water as the end product.

Participants in this session will be able to learn:
- Water Treatment systems to remove PFAS currently operating in the US
- Capital and O&M Costs associated with PFAS Treatment
- PFAS Destruction Technologies
- The capabilities and commercial readiness of FF and SCWO in treating waste streams impacted by PFAS

Dutch Innovations for US and Global Challenges – Get Inspired by Dutch Smart Water Solutions*

Tuesday, October 3 | 10:00 am - 11:00 am

ORGANIZER
Water Alliance

MODERATOR
Stefan Bergsma | International Project Manager/International Business Developer, Water Alliance

SPEAKERS
Erik Driessen | CEO, Acquaint
Tonnie Telgenhof Oude Koehorst | Global Sales UV, Nedap
Casper ten Bokkel | International Sales Manager, P.B. International
Barbara Berson | CEO, UVOX Redox
Martin Tielbaard | Sr. Sales manager, Paques Environmental Technologies
Eric Wildeboer | Managing Director, Berghof Membranes

Dutch water tech innovators will present their solutions on global and US water challenges. Sharing state of the art innovations on for example Inspection techniques, UV disinfection, wastewater treatment and re-use, and other new innovations. US and Dutch partnerships strengthen R&D, innovation and doing business together; let’s get connected on water tech innovation.

Meet Utility Technical Experts from Japan!

Tuesday, October 3 | 11:00 am – 12:00 pm

ORGANIZER
Japan Sewage Works Association (JSWA)

MODERATOR
Yosuke Matsumiya | Director of International Programs , Japan Sewage Works Association (JSWA)

SPEAKERS
Masashi Yamato | Staff Member/Drainage and Industrial Wastewater Guidance Section, Facilities Management and Maintenance Division, Tokyo Metropolitan Government (TMG)
Kento Sawada | Senior Staff Member/Sewer Maintenance Section, Facilities Management and Maintenance Division, Tokyo Metropolitan Government (TMG)
Kentaro Muroya | Civil Engineer / Sewage Works Management Division, Environmental Planning Bureau, City of Yokohama

The three Japanese utility professionals will speak about about their innovative management practices and research work. Masashi Yamato will speak about Tokyo’s strategy to protect its collection system from the discharge of dialysis clinics after it discovered a sewer damage from the strong acidic discharges. The conventional approaches such as the awareness campaign and enforcement would have taken time to contain the problem. Then, Tokyo initiated holistic approaches. Kento Sawada talks about the development of the anti-slip manhole cover in Tokyo. He tested thirteen prototypes with different shapes, heights, and density of the protrusions to investigate their slip resistance and then chose two to make the prototypes. The developed covers have been installed since 2021. He will share the knowledge he gained while he was developing the cover. Kentaro Muroya will talk about Yokohama’s creation of its flood hazard map to raise awareness of disaster prevention leading to reduced inundation damage. The map created assumes 153 mm/h, the maximum rainfall that may occur in Yokohama City. He compared eight scenarios with the two hyetograph shapes and the four river levels. The selected scenario was a central wave and “river-sewage integrated model, flooding from river”. After a 10-15 min presentation each, a 5 min Q&A is set aside.

* Denotes programming as part of the Water Cluster Leaders Forum (WCLF)
O Canada!: Canadian Wastewater Innovators Aren’t Sorry They’re Taking the Lead

Tuesday, October 3 | 12:00 pm - 1:00 pm

ORGANIZER
Canadian Trade Commissioner Service

MODERATOR
Corinne Lynds | Content Director, Water Canada Magazine

SPEAKERS
Amirreza Sohrabi | CEO, Roshan Water Solutions
Macarena Cataldo-Hernandez | Co-Founder & CEO/CTO, Viridis Research Inc.
Tristan Walker | Global Sales Manager, Pipe Trekker Inc.
Patrick Kiely | Founder and CEO, SENTRY Water Tech

Dive into Canada’s thriving wastewater cleantech sector with industry leaders showcasing transformative technologies, game-changing innovations, and digital advancements that are positioning Canada as an industry leader on the global stage. With a focus on Canadian innovations that are addressing pressing wastewater challenges with cutting-edge solutions, the discussion will also offer insight into the value of international partnerships, the potential for cross-border synergy, and why Canada’s vibrant wastewater cleantech industry cannot be ignored.

