

**CONVERTING SOUTH AFRICA'S WATER CHALLENGES TO SUSTAINABLE
TECHNOLOGIES**

**UNIDO WATER BUSINESS SEMINAR
13 November 2014
Green Innovation Expo 2014, TOKYO, JAPAN**

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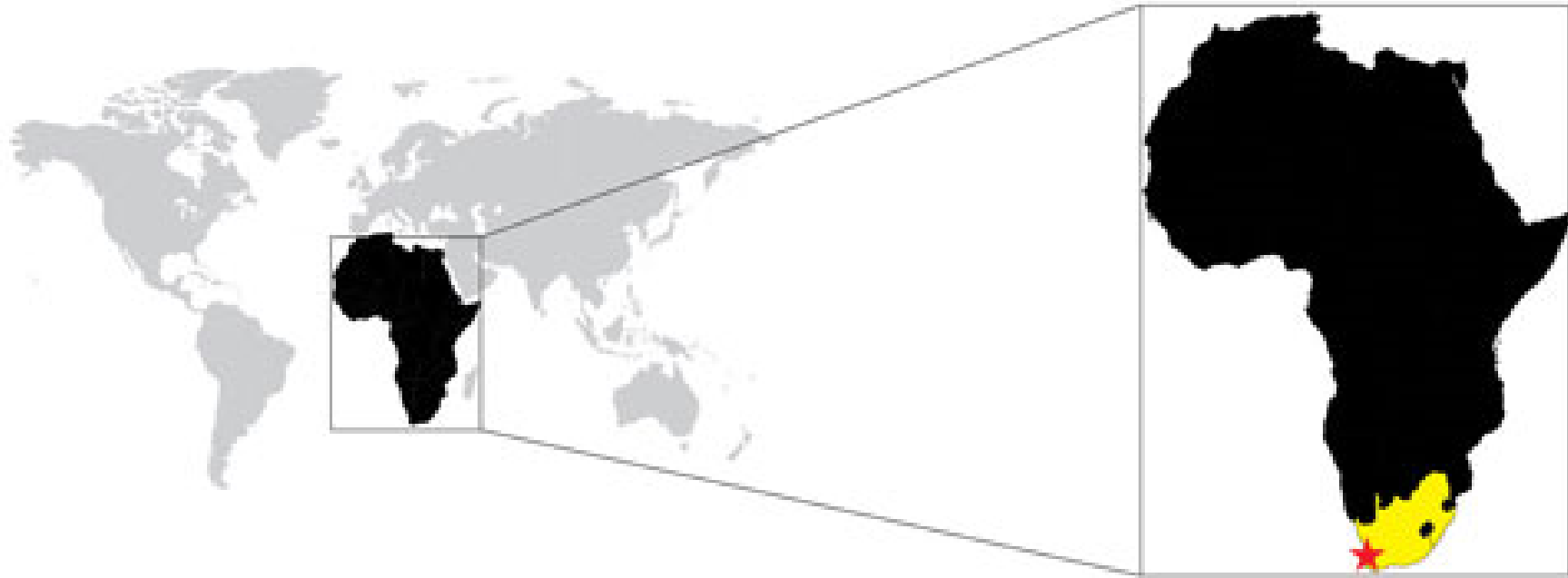
SOUTH AFRICA AT A GLANCE



There are 54 countries in the African Continent!



INTRODUCTION TO



LOCATION:

Southern Africa, at the southern tip of the continent of Africa



Economic Overview

- ❑ Middle-income, emerging market with abundance of natural resources.
- ❑ Well developed financial, legal, communications, energy and transport sectors and JSE which is 16th largest in the world.
- ❑ GDP growth in 2014 projected at 1.4% - while growth is expected to reach 3% according to the Medium Term Budget Policy Statement by the Minister on Finance on 22/10/2014.
- ❑ 25% Unemployment

Export partners:

China, US, Japan, Germany and India (2012)

Import partners:

China, Germany, Saudi Arabia, US and Japan



SOUTH AFRICA'S POPULATION

- ❑ According to Census 2011 data from Statistics South Africa, in 2011 the country's population was **51,770,560** of which 26,581,769 (51.3%) were female and 25,188,791 (48.7%) were male. Africans are in the majority at just over 41-million, making up 79.2% of the total population.
- ❑ 13.3 million households have access to clean water (DWA)
- ❑ South Africa has 9 provinces and 283 municipalities.
- ❑ Gauteng province is the most densely populated at 12 million people.



