



## EARTH HOUR CITY CHALLENGE 2014

### JOURNEYS TOWARDS SUSTAINABILITY – CITY OF JOBURG

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#### **Joburg's fine balance between development and sustainability**

The City of Joburg is the largest municipality in South Africa, serving the country's economic powerhouse, the greater Johannesburg metropolitan area.

Faced with many developmental and operational challenges owing to its large population and high-density commercial and industrial sector, the city nevertheless has an integrated development plan focused on sustainability, climate change mitigation, liveability and adaptability. Its commitment to these goals is showcased by the fact that the City of Joburg is effectively one of the largest cultivated tree plantations in the world. A tree census conducted when the metro was formed in 1995 estimated that there were around 10 million trees in the city's 1 645km<sup>2</sup> area at the time, approximately 1.2 million of which were on public land.

Within this context, Joburg recently hosted the fifth biennial C40 Cities Climate Leadership Group Mayors Summit, an international event that brings together C40 mayors from all around the world to propose and debate urban solutions to global climate change. This was the first time the event had been held in Africa, and it focused on all aspects of sustainable city management.

The metro's own sustainability plan is based on three interrelated pillars: sustainable communities, green transportation and integrated waste management. The plan acknowledges the ever-increasing complexity of the challenges facing large metros, as well as the fact that developmental initiatives need to be balanced with sustainability issues. In short, growth needs to take into account scarce environmental resources and potential environmental impact.

Developmental challenges in Joburg are, however, complicated by the fact that the city attracts a large number of local and international migrants in search of better economic opportunities, quality of life and refuge. These include what might be described as the first wave of climate change refugees; people from rural communities facing the collapse of their livelihoods due to rising temperatures and extreme weather events.

The City of Joburg also faces significant challenges in terms of urban poverty and social exclusion, which are exacerbated by the spatial divisions of the past. In its attempts to address some of these issues, the administration has introduced a unique programme called Corridors of Freedom, which aims to overcome previous spatial inequalities. This 10-year R110 billion infrastructure development programme is creating corridors that link the CBD and the Sandton business district with previously disadvantaged areas, steadily transforming Joburg into a city of integrated, liveable communities. New infrastructure along these corridors includes mixed-income housing, offices, schools, community and cultural centres, parks, libraries, clinics, public squares, bicycle paths and pedestrian walkways.

It is against this backdrop that the city is implementing its long-term sustainability programme, and is taking the opportunity to use its response to climate change as a vehicle with which to promote alternative developmental paths. Planned and existing methodologies include alternative modes of transport, ecological sanitation, organic urban agriculture and

horticulture, water harvesting, water purification using solar energy, participatory plant breeding, recycling and the introduction of a decentralised and renewable energy supply.

Green transportation, in particular, is a key theme.

Cognisant of the need to reduce carbon emissions and facilitate a rapid transition to a low-carbon economy, Joburg adopted a new long-term transportation plan in October 2013. The plan, which focuses on the realisation of inclusive economic growth through transit-orientated development, centres around the Rea Vaya rapid-transit bus system, which links key hubs throughout the metro.

Rea Vaya, which means 'we are going', offers fast, safe and affordable transportation on a network of routes around the city. The project aims to provide better public transportation, reduce congestion, improve environmental quality and create new jobs.

Long-term, the plan is for the Rea Vaya network to cover 330 kilometres, giving more than 80% of the city's residents easy access to bus transportation. It is the cornerstone of a city-wide plan to provide a seamless transport network combining regular buses, trains, taxis and private vehicles.

Johannesburg has approximately 1.3 million households housing about 4.5 million people, and this number is expected to grow to 1.4 million by 2015. The administration's primary challenge is therefore to provide reliable services for households, businesses and industry alike, and to do so in a way that does not replicate high-consumption patterns in other big cities. Joburg also needs to promote human settlements that feature more sustainable development practices and technologies, and which can withstand the hotter, wetter conditions expected to result from climate change.

Part of this effort involves the promotion of urban agriculture to address the issue of food security and facilitate the formation of more self-reliant communities. Food insecurity among urban poor can be as high as 42% in some cities, and it is with this in mind that Joburg supports an active food gardens programme on unused municipal land.

Another feature of the city's urban development and renewal projects is the attempt to promote eco-mobility, the ability to walk around communities without the need to use motorised transportation. Walkability is the concept at the centre of non-motorised infrastructure development in such areas as Ivory Park, Diepsloot, Zola and Orange Farm.

Also in this vein is the Cosmo City Climate Proofing Project, which has involved the provision of low-pressure solar water geysers to over 1 000 low-income households in the area, as well as the provision of energy-efficient light bulbs and the planting of fruit trees. The solar geyser programme has been extended to other areas through the City Power Solar Water Geyser Programme (SWHP), which was launched in October 2012. The SWHP aims to roll out 110 000 solar geysers to poor and low-income households over a three-year period.

Among many similar projects is a landfill gas-to-energy project, which is currently being implemented. Two sites have already been developed, and the final five sites that have been planned will generate approximately 19MW of electricity, which will be used to supply about 12 500 middle-income households.

"The City of Joburg's vision is to be a world-class African city," says Mayor, Parks Tau, "and we aim to develop this vision by drawing on best-practice technologies and methodologies from all around the world. We aim to be at the cutting edge of sustainability in Africa."

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Source: Tree count: Africa Check (<http://africacheck.org/reports/is-johannesburg-the-worlds-largest-man-made-forest-the-claim-is-false/>)