Construction and Operation of Energy Efficient and Sustainable Wastewater Treatment Plants – German Experiences

Tuesday, October 3 | 1:00 pm - 2:00 pm

ORGANIZER
The German Association for Water, Wastewater and Waste (DWA)

MODERATOR
Dipl.-Ing. Johannes Lohaus | Managing Director, The German Association for Water, Wastewater and Waste (DWA)

SPEAKERS
Prof. Dr.-Ing. Andre Niemann | Head of the Institute of Hydraulic Engineering and Water Resources Management University of Duisburg-Essen
Dr.-Ing. Michael Kuhn | Managing Partner, KUHN GmbH

The limitation of greenhouse gas emissions is a major target in Europe. The European Green Deal and the new proposal of the European Commission for the revision of the Urban Waste Water Treatment Directive demand energy neutrality for wastewater treatment plants bigger than 10,000 p.e. until 2040. Therefore, German operators and manufacturers are facing major challenges. The first presentation in this session “Opportunities for energy and resource recovery on WWTPs in Germany” will illustrate central aspects of saving CO2 emissions, for example through waste heat recovery from wastewater and through reuse of water. In Germany, large-scale pilot projects and demonstration plants had been carried out to show conversion strategies of wastewater treatment plants. The second presentation “Sustainability as a challenge for manufacturers” will point out how manufacturers take the sustainability aspects into account. This includes among others the design, the selection of materials and the question of recycling of the machines after use. This is an interactive process between the manufacturers and the customers. And at the end it is quite challenging not to build cheap in the first place and to pay later.

Bridging Clusters: Connecting the World of Water*

Tuesday, October 3 | 2:00 pm - 3:00 pm

ORGANIZER
Daegu City, Korea Water Partnership (KWP)

MODERATOR
Dr. Jin-Young Jung | Professor/Yeungnam University

SPEAKERS
Xavier Amores Bravo | Director, Catalan Water Partnership
Scott Gronnegaard Allison | Head of International & Chief Project Manager, CLEAN
Huiwoong Bae | Manager, Korea Water Cluster
Bryan Stubbs | President, Cleveland Water Alliance

This session is for the 4th World Water Cluster Leaders Forum. We will highlight the successes and experiences of water clusters and discuss ways to strengthen global networks and foster the blue economy. In this session, we would like to share the water cluster’s experiences about adopting innovative solutions by country and city and to find out the way to be a water tech accelerator.

Optimizing the Energy Balance of Wastewater Treatment – The Case of the Helsinki Metropolitan Area

Tuesday, October 3 | 3:00 pm - 3:30 pm

ORGANIZER
Helsinki Region Environmental Services HSY

SPEAKER
Kristian Sahlstedt | Helsinki Region Environmental Services HSY

The water, wastewater and municipal waste services for the Greater Helsinki Region (pop. ~1,3 M) shall be carbon neutral by 2030. We present the technical and operational improvements that have increased our WWTP’s electrical self-sufficiency up to >90 %. For heat, self-sufficiency is > 100 %. The most notable features are: i) on-line optimization of energy balance, involving WWTP, water treatment plant, own production and purchase from / selling to the market, taking into account the hourly spot-price of electricity and variability of own production; ii) applying various energy sources, including biogas, air, sludge, solar and market; iii) investments made for improving efficiency of own electricity production and use; iv) optimized recovery and re-use of heat at various points of the treatment process. In addition, we present how heat and cold are recovered from treated wastewater and used for district heating & cooling by local energy companies. The system is a showcase of circular economy with direct positive climate impact. We will also reflect on how the reduced dependency on external energy sources improve the crisis resilience of our services.