WATER IS LIFE:

RESPECT IT, CONSERVE IT & ENJOY IT

SOURCE: DEPARTMENT OF WATER AFFAIRS



REAL ECONOMY INSIGHT: WATER

- ❑ Water scarcity is one of the greatest challenges in the 21st century affecting every continent.
- ❑ According to Research Channel Africa year book, It is estimated that by 2025, about 2.8 billion people in 48 countries will face water scarcity.
- ❑ In terms of the Millennium Development Goals Report of 2014: “Access to an improved drinking water source became a reality for 2.3 billion people. The target of halving the proportion of people without access to an improved drinking water source was achieved in 2010, five years ahead of schedule.
- ❑ In 2012, 89 per cent of the world’s population had access to an improved source, up from 76 per cent in 1990. Over 2.3 billion people gained access to an improved source of drinking water between 1990 and 2012.



REAL ECONOMY INSIGHT: WATER (Cont'd.)

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South Africa's situation:

- ❑ Water supply is limited and demand is increasing due to the growing population.
- ❑ The country is challenged due to below average rainfall and thereby depends much on the transfer of water from neighbouring Lesotho.
- ❑ The country faces various challenges with regard to the management of its water resources.
 - Security of supply, environmental degradation, resource pollution and inefficient water use are some of the current challenges.
- ❑ Projections have indicated South Africa's water demand could outstrip supply between 2025 and 2030.



REAL ECONOMY INSIGHT: WATER (Cont'd.)

- ❑ Global experts convened under the auspices of the WEF, estimates that demand in South Africa will increase to 17.7-billion cubic metres in 2030 while supply will amount to only 15-billion cubic metres.
- ❑ A Johannesburg Water Report has warned that South Africa's key business hub could face water shortages by 2015, unless the City of Johannesburg's demand is reduced.
- ❑ Some experts have identified technical and institutional challenges as undermining water service delivery.
- ❑ Government acknowledges that the sustainability of the country's freshwater resources has reached critical point and that water management is at a crossroads.
- ❑ To deal with this eminent crisis, 89 hotpots requiring urgent attention were identified and a total of USD 65 million was allocated to municipalities and a part of which has been set aside for sanitation infrastructure.
- ❑ Water boards were appointed as implementing agents to drive the projects.



NON-REVENUE WATER

- ❑ As a water-scarce country, South Africa is facing funding challenges to better distribute water and improve water resource management.
- ❑ Non-revenue water is one of SA's biggest challenges. A study conducted by the Water Research Council (WRC) on 132 municipalities has shown that 37% of purified water destined for urban areas has been lost between 2008 and 2014 due to leaks, old and failing infrastructure and other reasons.
- ❑ This loss amounts to 1.6-billion cubic meters of water a year, valued at at USD 1.1-billion worth of water a year.
- ❑ The WRC also states that on average small municipalities lose 72.5% of water, medium sized 30.5% - 41.3% and metros about 34.3%.
- ❑ Government is now putting measures in place to try and reduce this wastage of water.



SOUTH AFRICA'S WATER RESOURCE

□ DRINKING WATER SOURCE:

Improved:

Urban: 99.2% of the population

Rural 88.3% of the population

Total: 95.1 of the population

Unimproved:

Urban: 0.8% of the population

Rural: 11.7% of the population

Total: 4.9% of the population 2012 (est.)



SOUTH AFRICA'S WATER RESOURCE (Cont'd.)

□ SANITATION FACILITY ACCESS:

Improved:

Urban: 81.7% of the population

Rural: 62.4% of the population

Total: 74.4% of the population

Unimproved:

Urban: 18.3% of the population

Rural: 37.6% of the population

Total: 25.6% of the population 2012 (est.)



WATER RESOURCES AND IMPACT OF CLIMATE CHANGE

- ❑ The world average water consumption is 173 litres per person per day. The average per capita water consumption in South Africa is **235 litres**.
- ❑ SA has an average annual rainfall of ~500mm (60% of the world average)
- ❑ Only 9% rainfall reaches the rivers, compared to a world average of 31%.
- ❑ Orange River has the highest discharge at 22% of total water in SA, this includes the Vaal River which is a tributary
- ❑ Acid mine drainage in Gauteng, especially West and East Rand of City of Johannesburg – a metro
- ❑ Incapacitated water treatments such as Umgeni River (KwaZulu Natal), resulting in constant contaminated by sewage



GOVERNMENT INFRASTRUCTURE INVESTMENT PROGRAMME

- ❑ The National Development Plan (NDP) identified the need to expand water access along the supply chain starting with investments in dams, bulk water supply schemes and waste water infrastructure.
- ❑ Developing and maintaining new and existing water and waste water infrastructure is one of government's priorities and the Presidential Infrastructure Coordinating Committee (PICC) has listed water and sanitation among its 18 strategic infrastructure projects.
- ❑ Government plans to increase water infrastructure investments over the medium term expenditure framework period with bulk water infrastructure identified as priority



GOVERNMENT INFRASTRUCTURE INVESTMENT PROGRAMME (Cont'd.)

