

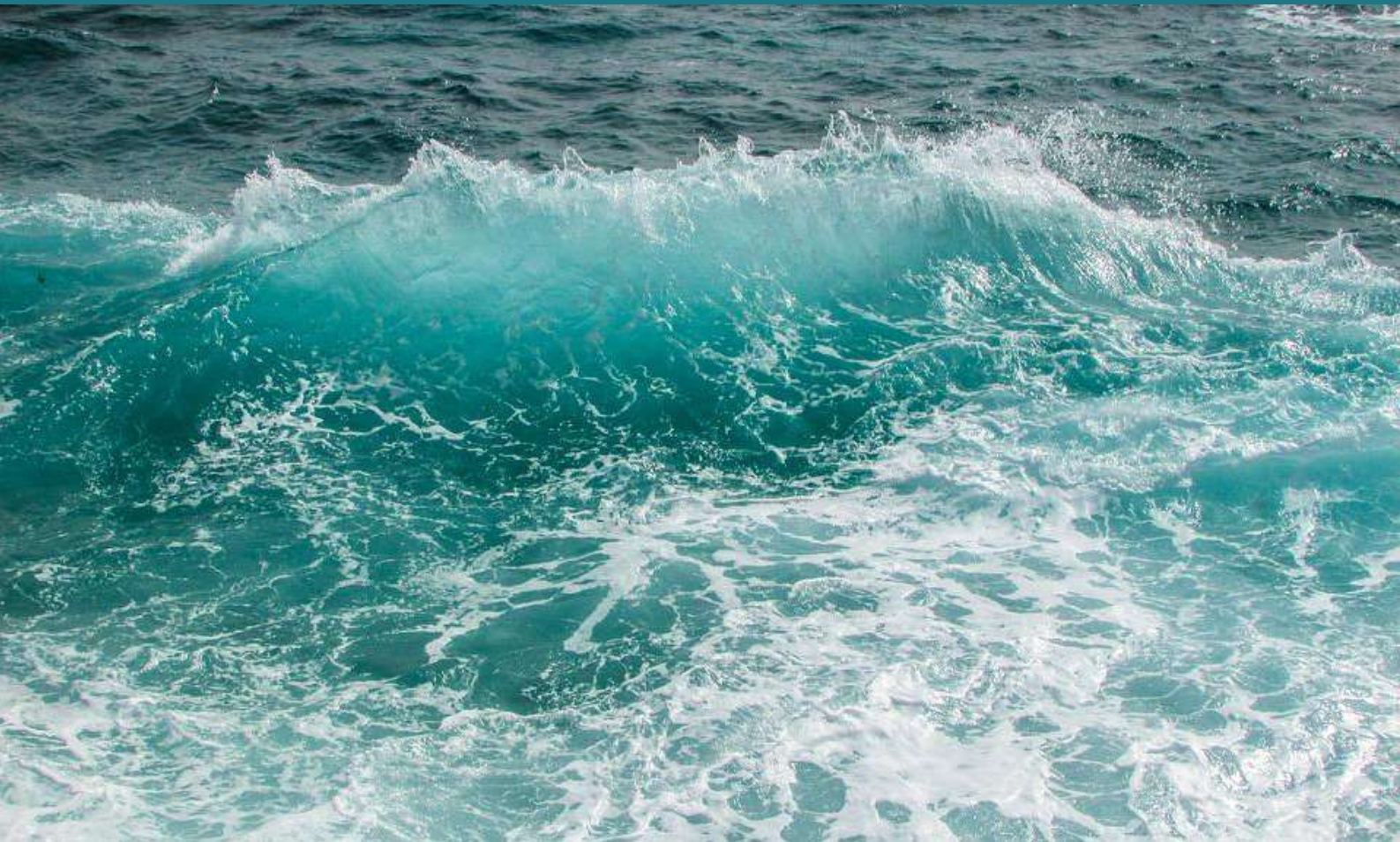
AFRICA

Water Desalination, RO/Membrane & Wastewater Reuse Hybrid Conference 2021

"Current Technological Developments To Curb Water Challenges"

Date: 27th – 29th October, 2021

Venue: Radisson RED, V&A Waterfront, Cape Town



Conference Sponsor and Exhibitor Opportunities

The Conference offers the opportunity to become a conference sponsor or exhibitor.