* Denotes programming as part of the Water Cluster Leaders Forum (WCLF)
Innovative Solutions for Tackling Inflow and Infiltration (I&I) in the Finnish Public Wastewater System: Aquapriori’s Leading Role in Addressing a Global Challenge

Tuesday, October 3 | 3:30 pm - 4:00 pm

ORGANIZER
AquaPriori Oy (Ltd)

SPEAKER
Harri Rautio | Founder/CEO, AquaPriori OY (Ltd)

AquaPriori Oy (Ltd) is a small Finnish company that has been operating since 2012, specializing in conducting condition inspections on water supply and sanitary sewer networks. AquaPriori has made significant contributions to addressing the challenge of inflow and infiltration (I&I) in the Finnish sanitary sewer system, primarily through its innovative solution known as AquaDuoscope®.

In Finland, the management of water treatment utilities has been focused on improving their understanding of the I&I problem, utilizing a specific approach known as the general-to-specific approach. A case study of HS-Vesi, a regional water company in Finland, sheds light on the practical application of AquaDuoscope®. HS-Vesi has adopted AquaDuoscope® as a valuable tool to address I&I issues within its sanitary sewer system. AquaDuoscope® is designed to track the most problematic leaking areas and pipelines, precisely identifying the sources of I/I. The core principle of the AquaDuoscope® measuring method involves assessing the flow rate and I&I content in sanitary sewer pipelines. It achieves this by comparing various parameters of a wastewater sample, such as pH, temperature, conductivity, and ORP, to an AI-driven database.

AquaPriori have expanded their reach by introducing AquaDuoscope® SaaS (Software as a Service) to pilot projects in Wisconsin, USA.

Rethinking Water in Africa: Navigating Challenges and Embracing Opportunities

Wednesday, October 4 | 9:00 am - 10:00 am

ORGANIZER
Desalytics

MODERATOR
Walid Khoury | General Manager, Desalytics

SPEAKERS
Robert Hultz | Owner, RJH Growth Consultants
Charles Yeboah | Head, Business Analytics & Innovations, Safe Water Network
Tshoganetso Masunga | Community Development Coordinator & Research Analyst, JG Afrika (Pty) Ltd.
Nabil Benazzou | President, Moroccan Federation for Consultancy and Engineering
Selma Jariri | Deputy Technical and Engineering Director at the National Office of Electricity and Water

Join us for an engaging panel discussion as we reevaluate the water landscape in Africa, delving into the pressing challenge faced by the region and exploring innovative opportunities to foster sustainable water management and equitable access for all.

Digitalising the Water Sector: EU Solutions for Global and US Water Challenges*

Wednesday, October 4 | 10:00 am - 10:30 am

ORGANIZER
France Water Team

SPEAKERS
Thelma Pellicer | International Project Manager, France Water Team
Scott Gronnegaard Allison | Chief Project Manager & Head of International, CLEAN
Stefan Bergsma | International Project Manager / International Business Developer, Water Alliance
SME #1 | TBD
SME #2 | TBD
SME #3 | TBD

European water clusters collaborate to collectively address global water challenges, recognizing that country-specific or industry-specific solutions are inadequate. Their efforts involve connecting businesses, sharing opportunities, and rapidly advancing innovative solutions across various sectors. Through various projects and networks, European water clusters pursue highly collaborative and internationally oriented work. This session will showcase the digital innovations spearheaded by European SMEs in the water sector, leveraging the groundbreaking examples of European efforts such as the Water4all partnership and the International Cleantech Network (ICN). Participants can expect to see firsthand how European collaboration, as demonstrated via these successful partnerships, can lead to remarkable solutions for global water issues facing the US and beyond.

