Sustainable water solutions for Africa
94 million people supplied with water
62 million people connected to wastewater systems

4,532 drinking water production plants managed
3,442 wastewater treatment plants managed
Veolia
Resourcing the World
Is Our Goal

There are already more than seven billion people on the planet. In the near future, there will be nine billion. The world is growing; it needs alternative resources.

Veolia is recovering water, waste and energy by supplying high-quality treatment solutions to resource the world.
Growing Sustainably
with the True Cost of Water

Using water sources in sustainable, cost-effective ways is at the heart of everything we do. Our solutions help municipal and industrial clients grow sustainably, meeting the needs of the present without compromising the needs of future generations.

- We measure and improve environmental and economic performance
- We help turn wastewater into a resource
- We implement energy-efficient water treatment strategies

The True Cost of Water:
Veolia’s True Cost of Water is a game-changing methodology that focuses on the direct and indirect financial implications of water-related risks to help municipalities and industrial companies implement advanced and integrated water solutions.

- Better manage water risks
- Optimise water management costs
- Enhance competitiveness
- Secure social licence to operate
- Ensure long-term profitability

40% of the world’s population face uncertain water security

Water crises will be the 2nd major global risk in the next 10 years

If correctly valued, water will be better managed

Africa’s water is too valuable to be used only once! Veolia has a holistic portfolio of technologies aimed at reuse and recycling:

- Potable / drinking water production
- Domestic wastewater / sewage treatment
- Seawater desalination
- Water re-use
- Industrial process water production
- Zero liquid discharge (ZLD) of industrial wastes
- Valuable substance recovery
- Modular water and wastewater treatment plants
- Mine water solutions including acid mine drainage
Total Water Solutions for Africa

Veolia Water Technologies in South Africa provides customised water and wastewater treatment solutions to municipalities and industrial companies.

Large Projects
Veolia specifies, designs, constructs, installs and commissions large-scale water plants using traditional and cutting-edge treatment technologies.

Modular Projects
Fully containerised package plants for smaller-scale water treatment solutions in remote, independent or decentralised communities and industries.

Operations & Maintenance
Veolia provides technical assistance, planned/unplanned maintenance and daily management services to keep treatment plants functioning at their peak.

Chemicals
From sanitising chemicals to membrane optimisation, Veolia’s HYDREX™ chemicals range is tailored to the needs of Africa’s water treatment requirements.

Services & Consumables
Veolia’s Customer Services Division provides field service, spares, membrane manufacture and maintenance contracts, ensuring complete ongoing support and optimisation.
The **Industrial Markets** we service

- Petrochemical
- Pulp and Paper
- Automotive
- Steel
- Food and Beverage
- Pharmaceutical
- Power Generation
- Mining
Municipal Solutions

Give Water Several Lives

Veolia provides all water and wastewater treatment technologies, from primary treatment to odour control, for safe, environmentally compliant day-to-day potable and wastewater treatment plant operations, regardless of size!

Serving big cities
Caring for communities

Veolia supports Africa’s municipalities, in urban and rural areas, with water treatment solutions for drinking water, wastewater, re-use, sludge treatment and energy recovery from sludge digestion and incineration. These solutions help address scarce water resources and health concerns, while meeting stringent environmental regulations.

The Durban Water Re-use Project
It’s not wastewater. It’s resource water

Veolia designed, constructed and financed the country’s first PPP water re-use plant. Some of Durban’s largest industrial water consumers, including the Mondi and SAPREF plants, are able to maximise their output, knowing their water needs are taken care of.

The city’s municipality can now divert potable water away from industrial customers to supply previously unserviced communities.

- Commissioned in May 2001
- Upgrades 42 megalitres per day
- Public Private Partnership (PPP)

100% of wastewater can be recycled
Aimed at the mining and heavy industrial sectors, Veolia supplies turnkey ZLD extraction plants that drive profitability and minimise damage to the environment.

**Economical, effective & eco-friendly**

**Turnkey solution for ArcelorMittal Steel**

Veolia delivered a complete solution that is beneficial to both the environment and for ArcelorMittal Steel in Vanderbijlpark, South Africa. The dual-purpose solution not only removes suspended solids, salts and hardness from process water, but also minimises the plant’s environmental impact.

The solution utilises a mix of Veolia's technologies to treat the water, including: clarification, media filtration, reverse osmosis, evaporation and crystallisation.

- 30% less fresh water required
- No process water released into the environment
- Complies with environmental legislations
- Total cost: ZAR 222 million
Extracting valuable resources from waste streams

For Veolia, wastewater sludge is no longer a waste product; it can be used in real circular economies.

Valuable mineral recovery at Ambatovy Mine

With an extraction capacity of 25.6 tons per hour, this is the largest crystallisation project ever designed in Africa, and one of the largest in the world.

- Recovery of saleable minerals from waste streams
- Contain 100% of polluting waters within plant walls
- Re-use water on-site and significantly reduce fresh water intake

Turning waste into fertiliser with evaporation

Ambatovy Mine in Madagascar, a producer of nickel and cobalt, needed a solution to extract ammonium sulphate left behind by the primary refining process. The answer was to dry the effluent stream, leaving the ammonium sulphate behind in a waterless, manageable form that can be sold to the agricultural sector as fertiliser.