To participate as a sponsor or exhibitor, please email info@zambezipride.co.za

Organized by **Zambezi Pride** your number one Training Provider

Meet The SPEAKERS



Abraham Tenne
Former Head: Desalination Division and Chairman of the WDA (water desalination administration) at Israeli Water Authority



Melanie Loram
Technical Specialist at ImproChem



Strover Maganedis
Director at National Treasury of South Africa.



Dr. Luyanda Ndlela
Senior Researcher: Wastewater Microbiologist at CSIR



Dr. Patrick Hlabela
CSIR senior researcher and competence area manager for hydraulic infrastructure engineering.



Katrina Zlobich
Head of global service sales development at GRUNDFOS



Tiaan Hendricks
Head of Department: Energy Design, Sales & Marketing at SEM Solutions (Pty) Ltd



Sydney Masha
Civil Engineer at the Commercial and Business Department, eThekweni Water and Sanitation



Gareth Schenck
Chief Operating Officer at Impact Water Solutions



Dr. Jeremiah Mutamba
Senior Manager for Strategic Programs at TCTA



Prathna Gopi
Water Treatment Area Manager at eThekweni Water and Sanitation



Herman Smit
Owner at Quality Filters Systems



Simon Wijnberg
CEO at Impact Free Water



Cobus Raubenheimer
Project Director at EPF Systems

Israeli Water Desalination Technology

Desalination in Israel in large scale facilities began to develop massively with governmental decisions from 2000 onwards.

The lecture will deal with the policy of desalination and its implementation in the coming decade with reference to future generations.

Desalination perimeters in Israel: Desalination of sea water currently desalination of about 670 MCM/Y. In the end of 2015 we reached a level sea water desalination rate of about 585 m³/h and about 70 MCM/Y.

The lecture will present the purpose of the Water Authority and closing the gap between supply and demand through water saving activities, water reuse and desalination.

The expected supply and demand data for the next decade will be presented and how the desalination plan is derived from them.

A comprehensive review of the current desalination plan will be provided and existing desalination plants will be described.

Application of Artificial Intelligence on the Water Infrastructure

“It seems that in today’s market, there are buzzwords in process automation like Industry 4.0, AI and Machine learning – but without industry knowledge, these new technologies and concepts cannot add value unless the correct application can be identified. This session will look at the issues around water treatment and desalination, and where Artificial Intelligence can bring meaningful improvements to an aged industry. “

Potential for micro-hydro generation in South Africa

Hydropower is an underutilized resource in Africa, which accounts for about 10% of the global hydropower potential. People are always expecting the power to go out in South Africa due to rolling blackouts. Every time it happens, the possibilities of alternative power generation are discussed, usually with a focus on wind and solar power. Question is: What about water?

This session will look at the potential role of micro hydropower from water treatment plants. in establishing access to electricity and eradicating energy poverty.

Case Studies:

- Israel Water Initiatives
- Desalination
- Reclamation
- Technology

Case Studies from AECl

PPP’s Case Studies

wastewater uses for micro-hydro Case Studies

OVERVIEW

It seems that in today's market, there are buzzwords in process automation like Industry 4.0, AI and Machine learning – but without industry knowledge, these new technologies and concepts cannot add value unless the correct application can be identified. This conference will look at the issues around water treatment and desalination, and where Artificial Intelligence can bring meaningful improvements to an aged industry.

The Water Desalination, RO/Membrane and Wastewater Reuse Conference aims to bring together leading academic scientists, researchers, engineers from membrane desalination, wastewater treatment associated industries as well as representatives of government organizations to exchange and share their experiences and research results on all aspects of Desalination and Water Treatment. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Desalination, Water Sources and Water Treatment.

