

## Sustainable Development - North West Province

The North West Province, home to 9,5 percent of South Africa's total population, was created in 1994 by the merger of Bophuthatswana (one of the former black homelands) and the western part of Transvaal (one of South Africa's former provinces). Its 118 797 square kilometres of mostly flat grassland with scattered trees, is bounded by Botswana to the north, the provinces of Free State and the Northern Cape to the south, and on the northeast and east by the Limpopo Province and Gauteng.

Out of a population of 3,5-million people in the province, 65 percent live in rural areas. The majority of the province's residents are the Tswana people who speak Setswana. Smaller groups include Afrikaans, Sotho, and Xhosa speaking people, with English spoken primarily as a second language. The North West Province has the lowest number of people over the age of 20- only 5,9 percent - who have received higher education, and has a literacy rate of 57 percent.

**MINING IN THE PLATINUM PROVINCE** Known as the Platinum Province, mining, considered the mainstay of North West's economy, produces more than 42 percent of the province's Gross Domestic Product (GDP) and provides jobs for more than a third of the work force.

The province is home to the famous Merensky and UG2 reefs and produces 84 percent of South Africa's platinum, 46 percent of the granite and 25 percent of the gold production in the country, as well as uranium, diamonds, fluorspar, copper, vanadium, limestone, slate, phosphate, coal, manganese, dimension stone, cement and nickel.

Increased world demand for platinum has seen the price of the metal soar over the past few years and as a consequence, platinum mining in the North West Province is booming. Investment in the area is active and huge expansions worth billions of rands are already underway at a number of the platinum mines in the area.

The North West Province is the fourth largest provincial contributor to GDP, after Gauteng, KwaZulu-Natal and the Western Cape. The province produces 5,7 percent of South Africa's GDP with mining, agriculture and manufacturing contributing the largest portion of provincial output. Tourism is the fourth most important economic sector in this predominantly rural, and scenic, province. **AGRICULTURE** Aside from mining, agriculture is the only sector in which North West is acknowledged to have a comparative advantage over the other provinces. The agricultural sector produces 13 percent of provincial GDP and provides jobs for 18 percent of the labour force in the province.

Sunflower seeds, groundnuts, maize, wheat and cattle dominate the sector. The eastern part of the province has a higher rainfall and also produces vegetables, flowers and poultry. Horticulture, aquaculture and bio-fuels show particular promise for expansion, and the North West already has several bio-fuels initiatives underway. **MANUFACTURING**

The economy, with the exception of the mines, is characterised by small, medium and micro enterprises (SMMEs). Given the sensitivity of the province's economy to world mineral prices, the North West plans to reduce its dependence on the mining sector, with an increased diversification to tourism and non-mining related manufacturing industries, evident in the recent 4,5 percent growth in this sector.

North West's manufacturing sector is largely centred around the big five municipalities; namely Brits, Rustenburg, Potchefstroom, Klerksdorp and Mafikeng, which account for more than 50 percent of total manufacturing production in the province.

Beneficiation of mineral resources is a natural progression from the strong mining sector, and beneficiation of animal and mineral products and agro-processing are poised for growth. In the high-tech manufacturing area, automotive parts, electrical machinery, electronic, audio- and medical equipment are already being manufactured in the province using local materials.

### TOURISM

The Province has a total of 14 national parks and provincial reserves within its borders. The most well known are the Pilanesberg and Madikwe National Parks and North West boasts a wide array of species, ecosystem and habitats - including the Big Five in a malaria free environment. Tourism is a growing industry within the province, contributing some 13 percent to the provincial economy in 2006.

Sun City and the Lost City offer tourists the luxury of five-star hotel accommodation, internationally-famous casinos, water sports and two of the finest golf courses in the country. The area is also rich in natural, archaeological, cultural and historical attractions with the natural beauty of the Magaliesberg Mountains and the Pilanesberg mountains - rich in hominid discoveries, fossils and traces of Iron and Stone Age settlements. **ACCESS**

Location is one of the North West Province's greatest natural advantages. The main Cape Town to Zimbabwe railway line runs through the provincial capital of Mafikeng, linking North West Province to several southern African countries, including Angola, Zambia and Botswana.

An extensive road network connects the major commercial centres of the province to the rest of the country via a network of 1 785 km of national roads. The vital east-west corridor links the east Africa seaboard at Maputo to the west African

seaboard at Walvis Bay, running through the North West en-route. Â

Mafikeng has an established airport with one of the longest runways in the world and Pilanesberg also has an international airport, servicing primarily the tourism industry. Its strategic positioning will be further improved with the completion of the Trans Kalahari Corridor through Botswana and Namibia - and these developments auger well for a thriving business and tourism economy. WATER

Water is considered the key limiting factor to development in the North West. The western part of the province is arid, encompassing the eastern part of the Kalahari Desert with a rainfall of less than 300mm a year. The central part is typically semi-arid receiving 500mm a year and the eastern part is temperate with 600mm a year.

