# **AFRICA WATER, WASTE & GREEN ENERGY** Substainable solutions to water, waste and energy and the solutions to water, waste and energy and the solution of the solutio **CONFERENCE 2022**

2 Oceans Aquarium, Cape Town, South Africa 21<sup>ST</sup> & 22<sup>ND</sup> JULY 2022









## **AFRICA WATER, WASTE & GREEN ENERGY**

"Sustainable solutions to water, waste and energy related tribulations in Africa"

Climate change is the leading cause of water scarcity, and the growing population is putting even more strain on the available water resources around the world. However, when we look at Africa, we realise that there is a major threat. Not only do we face water challenges due to climate change, but we face challenges in accessing water resources.

As it stands, about 2.2 billion people across the globe don't have access to clean drinking water - an alarming number as water is a basic need for your health and basic hygiene. This has shown by the growing need for water. But, apart from people not having access to potable water, water scarcity is also something that has become a cause of concern.

### **WASTE TO ENERGY**

In South Africa, the burden placed on energy due to the rise in its demand coupled with the huge amount of untreated waste that ends up in landfills has called for the quest for sustainable energy utilisation from waste resources. Electricity load shedding has been the order of the day in South Africa for the past few years and green energy can be the best solution to ease the burden on coal.

As South Africa becomes more urbanised, the urban population will rapidly increase and greater effort will be required to manage waste and provide energy services. Municipalities have the potential to deal with these challenges and realise many benefits by transforming and valorising waste through waste-to-energy (WtE) schemes/projects.

### 

are facing increasing pressures and challenges to provide waste management services due to we put that waste to good use by generating

### About The Conference

### 

South Africa water utilities are confronted with serious water challenges such as nonrevenue water, skills shortages, ageing infrastructure, shifting demand patterns, overwhelming water supply demand and outdated solutions for emerging challenges. Water distribution is managed via a large number of dams that store this precious water all over the country, and a number of water transfer schemes that move water from one catchment via pumps, pipes and canals into other catchments.

development and innovation and private public partnerships are fundamental in addressing this complex water challenges and to ensure availability and quality of water resources and their efficient use for sustainable healthy economy and

The conference aims to bring industry experts to the table to uncover pathways that will lead us to a low-carbon future. It will also focus on the regulatory landscape, planning and development, stakeholder engagement, and technology and innovation in the water, waste, and

We're delighted to be hosting the Africa Water, Waste & Green Energy Conference 2022(dubbed 4 in 1) and continuing our quest to promote in water, waste and green energy, and projects across the continent and around the globe, energy challenges in South Africa and on the continent, government's involvement and funding of green energy and WtE projects across the continent among other exciting topics.

AFRICA WATER, WASTE & GREEN ENERGY CONFERENCE 2022

> "Sustainable solutions to water, waste and energy related tribulations in Africa"

### **Highlights**

### Water

- Water-Use Efficiency: Advances and Challenges in a Changing Climate
- Industrial Effluent Impact on Municipal Wastewater
- Infrastructure Maintenance
- Water governance challenges in rural South Africa
- Desalination projects, financing schemes

### Waste

- Waste Management Policies in South Africa
- Municipal waste management
- The Need for Appropriate Waste Management Processes
- Beyond good intentions: how to pay for waste management and recycling services in developing economies

Providers of grid infrastructure & solutions for the integration of renewable energy

Manufacturers, suppliers, distributors and service providers of renewable energy

Medical Waste Management

Certification institutes & regulatory bodies

products and water and waste solutions

### Energy

- Solar energy utilization and its collection devices
- Renewable energies
- Mustapha Energy-Residual Waste to Energy-A Smaller Scale Embedded Energy Concept Plant in Cape Town-Case Study

**Financial services** 

The Role of manufacturers, designers and suppliers of WtE implements in Africa

### **Exhibitors Profiles**

- System providers
- Technology solution providers
- Water solutions experts
- Water & Wastewater utilities
- System integrators
- Project developers/EPC contractors

### **Benefits of Exhibiting**

- ✓ Benefit from cross-industry exposure through the colocation
- ✓ Discover opportunities for strategic partnerships and marketing alliances
- ✓ Position your brand as the leader for industry solutions
- ✓ Enhance your brand presence through sponsorship opportunities exclusive to exhibitors
- ✓ Drive thought leadership by participating in top notch presentations from industry experts

### **Book a Special Speaker Slot**

The Special Speaker Slots are a component of the conference and provide companies/individuals to discuss about their products, and exhibit and do demonstrations on innovations and new developments (projects, services, research, challenges, and strategic direction). The slot also comes with an exhibition stand plus 2 free passes to the conference.