The aim of this Conference is to provide an overview of both the theoretical and practical aspects of desalination, membrane technology, advanced oxidation processes, natural treatment systems, and wastewater reuse. This Conference will highlight innovative ways of tackling water shortages and government initiatives across the continent. Major players from government, industry, academia and commerce will meet to discuss the way forward, to find out if Public Private Partnerships are the solution to the water crisis in Africa. We will also echo the digital age terminology: Speed and agility, "big data", cyber security, transparency and optimization, all global vectors of change that should be leading the modern water industry mindset. The conference scope will include theoretical and applied research, technological and industrial development.

This conference is also open to the representatives of government organizations, international agencies and aid organizations to inform governments and stakeholders on key progress, research findings and newest development for strategic and policy reference.

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- **The broad areas proposed to be covered include but not limited to:**
- COVID-19 impact in Desalination
- Hyphenated and hybrid technologies: transformation of dispersive to non-dispersive operations
- Feed water pretreatment for desalination
- Seawater desalination by reverse osmosis
- Brackish water desalination
- Nanofiltration, ultrafiltration, microfiltration in water treatment processes
- Forward osmosis
- Pressure retarded osmosis
- Removal of specific compounds
- Membrane performance and maintenance
- Membrane reuse
- Fouling
- Biofilms
- SDI/MFI
- Novel Hybrid Systems and Module Design
- Energy recovery technology
- Renewable energy for desalination
- Solar, wind, wave, osmotic power
- Pre-treatment and post-treatment
- Desalination and water in industries: Oil and gas/Mining/Food and beverage
- Financing – public and private
- Cutting-edge technology and systems for water treatment and reuse
- PPP'S
- Alternative Water Sources in the Future.
- Storm water/Wastewater Reuse
- Use of biochar for Wastewater
- EDC in Wastewater
- Low-cost water purification for remote and disaster areas
- Case Study on PPP's
- Hydropower
- Inter basin transfer scheme used as mitigation during drought.
- Water Security.
- Innovative startups
- Case Studies from AECI

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Dear Delegate,

The fifth Water Desalination, RO/Membrane and Wastewater Reuse conference is a continuation of Zambezi Pride conferences held in Cape Town and Durban in South Africa.

The changing climate and increasing urbanization require increasing freshwater supply and the sustainable water usage for industries and agriculture is of top priority. One of the most viable solutions is to tap from seawater and wastewater. Membrane technologies have been established as the golden standard for desalination to address the global deficit for clean water. However, it is still expensive, which is one of the main obstacles for prevalent adoption of membranes.

Innovation is key to reduce the energy consumption and total cost. This can be advanced by developing high performance reverse osmosis and nanofiltration membranes, robust module and process design, as well as other novel desalination technologies. We have seen promise in breaking the perm selectivity trade-off using state of the art nanomaterials.

The fifth Water Desalination, RO/Membrane and Wastewater Reuse conference is the dedicated forum to disseminate the cutting edge research and development in this regard.

We are excited to host this important water event in the City of Cape Town and the City of Durban again. It will be a key platform for scientists and professionals in the membrane section of water research/industry to share the latest findings, exchange thoughts, and enlighten more ideas to advance membrane technologies for water purification, wastewater reuse, and desalination. This is an incredible business platform for developing effective strategies, sharing experiences, presenting new investment projects and innovations, consolidating efforts of governments and business to implement desalination projects and to increase water supplies all over South Africa.

At present we intend to host the event onsite according to COVID-secure guidelines to best facilitate in-person networking and learning.

However, as the future situation regarding international travel remains uncertain, we have the option to switch to our fully interactive online conference platform should the need arise.

Who Should Attend?