PROJECTS ON THE GO:

- ❑ In March 2014, the USD 1.5 billion, 2nd Phase Lesotho Highlands Water Project (LHWP) was launched. This phase also includes the construction of a hydropower generation system.
- ❑ In April 2014, the USD 1.2 billion Mzimvubu water project was launched in the Eastern Cape. The project includes the construction of two dams and hydropower and the project is about to start.



GOVERNMENT INFRASTRUCTURE INVESTMENT PROGRAMME (Cont'd.)

TCTA

- ❑ is a state owned entity, and it provides project finance and project management for bulk water infrastructure projects.
- ❑ Since its inception it has implemented a number of bulk water projects.

RAND WATER

- ❑ is an organ of state, reporting to the Department of Water & Environmental Affairs.
- ❑ Throughout its long history, Rand Water has remained financially self-sustaining. Its financials are affirmed by Standard & Poor's rating of its long-term local currency, corporate credit rating as A+ and its long-term foreign currency, corporate credit rating as BBB+.



GOVERNMENT INFRASTRUCTURE INVESTMENT PROGRAMME (Cont'd.)

Area Of Supply

- ❑ Rand Water's distribution network includes over 3,056 kilometers of large diameter pipeline, feeding 58 strategically located service reservoirs. Its customers include metropolitan municipalities, local municipalities, mines and industries and it supplies on average 3,653 million liters of water to these customers daily.
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TCTA WATER INFRASTRUCTURE INVESTMENT PROJECTS



Berg Water Project

The R1.6- billion flagship Berg Water Project in Franschhoek augments the supply of water to the City of Cape Town. In March 2009 it was officially inaugurated by former President Kgalema Motlanthe. It was mandated in May 2002 and became operational in December 2007.

Source: *TCTA website*



TCTA WATER INFRASTRUCTURE INVESTMENT PROJECTS (Cont'd.)



Komati Water Scheme Augmentation Project

The Komati Water Scheme Augmentation Project (KWSAP) has been designed to resolve the water supply problems to Eskom's Duvha and Matla power stations in Mpumalanga. It augments the Komati Water Scheme from the Vaal Eastern Subsystem for the sole benefit of Eskom.

Source: *TCTA website*



TCTA WATER INFRASTRUCTURE INVESTMENT PROJECTS (Cont'd.)

Acid Mine Drainage

Acid Mine Drainage is a project aimed at implementing the short term action plan, as recommended to the Inter-Ministerial Committee on Acid Mine Drainage, in the Western, Central and Eastern Basins of the Witwatersrand Goldfields. Construction Started in November 2011 on the refurbishing the Rand Uranium plant in the Western Basin and commissioning was due to commence in April 2012.



TCTA WATER INFRASTRUCTURE INVESTMENT PROJECTS (Cont'd.)



Lesotho Highlands Water Project Phase 1

The Lesotho Highlands Water Project was instituted as a bi-national project spanning the borders of South Africa and Lesotho in accordance with a treaty signed in 1986. This almost miraculous engineering feat diverts water from the Senqu River System in Lesotho to South Africa's economic hub, the water-stressed Gauteng region.

Source: *TCTA website*



BUSINESS OPPORTUNITIES

- ❑ National statistics reveal that 85% of households have access to RDP acceptable levels of water. However, in KwaZulu Natal, 14.1% of households never had access to water.
- ❑ National statistics also revealed that over 70% of households in South Africa have access to RDP acceptable sanitation. However, 12.5% of households in the Eastern Cape do not have access to any sanitation.
- ❑ The above implies that private sector investors should consider partnering with Government to close the gap in the quest to provide universal access to the population and make a reasonable return.



BUSINESS OPPORTUNITIES (Cont'd.)

- ❑ Recent interruptions in the water supply in Gauteng is proof that opportunities exist for private sector participation especially foreign investors who bring with them advanced technologies and technical know-how which is highly needed to deal with the current water crisis.

REQUIREMENTS FOR PRIVATE SECTOR PARTICIPATION:

- ❑ Registered company in South Africa
- ❑ BEE compliant
- ❑ Projects are on a tender system
- ❑ Tax registration a must

Government support for investors:

- ❑ There are a number of incentives provided by government to assist interested companies and potential investors.



Quality of life?