Evaporation exceeds rainfall in most parts of the province and as a result, the North West Province relies heavily on ground water resources to meet its needs. Perennial surface water is scarce, and although the province has a large reservoir of subterranean water, this resource is recharged at less than 10mm a year.

The province is not only depleting its precious water reserves, but suffers from an additional problem - that of pollution of groundwater. This includes high levels of dissolved mineral levels, nitrates and fluoride concentrations in certain areas, caused by both natural and human-induced factors including mining and industrial activities, agriculture and domestic use.Â POLLUTION PROBLEMS

Solid wastes and effluent from industry, manufacturing and households, as well as ammonium-based fertilisers and chemicals were considered the most important soil and water polluters in the province. But more recently the threats of radiation and radioactivity have been recognised in the province.

The main source of radioactive water pollution is from the acid mine drainage from gold mines in the more than 100 years of mining history. While spills might now be relatively well contained, this was not necessarily the case in earlier days.

The Brenk Report, released by the National Nuclear Regulator early August this year, warns that 100km of the Wonderfontein Spruit that runs through rich goldfields from Randfontein in Gauteng Province down to Potchefstroom in the North West Province, has been found to be dangerously polluted.

The report claims that the water in the river has absorbed polonium and lead, the radioactive by products of uranium and radium, which in turn are by products of gold mines. Experts say that people who drink the water or eat products irrigated or supported by the water could suffer from kidney and liver failure or get cancer; other symptoms include the hampering of growth in children and mental disability.

In the report, German physicist, Dr Rainer Barthel stressed that there was no natural water in the whole area that was safe for use by humans, animals or plants - pointing out the fact that the radiation and heavy metals exposed during mining was seeping into the ground and percolating through into the wetlands and waterways.

Authorities however, argue that contamination is highest in the mud and sediments of rivers and dams, and that the water itself, running into Potchefstroom's main dam is not contaminated above acceptable levels. This however, offers little compensation to the 150 000 residents of Khutsong, who unlike other areas, rely solely on the river for their water source - and fails to consider what happens when cattle stir up the mud when drinking from dams and rivers, or the consequences of children playing in contaminated areas.

There are a number of issues that nearby Durban Roodepoort Deep and Harmony Gold Mines need to answer for, including the rehabilitation of Robinson Lake, used as an emergency leakage overflow more than five years ago. This goes beyond stating that they are investigating solutions and that mine effluent is contained in tailings or slimes dams, and that spills are rare and well managed.

While the outlook for residents, particularly farmers, affected by contaminated water is a cause for concern, there are a number of initiatives in place that will have a positive impact for the North West - both environmentally and economically. SUSTAINABLE DEVELOPMENT

Trade in indigenous medicinal plants, like Devils Claw, is being encouraged and regulated to ensure that sustainable harvesting is practiced. If, in addition to growing, the product is processed and packaged within the province, the project could yield 400 jobs at planting, 6000 at harvesting and 200 at the processing stage. The growth and harvesting of Haragophytum procumbens, a medicinal plant native to the Kalahari Desert is coordinated and monitored by the North West's provincial Department of Agriculture, Conservation and Environment (Tel: 018 389 5111)

The development of community based small-scale commercial fisheries on several dams in the province is underway. A business plan for catfish production has the potential to create opportunities for both small and big businesses to establish plants throughout the province. The pilot project was built in Ventersdorp with a second project in Disaneng.

Production clusters are already planned for the Rustenburg, Brits and Mafikeng areas. Apart from providing an opportunity for sustainable income generation, and export markets to Japan and China, this project does not have a negative impact on the environment and the recycled water has a beneficial high concentration of nitrogen that would be good for crop yields.

The North West Province has a number of alternative energy and bio-fuel projects for the production of fuel from maize, sunflowers and oil-bearing trees. An ethanol from sweet sorghum production unit is also under consideration in the province.

One of the first initiatives to commercially grow oilseed trees in South Africa, the Mafikeng bio-diesel pilot project, began in May 2006 as a partnership between investment arm of the North West provincial government, Invest North West, and the Barolong Bo-Rratshidi Development Company, Mafikeng Bio-Technologies, Clean Air Nurseries and the Mafikeng Industrial Development Zone company.

The aim is to build the Mafikeng pilot project into a full-scale, R850-million initiative, employing 10 000 people. For more information on both the catfish and bio-diesel projects contact Invest North West on 014 594 2570.Â