CEO's
Project & Investment Managers
Heads of Development & Sustainability
Finance Directors Corporate Affairs Directors
Product Innovation & Development Managers
Operations Directors CSR/CSI
Executives Asset Managers
Investment Houses
Finance Houses Banks
Municipality Water Heads Department of Water Affairs Water Boards
Food Manufacturers
Research Institutes
Membrane Technology Companies Water Organisations/Institutes
NGO's
Innovation Hubs Hydrologist
Consulting Engineers Chemical Engineers
Process Engineers
Civil Engineers
Water Resource Engineers
Hydropower plant operator
Water Scientists/Technologists/Technicians
Water Management Advisors
Water & Wastewater Operators/Plant Managers/Superintendents
Planning Managers/Engineers
Project Managers
Project Engineers
Wastewater Utility Managers
Academia
Media (Print & Digital)

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Day One: Wednesday 27 Oct 2021

08:00 Registration and Early Morning Refreshments

08:50 Opening Remarks and Welcome Address by the Chairperson: *Dr. Patrick Hlabela - senior researcher and competence area manager for hydraulic infrastructure engineering at The Council for Scientific Industrial Research (CSIR)*

09:00 – Herman Smit: Owner at Quality Filters Systems.

Topic: *"Desalination and Re-use combination as a drought solution for smaller towns".*

10:00 – 10:15 Tea Break

10:15 – 11:00 - Gareth Schenck: Chief Operations Officer at Impact Water Solutions.

Topic: *"Application of Artificial Intelligence on the water infrastructure".*

11:00 – 12:00

Topic: *"Wave, wind, solar, osmotic power: Hybrid renewable energy systems for desalination"*

12:00 - Katrina Zlobich: Head of global service sales development at GRUNDFOS

Topic: *Revolutionize the water sector with digital technology*

13:00 – 14:00 Lunch Break

14:00 – Strover Maganedis: Director at National Treasury of South Africa.

Topic: *"PPP's and the "infrastructure gap" and PPP Models and Structures" Case Studies on PPP's*

15:00 – 15:15 Afternoon Tea Break

15:15 – 16:30 –Abraham Tenne:

Topic: *"Closing the gap- The Israeli desalination story"*

16:30 Close of Day One

Agenda

08:00 Registration and Early Morning Refreshments

10:00 – 10:15 Tea Break

13:00 -14:00 Lunch Break

15:00 – 15:15 Afternoon Tea

16:00 – 16:30 Close of Day

Day Two: Thursday 28 Oct 2021

08:00 Registration and Early Morning Refreshments

08:30 – 09:00 - **Cobus Raubenheimer:** Project Director at EPF Systems

Topic: *"Status of SA wastewater plants, suggested repair, and long-term operation and maintenance solution"*

09:10 – 10:00 **Tiaan Hendricks:** Head of Department: Energy Design, Sales & Marketing at SEM Solutions (Pty) Ltd

Topic: *Status and possibilities for micro-hydro generation in Africa: the use of micro-hydro in wastewater treatment or reuse*

10:15 – 11:00 – **Dr. Luyanda Ndlela:** Senior Researcher: Wastewater Microbiologist at CSIR

Topic: *"Small Wastewater Treatment Plants in Municipalities"*

11:00 – 12:00 - **Dr. Patrick Hlabela:** Senior researcher and competence area manager for hydraulic infrastructure engineering at CSIR

Topic: *"Industrial Wastewater Trading"*

12:00 – **Melanie Loram:** Technical Specialist at ImproChem

Topic: *"Sustainable Water Reuse in Industry: road map to identifying water reuse opportunities"*
Case Studies from AECL.