- ❑ Top ranked universities
- ❑ State of the art airports
- ❑ State of the art golf courses
- ❑ Estate residences
- ❑ Shopping centers

Japanese companies in SA:

Toyota, Nissan, Mitsui, Sumitomo, Sunace, Bridgestone, Kansai Paint, NTT to name a few





Is your company ready to live the South African dream? If so,
stand up and be counted!!!



AFROLINK ENTERPRISES (PTY) LTD. as a PARTNER

Afrolink Enterprises (Pty) Ltd. was established in September 2013. It is a 50 - 50 joint venture partnership.

Shareholders:

Ms. Tshepo Makhene 50% ownership

Mr. Ryo Sasaki, Group CEO of Sunace - 50% ownership

Services rendered:

- Investor services
- Business to business matching
- Research
- Business tourism
- Equity partnership sourcing
- Access to Afrolink's networks both in government and private sector



AFROLINK ENTERPRISES (PTY) LTD as a PARTNER

Afrolink Enterprises' mission is to deliver World Class and quality service to our clients

STRATEGIC PARTNERSHIPS:

Water & Sanitation Infrastructure projects:

Ms. Khumbuzile Zuma, MSc Management of Social Change and Agricultural Systems, Wageningen Agricultural Research University (WUR), the Netherlands

Energy & Construction Infrastructure projects:

Ms. Lorato Dlamini – Electrical Engineer

KPES (Pty) Ltd.

www.kgatelelopele.co.za



AFROLINK ENTERPRISES (PTY) LTD. as a PARTNER (Cont'd.)

Academic Partnerships:

Prof. Sabelo Mhlanga, PhD (WITS)

Associate Professor: Department of Applied Chemistry

University of Johannesburg

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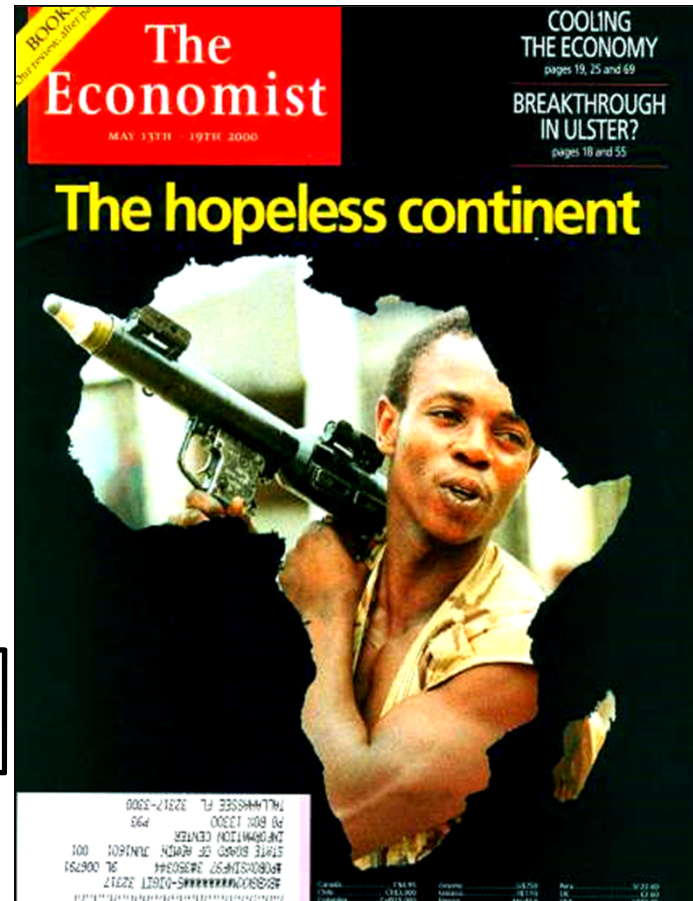
Japan link: Currently in negotiation with a local partner to offer a whole suit of services (turn-key solutions) to Japanese investors

Clients:

A. Hartrodt SA (Pty) Ltd – Afrolink is offering advisory services



The DARK continent



The Economist May 2000



If you want real growth Africa is the place to be!



The Economist

The happening continent

THANK YOU

The image shows a stylized orange cover for 'The Economist' magazine. At the top left, the title 'The Economist' is written in white serif font on a red rectangular background. Below it, the headline 'The happening continent' is written in yellow bold sans-serif font. In the center, there is a light green silhouette of the African continent. Overlaid on this silhouette is a photograph of a young Black man with a serious expression, looking at a silver mobile phone he is holding in both hands. The photo is framed with a thin red border. At the bottom of the cover, the words 'THANK YOU' are printed in large, bold, black sans-serif capital letters.