Extreme energy efficiency

The plant is equipped with an energy recovery system which harnesses steam from the drying process, and converts it to electricity. This helps power the extraction plant, keeping energy requirements as low as possible.

Runner-up for the Industrial Water Project of the Year Award at the 2013 Global Water Intelligence Awards.
Modular Plants

Using state-of-the-art technology that was developed by Africa for Africa, Veolia’s containerised water treatment plants treat any raw water source to supply treated water to isolated communities and remote locations.

Developed by Africa for Africa

Plug in, switch on
Package plants offer highly efficient solutions to smaller communities’ water needs. They are pre-assembled, containerised and transported to site, where they are simply plugged in and switched on. They feature few moving parts, are affordable to maintain and are exceptionally easy to operate.

6 modular plants at Kansanshi Copper Mine, the world’s eighth largest copper mine, with specific requirements for its boiler feed, process and drinking water. Veolia’s 40-foot modular plants upgrade river water and operate as a single ‘plant’ with multiple output streams to produce 42.5 m³ of treated water per hour.

Made-to-order solutions
Veolia designs and assembles package plants to suit each application’s unique requirements, whether for potable, process or wastewater. Factors include the type of influent, and the legislated effluent standards.
Trickling Filter Technology

The Elisenheim Housing Development near Windhoek has acquired a trickling filter plant capable of turning municipal sewage into water suitable for gardening and greening functions.

Trickling filter technology is a cost-efficient solution to remote communities’ sewage treatment problems. Ideal for small-scale package plants and full-scale wastewater treatment plants, the technology offers highly efficient solutions to upgrade sewage water to near-potable standards for irrigation, dust suppression and other uses.

Trickling filter technology is used to:
- Upgrade sewage water for re-use in irrigation, dust suppression and other tasks
- Upgrade sewage water to near potable standards so it can be made suitable for human consumption
- Ensure discharge water is compliant with environmental standards

Water infrastructure overhaul in Walvis Bay, Namibia
Veolia upgraded stone-media biofilters to trickling filters to assist with sewage blockages in the existing infrastructure.
- Treats 500 m³ of raw sewage per hour
- 6.5 megalitres treated per day
- Simple and robust design to suit severe operating conditions
- Total cost: ZAR 15 million
Seawater Desalination

Using technology to create a resource

The coastal town of Mossel Bay needed urgent drought relief, so we turned to the only consistent water source available – the ocean.

Thanks to Veolia, the Mossel Bay Municipality is now able to consistently supply large industrial customers with high-quality fresh water that’s suitable for various processes. Residents of the greater Mossel Bay region also have more drinking water in their taps.

South Africa’s largest desalination plant, Mossel Bay

- Located in Mossel Bay (400 km east of Cape Town), Western Cape
- Desalinates 15 megalitres per day
- 10 megalitres used domestically as potable water
- 5 megalitres used by PetroSA as process water
- Total cost: ZAR 210 million

As the world leader in desalination, we have extensive expertise in the very latest filtration technology and are constantly working on limiting its ecological footprint, particularly through the use of renewable energy.

By removing the salt from seawater on a large scale, we can supply enough process water for industry, and fresh water for municipalities.

72% of the Earth’s surface is covered with water

97% of this water is salty
Veolia supplies the HYDREX™ range of water treatment chemicals to Africa’s industrial and municipal operations, optimising plant safety and water quality.

From once-off treatments to plant-wide dosing stations, our HYDREX™ chemical range enhances overall water-cycles while reducing plant operating and maintenance costs.

Our extensive range of chemicals covers all water treatment requirements, from pre-treatment to sludge treatment, and is strictly manufactured according to ISO 9001:2008.

We supply and customise organic and inorganic chemicals to suit all industrial and municipal water treatment needs, including:

- Boiler water treatment
- Cooling water treatment
- Potable water treatment
- Membrane treatment
- Wastewater treatment
- Maintenance and cleaning
- Industrial applications
- Biocides
- Food and beverage applications
Operations & Maintenance

To cut costs and reduce downtime, some of Africa’s largest manufacturing and industrial-sector companies and municipalities have turned to Veolia to manage the day-to-day operations and maintenance of their water treatment plants.

We use our expertise, infrastructure and footprints across Africa to provide tailored maintenance plans to ensure you meet the treatment standards required. As a result, Veolia enables companies to focus on their primary activities, while we take care of their water requirements.

**Durban Water Recycling Plant**

Full operations and maintenance services for the Durban Water Recycling Plant, South Africa.
- Feed water and treatment monitoring
- Quality management to ISO 9001:2008
- Integrated online water quality monitoring systems

**Evander Gold Mine**

Full operations and maintenance of the onsite water treatment plant for Evander Gold Mine, Mpumalanga, South Africa.
- Replaced and upgraded dosing stations
- Eliminated dangerous chemical spillage
- Developed onsite office for 24/7 support
Active across Africa
Resourcing the world

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