### Who attends the Africa Water, Waste & Green Energy Conference 2022?

- Water resource planners and engineers
- Conservation professionals
- Green infrastructure professionals
- Water Catchment Operations Managers
- Municipal water & wastewater utilities
- Industry consultants
- National, Local, Provincial Government
- Water treatment OEMs and systemintegrators, decision-makers in government, municipalities, water boards and public health departments
- Research groups
- Utility managers
- Water quality specialists
- Public affairs managers

- Project managers
- Parks & Recreation Managers
- Business Development Managers
- Water Resource Managers
- Infrastructure Managers
- Water Plant Managers
- Project Heads
- Technical Department Heads
- Operations Heads
- Process Engineers
- Principal Hydrogeologists
- Environmental & Social Advisors
- Water Use Planners
- Catchment Management Agencies
- Water Resources Specialists

- Water Area Managers
- Scientific Managers
- Business Development Managers
- Agricultural Engineers/Project Managers
- Independent Consultants
- Agricultural Extension Officers
- Team Leaders-Land & Water
  Management
- Rural Development Coordinators
- Water Quality & Revenue Managers
- Data Analysts
- Lecturers
- Funding agencies
- Research organisations

📞 011 791 1535 🌐 www.federatedinstitute.co.za

fi

### CONFIRMED **SPEAKERS**

Ø



Candice Mostert **Founder & Director** Waste-ED



Mishelle Govender **Chief Director: Hazardous** Waste Management & Licensing Department of Environment



Johan West **Managing Director** GreenAfricaGroup



Noxolo Mtembu **Project Manager** Gauteng Infrastructure Financing Agency



Kalnisha Singh **Development Economist;** founder & owner **KD** Strategies (KDS)



Riaan Meyer **Managing Director** GeoSun



Paroshen Naidoo MD Afri Energy Solutions

**Full-Time Regulator** 

Member

NERSA

Gavin Heron Founder/MD Earth Probiotic



Prof Paul Oberholster Director: Centre for Environmental Management - Faculty: Natural & Agricultural Sciences IJ niversity of the Free State



Pravashen Naidoo CEO E-Waste Africa

eØ

Styger Kruger **Managing Director** Greenchain Group

Dheepak Maharajh

BioCiTi

**Executive Cluster Head** 



Joshua Palfreman International Waste Management, Recycling **&Ocean Plastics Specialist** DAI



Moha HADDOUCH **Managing Director** SECADERD-Morocco



Zakir Engar Founder & Managing Director Waste Carriers



Kgauta Mokoena Chief Director: Chemicals & Waste Policy, Monitoring & Evaluation Department of Forestry, Fisheries & the Environment (DFFE)

Water Strategist/Director

Andries Wilke

Eau de Vie



ance Kallis. **Rental & Services Manager** Mpact Plastic Containers



Lee-Hendor Ruiters **Regional Manager for** Western Cape National Cleaner Production Centre of South Africa (NCPC-SA



f

Anton Hanekom **Executive Director Plastics SA** 



Simba Mhuriro CEO Oxygen Africa (Private) Limited Harare, Zimbabwe



Derril Daniels Deputy Director: Berg-Olifants Water Management Area: Berg Area Department of Water & Sanitation: Western Cape Provincial Operations

🚫 011 791 1535 🌐 www.federatedinstitute.co.za



### **CONFIRMED SPEAKERS**



Eng. Munyaradzi C. Munodawafa Chief Executive- Zambia / Zimbabwe Zambezi River Authority

Eng. Munyaradzi Crispen Munodawafa is Chief Executive of the Zambezi River Authority, a trans boundary river basin organisation, with a dam development, operation and management mandate. Eng. Munodawafa has more than 36 years' experience in the Energy Sector, ranging from power engineering, fossil fuels, renewable energy, water resources & large dam management. Currently implementing the US\$ 300 million Kariba Dam Rehabilitation Project and concluding the predevelopment activities for the development of the 2400 MW Batoka Gorge Hydro-Electric Scheme. Eng. Munodawafa is a Fellow of the Zimbabwe Institute of Engineers (ZIE), Corporate Member of the Engineering Institution of Zambia (EIZ) & a contributor to the Engineers Without Borders programmes, jointly organized by the Zimbabwe Institute of Engineers and the Engineering Institution of Zambia. Further, he is a registered practicing Engineer under the Engineering Council of Zimbabwe (ECZ) & the Engineering Council of Zambia.