Collaboration ‘Across the Pond’ – US & EU Cluster Engagement *

Wednesday, October 4 | 10:30 am - 11:00 am

ORGANIZER
The Water Council

SPEAKERS
Karen Frost | VP Economic Development & Innovation, The Water Council
Stefan Bergsma | International Project Manager / International Business Developer, The Water Alliance
SME #1 | TBD
SME #2 | TBD
SME #3 | TBD

Join us for this conversational session between The Water Council, The Water Alliance (Netherlands) and CLEAN (Denmark) to hear about our cross-cluster collaboration including how we’ve jointly supported startups and SME’s in our respective markets and how we have leveraged each other’s programs, networks and business opportunities. You’ll also hear from startups and SME’s that have been involved with the cross-cluster work.

* Denotes programming as part of the Water Cluster Leaders Forum (WCLF)
Developing a Sustainable Tico Wastewater Industry

Wednesday, October 4 | 11:00 am - 11:30 am

ORGANIZER
Global Water Stewardship (GWS)

SPEAKERS
Elizabeth Heise | Project Engineer, Trotter and Associates
Sarah Guzman | Biosolids Process Engineer, Black & Veatch
Megan Livak | Director of Customer Strategy, Smart Cover
Joe Lapastora | Director of Operations, Northern Moraine WRD
Mohammed Haque | District Manager | Chief Executive, Northern Moraine WRD

Global Water Stewardship (GWS) is a 501c3 Organization that was created in 2013. Mohammed Haque, CSWEA Executive Director, founded the organization as a committee under CSWEA in response to what he saw as a need, and an opportunity. The need: improve the sanitation industry in Costa Rica; The opportunity: provide CSWEA members a way to fuel their passions and make a global impact. Costa Rica may not be the first place that comes to mind when considering international development projects given the stable economy that is fueled by tourism. Additionally, it is the only country in Latin America that provides safe, reliable drinking water to over 98% of its inhabitants. Wastewater infrastructure is a different story. In fact, only about 15% of wastewater is currently treated in centralized facilities prior to disposal. Approximately 70% is collected by either individual septic tanks or rural drainage systems and discharged without treatment. The Costa Rican Institute of Sewers and Aqueducts (AyA) has put in place a National Plan for Sanitation Improvements in line with SDG Goal 6. GWS has partnered with AyA to help achieve this goal. GWS does this by providing resources such as training opportunities, networking events, and public health campaigns.

Business Opportunities for U.S. Companies in Brazil

Wednesday, October 4 | 11:30 am - 12:00 pm

ORGANIZER
U.S. Commercial Service Brazil

MODERATOR
Thales Demarchi | Environmental Technologies Specialist, U.S. Commercial Service Brazil

SPEAKERS
Alexandre Anderaos | Superintendent of Basic Sanitation Regulations, Brazilian Water and Basic Sanitation Agency (ANA)
Valdemar Jorge | Secretary of Sustainable Development, State Government of Parana
Marco Antonio dos Santos | Technical Director, Water Utility of Parana (SANASA)

Brazil's water and wastewater industry has been seeing several developments recently, mainly due to a robust regulatory framework that was approved in 2020 and was recently reconfirmed by the new federal government administration. This new group of guidelines set the stage for the sector to grow exponentially in Brazil, allowing for an increased participation of private companies, an inflow of multi-billion-dollar investments, and a well-defined structure to develop regulations for sanitation operations throughout all Brazilian states. This regulatory framework also set the challenging goal of reaching 99 percent of potable water access and 90 percent wastewater collection and treatment access by 2033 – currently, these levels are at 84.2 percent and 55.8 percent respectively. During this session, you will hear directly from key Brazilian sector stakeholders about the challenges the country is facing, and will face, trying to reach this goal and how it translates into business opportunities for U.S. suppliers of water and wastewater products and technologies.

WEF gratefully acknowledges WSP for its sponsoring of the Global Center.

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