



Ministry of Foreign Affairs

Opportunities for Dutch Businesses in the water re-use sector

Commissioned by the Netherlands Enterprise Agency

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Opportunities for Dutch Businesses in the water re-use sector

South Africa is a generally water scarce country which results in water restrictions in most of the major industrial cities which makes water availability one of the major concern for policy makers. There is a business case for industries in South Africa to use water more efficiently, such as through re-use. Industries consuming a lot of water include the red meat, mining and the sorghum brewing industries. Companies in this sector are looking into technologies improving water efficiency.

Why do business in South Africa?

South Africa is a water scarce country, which is why water security is a top priority for the South African government. The current national water crisis can have significant impact on economic growth and on the well-being of South Africans in general. This has resulted in strong water regulation the so called Water Use License which is regulated by the municipalities. Due to these strong regulations it is difficult for companies to share their water with other companies. Thus wastewater re-use has the highest potential to reduce demand of freshwater resources and improve water supply to industry.

The major facilitators in the water industry in South Africa

- Department of Water and Sanitation: the national department in charge of the water infrastructure and distribution.
- Strategic Water Partners Network South Africa (SWPN-SA): collaboration between government and private parties. The SWPN-SA has working groups that exchange ideas and are developing projects and are based in Cape Town and Johannesburg.
- Development Banks (eg. DBSA, FMO): finance projects and technologies that contributing to the SDG's; water availability and resilience of countries.
- Municipality of eThekweni: responsible for the Durban metropolitan area, a close partner of the Netherlands' embassy.
- SALGA: South Africa's association of municipalities.
- Water Institute South Africa (WISA): membership based organization including most water sector professionals.
- GreenCape: a non-profit organization that supports businesses and investors in the green economy to remove barriers to market entry and growth.
- National Business Initiative (NBI): this is a coalition of South African and multinational companies, working towards sustainable growth and development in South Africa. They facilitate companies to also comply with CPD Water sustainability reporting.

How can your company get involved with the South African water re-use sector?

- Present yourself to existing networks, such as the Netherlands Embassy in Pretoria & the Consulate-General in Cape Town, the Dutch Water Authorities, the Netherlands Water Partnership & the Partners for Water Programme. These organizations can give you access to networks and market information.
- Find a local partner and market in South Africa (eg through Embassy, NWP, participate in trade missions)
- Start to think about your South African pitch, which includes how you will contribute to strategic challenges in South Africa:
 - Do research: is your technology already available on the market?
 - Can you (partially) produce/source locally? How many jobs will you create in South Africa?
 - How will your product contribute to water availability, especially for previously disadvantaged communities?

- Visit the major networking events in the water sector in South Africa, such as:
 - 21 November 2019: NL trade mission Co Create My City Cape Town
 - May 2020: WISA conference Johannesburg Netherlands Pavilion

What support can you expect from the Dutch governmental institutions?

The Dutch missions in South Africa have an extended network within the water industry in South Africa in the private and the public sector. Besides there are several instruments available from [RVO](#) for funding of [demonstration/feasibility](#) projects, for [market entry](#) or [financing solutions](#).

Overview sectors: Water Research Commission National Surveys

The Water Research Commission (WRC) initiated a program for industry National Surveys (Natsurv) per industrial sector. The survey identifies priority industries which consumes large volumes of clean water and discharges highly polluted wastewater.

Industry	Usage of water	Current Management Strategies	Potentials
Soft Drink Industry	1.6 liters of water per liter of product	- pH adjustment (all) - sand filters for backwash water (some) - carbon filters (some) - stormwater management (hardly)	-Reverse osmosis treatment -Usage of municipality water with high standards.
Edible oils industry	Different sections of the production	-Re-use of cooling water -Phosphorus and nitrates to neutralize COD, grease, oil, TSS and pH	-No concerns of water use of municipalities -Reverse Osmosis
Sorghum brewing Industry	7.8 liters of water per 1 kg of malt produced	-2.26L of wastewater per liter of sorghum. -no technologies used	-limited research into general water management. -reliant on municipality water
Red meat Industry	Per slaughtered unit between 0.7 kl and 1.2 kl.	-wastewater treatments (large abattoirs) -COD range 730 mg/l – 9930 mg/l	-Red Meat Abattoir Association (RMAA) -stormwater for irrigation
Iron and Steel Industry	Average water intake 4.8m ³ /t ranging between 2.3-9.3m ³ /t (high range: different production processes)	-activated sludge, clarification, evaporation and dissolved air flotation -removal of TSS, ammonia	-Reductions in raw water intake
Metal finishing Industry (electroplating, anodizing, galvanizing, powder, painting etc)	A lot	-neutralization, precipitation, oxidation, reduction, filtration, reverse osmosis	-need better water management interventions -no water security plans

Embassy Pretoria

Opportunities for Dutch businesses
Water re-use solutions

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