After graduating from Kharkhov Polytechnical Institute in the then Soviet Union(Ukraine) with a Master's Degree in Electrical Engineering in 1984, Munodawafa worked as an Operations Engineer for the Zimbabwean Energy utility, Zimbabwe Electricity Supply Authority (ZESA) at Hwange Thermal Power Station (920MW). He was involved in the commissioning of the Stage II units at Hwange Power Station (440MW). He became Operations Manager in 1994 at Harare Power Station. He then joined the Government of Zimbabwe in the Ministry of Energy & Power Development in 2005 as Principal Director developing & promoting Policies & Strategies with respect to sustainable outputs and utilization of energy (including renewable) resources beneficial to Zimbabwe. Whilst in Government, he was closely involved in the formation of the International Renewable Energy Agency (IRENA)

Eng. Munodawafa is also a holder of an Executive Diploma in Business Leadership from the Zimbabwe Institute of Management, Diploma in Supervisory Management (ISM) United Kingdom In 2009 he joined Zambezi River Authority as Chief Executive, where he is involved in the operation and management of Kariba dam and reservoir including the associated implementation of environmental monitoring and water resource management. His role includes ensuring the management of the Zambezi River common to Zambia and Zimbabwe and the Kariba Dam complex and any future dams or infrastructure on the river forming the border between the two countries. He continues to oversee the major projects currently underway by the Zambezi River Authority including the Kariba Dam Rehabilitation Project that includes the reshaping of the eighty meter (80m) deep Plunge Pool & the refurbishment of the six (06) Spillway gates and the pre-development activities for the development of the 2400MW Batoka Gorge Hydro-Electric Scheme.



Dr Rembu Magoba Manager: Water Research Centre CSIR

Dr Rembu Magoba has over 17 years of experience in Water Research. He completed his BSc Honours in Biological Science at the University of Venda and later MSc-Ecological Assessment and PhD-Agricultural Entomology from Stellenbosch University. He worked for an Environmental Consulting Company for 8 years before joining Agricultural Research Council as a Project leader & Researcher for 3 years, focusing on invasive plants management. He then joined the City of Cape Town as Head: Water Research and Development, responsible for the scientific research in Water & Sanitation Department for 8 years. He is currently a Manager: CSIR Water Research Centre, championing the development of fit for purpose technologies & solutions for various water challenges. He is also very passionate about skills development & mentorship in the Water Sector.



#### Malik Dasoo Activist on Social and Environmental **Justice Initiatives**

Malik has recently graduated with his MSc in International Land and Water Management from Wageningen University and Research, specializing in Soil Physics and Sustainable Land Management. He gained experience in South Africa's biodiversity sector having worked with the South African National Biodiversity Institute (SANBI) on their Natural Capital Accounting and Ecological Infrastructure programmes. Malik is an activist on social and environmental justice initiatives. He has a keen interest in sustainable forms of agriculture practiced across Africa to better understand how the sector can reduce its contribution to biodiversity loss, climate change and land degradation.



Gabriel Krishna **Director - Energy Saver** Green Energy Options

Gabriel is an accomplished Senior Management professional with over 25 years working experience in a variety of industries. Well known for my ability to meet, achieve and exceed company, customer and project objectives. I have invested 15 years in the corporate and investment division of Standard Bank. That tenure has afforded me a solid foundation and invaluable experience in various roles from sales, marketing, and portfolio and client management through trade, finance, risk management and business development. Managing strategy, process and the coordination of people were always key deliverables. Exposure to the dynamics of transformation, as Chairperson of the Transformation Forum, has ignited my change management skills and given me a firm appreciation of the transformation and development needs in South Africa and Africa.

🚫 011 791 1535 🌐 www.federatedinstitute.co.za

### AFRICA WATER, WASTE **& GREEN ENERGY CONFERENCE 2022**

"Sustainable solutions to water, waste and energy related tribulations in Africa"

### **PRELIMINARY AGENDA**

### Day One | Thursday, July 21 - 2022

07:00 - 08:00 | Arrivals & Registrations 08:20 - 08:30 | Introductions & Welcome Remarks

08:30 - 09:15 | Key Note Address - Achieving Water Security in Africa: The Role of Innovation and Emerging Technologies

TRACK	Water	Waste	Waste to Energy	
09:15 -10:15	Water-Use Efficiency: Advances and Challenges in a Changing Climate	Municipal waste management	The drive to net zero and the circular economy – how is the waste industry responding to the challenge? What needs to happen to achieve it?	
10:15 -11:15	Management of water	The Need for Appropriate Waste Management Processes	Treatment of wastewater and storm water	
11:15 -12:00	Water supply	Beyond good intentions: how to pay for waste management and recycling services in developing economies	The Role of manuafacturers,designers and suppliers of WtE implements in Africa	
12:00 -13:00	Industrial Effluent Impact on Municipal Wastewater	Project Finance and Investment: New approaches to funding waste treatment plants	Mustapha Energy-Residual Waste to Energy-A Smaller Scale Embedded Energy Concept Plant in Cape Town-Case Study	
13:00-14:00	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	
14:00 -15:00	Water governance challenges in rural South Africa	Medical Waste Management	Converting Waste into Fuel	
15:00 -15:45	National Water policy	Dangerous wastes management	Waste Management Policies	
15:45-16:30	Safety and Quality of Underground Water	Agricultural waste management	Alimentary/organic wastes management	