14:00 - 15:00 - **Dr. Jerry Mutamba** – Senior Manager: Strategic Programs at TCTA

Topic: *Planned Wastewater Reuse in South Africa: Impediments and Future Prospects*

15:00 – 15:15 Afternoon Tea Break

15:15 – 16:20 – **Sydney Masha:** Civil Engineer at the Commercial and Business Department at eThekweni Water and Sanitation

Topic: *"eThekweni Water and Sanitation's Water Reuse Initiatives"*

16:20 – 16:30 Question and Answer session and handing of Certificates

16:30 Close of Day Two

Day Three: Friday 29 Oct 2021

08:00 Registration and Early Morning Refreshments

09:00 – 12:00 Workshop

12:00 – 13:00 Networking Lunch

13:00 – 13:30 Closing Remarks from the Chairperson



Innovation, Vision & Insight

Water Desalination, RO/Membrane & Wastewater Reuse Conference 2021

Delegate Registration Form

Please write in BLOCK CAPITALS

www.zambezipride.co.za

+27 (0) 87 700 3001

Email scanned copy to : info@zambezipride.co.za

Event Name : Water Desalination, RO/Membrane & Wastewater Reuse

☐ Delegate Fees: **R8 999** per Delegate plus Workshop

☐ 2-Day **R7, 999** per Delegate without Workshop

☐ Virtual: **R5, 999** per Delegate

☐ Student Price: **R4,999**

Delegate Details

Full Names : _____

Position : _____

Cell Number : _____

Email : _____

Full Names : _____

Position : _____

Cell Number : _____

Email : _____

Full Names : _____

Position : _____

Cell Number : _____

Email : _____

Full Names : _____

Position : _____

Cell Number : _____

Email : _____

By completing this form, Web submission or Booking via email , you are acknowledging that you have read the terms and conditions and that you have committed to attend this event. Please send this registration form or names only once you have obtained approval - as your company will be liable for costs once this information has been received by us. If the minimum number of delegates required is not met, the delegates will be moved to attend the next available confirmed class.

Please clarify by ticking the box whether you're attending the physical or online sessions - Limited slots available

☐ Date: 27th – 29th Oct, 2021 at Radisson RED Hotel, CPT

☐ Virtual: Cape Town

☐ Sessions Start at 08:00 AM to 4:30 PM

☐ Payment By Means Of Bank Transfer

- All Payments Must be made directly into the ZAMBEZI PRIDE Bank Account provided on the invoice and proof of banking details
 - Please state the invoice number as reference .
 - A copy of the bank deposit / Proof of Payment receipt must be emailed to accounts@zambezipride.co.za
- OR
- info@zambezipride.co.za

Invoice Contact

First Name : _____

Position : _____

Department : _____

Cell Number: _____

Email : _____

Special Food Requirement

I here by acknowledge that I have read and understood all the terms and conditions of registration and have the authority to approve the registration on behalf of the company

Name _____ Position _____

Approving Managers Signature : _____ Date: _____ email: _____

Direct line: _____ Company Name: _____

Type of Business: _____ Company Registration# _____

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_____ P.O.BOX: _____

Terms and Conditions

ZAMBEZI PRIDE PTY LTD. The signed registration form is a legally binding contract Please take note that a booking submission made via email or web submission or Telephonic is considered legally binding and as such , the registered delegates must inform the organiser if they will not be able to attend failure to which the case will be handed over and penalties apply .

Full payment is required within 5 working days. Payment must be received prior to the event date. **Zambezi Pride** reserves the right to refuse entry into the event should full payment not have been received prior to this date. Cancellation will be charged under the term set out below.

Cancellation, No Shows & Substitutions

Cancellations received in writing 14 days prior to event will attract a 50% cancellation fee. Should cancellations be received between 10 days & the date of the event the full event fee is payable and non-refundable.

Non- payment or non-attendance does not constitute cancellation. No show will be charged the full registration fee. Cash alternatives will not be offered, however, substitutes at no extra charge are welcome.

Alterations to advertised package: **Zambezi Pride** reserves the right to alter this programme without notice or penalty and in such situations no refunds or part – refunds or alternative offer will be made. Should **Zambezi Pride** permanently cancel an event, for any reason whatsoever, the Client shall be provided a credit of the equivalent amount paid towards the cancelled event. In the case of a postponed or cancelled event, **Zambezi Pride** will not be responsible for covering airfare, accommodation, or other travel cost incurred by Clients.

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