### Day Two | Friday, July 22 - 2022

07:00 - 08:00 | Arrivals & Registrations 08:20 - 08:30 | Introductions & Welcome Remarks

**08:30 - 09:15** Key Note Address-Waste to Energy in the Context of Sustainable Integrated Solid Waste Management in African Cities and Towns

TRACK	Water Energy		Utilities	
09:15 -10:15	Fresh water resource shortage and its solutions	Solar energy utilization and its collection devices	Infrastructure Maintenance	
10:15 -11:15	Burst Pipes-Leak Detection	Industrial ecology	Private Public Partnerships	
11:15 -12:00	Desalination projects, financing schemes	Renewable energies	Billing Challenges-Introducing e- Billing	
12:00 -13:00	Desalination and water in industries: Oil and gas/Mining/Food and beverage	Energetic installations	Smart Metering	
13:00-14:00	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	
14:00 -15:00	Nanofiltration, ultrafiltration, microfiltration in water treatment processes	Management of energetic projects	Water shedding/Water Cuts: The pros & cons	

### This agenda may change leading to the event and FMI reserves the right to add or remove speakers on/from the agenda.

### AFRICA WATER, WASTE & GREEN ENERGY CONFERENCE 2022 21<sup>ST</sup> & 22<sup>ND</sup> JULY 2022 2 OCEANS AQUARIUM, CAPE TOWN, SOUTH AFRICA



### **REGISTRATION FORM**

### PLEASE WRITE IN BLOCK LETTERS

Authoriz	ing P	erson:
----------	-------	--------

Surname			
Compan	y Vat Number		
Fax Num	ber		
Postal C	ode		
Purchas	e Order Number		
	Account Contact		
	Compan Fax Num Postal Co	Company Vat Number Fax Number Postal Code Purchase Order Number	

### Signature:

By completing & signing this form, the authorizing signatory accepts the terms and conditions as stated on the registration form **Note:** *Please provide information as you wish it to appear on the name tag and certificate* 

### Delegate Attendance Information:

Title	First Name	Surname	Designation	ID/Passport #	Email	Mobile

### **CANCELLATION NOTICE**

By signing and returning the registration form, the authorizing signatory on behalf of the stated company is subject to the following terms and conditions. Delegate Cancellations: All cancellations must be received in writing and are subject to the following conditions: Charge of 50% of the registration fee, plus R899 (+ VAT) administrative charge will be made for cancellations received in writing at least 14 working days prior to the event. For any cancellations received less than 7 working days before the date of the event, the full fee will be payable and no refunds will be given except credit notes. If a registered delegate does not cancel and fails to attend the Training, it will be treated as a cancellation and no refund or credit note will be issued.

### Substitutions

Delegate Substitution: Substitution is welcome at any time with no additional charges. Please notify Federated Management Institute in writing of any such changes at least 4 days before the event.

**Please note** that the speakers and topics are confirmed at the time of publishing. However circumstances beyond the control of the organizers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. As such Federated Management Institute reserves the right to alter or modify the advertised speakers and/or topics if necessary. Any substitutions or alternations will be updated and sent to you as soon as possible.

### FUNDS TRANSFER

Please state your full names clearly on the money transfer. Please note, bank charges are for your OWN account and this should be stipulated to your bank. Please advise your bank that the charges should be included in your deposit amount.

Payments must be made within 5 working days after receipt of invoice unless agreed upon prior to the confirmation of booking. Please be informed that full payments must be received prior to the event. Only fully paid up delegates will attend the event unless agreed otherwise with Federated Management institute. A copy of the bank deposit receipt should accompany your registration form and must be emailed or faxed.

### BANKING DETAILS:

Name of Bank:	FNB
Branch name:	Eastgate Branch
Branch Code:	257705
Account name:	Federated Management Institute
Account number:	62734093347
Swift Code:	FIRNZAJJXXX

### FEES PER DELEGATE

Standard | **R8450** ex vat Government | **R7500** ex vat

Rates ex VAT (Ask for 10% discount 5 & above delegates)

### Chama Lamba at chama@federatedmi.co.za