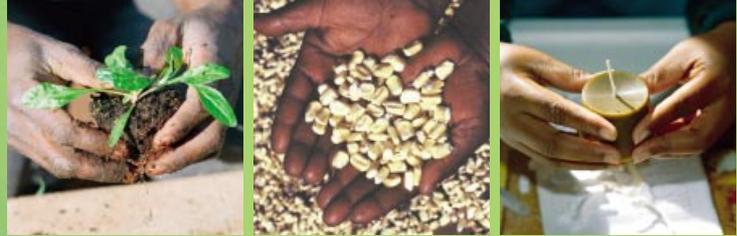




**GREENING**  
the WSSD



**Leaving a greening legacy**  
Thousands are doing their bit. Are you?

**Greening the WSSD is the first attempt to reduce the environmental impacts of a major UN Summit on the host city. In this case, the people of Johannesburg. By working with them, we aim to protect, conserve and improve the city's environment and natural resources.**

Local and global players have formed partnerships to make Greening the WSSD possible. Greening the WSSD is funded and supported by the Gauteng Department of Agriculture, Conservation, Environment and Land Affairs (DACEL); the Global Environment Facility (GEF); the United Nations Development Programme (UNDP) and the World Conservation Union (IUCN).

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## Preface

# Turning the Summit's global thinking into local action.

The World Summit on Sustainable Development is the largest conference ever held on the African continent.

Given its size – and its themes – will the conference itself be a leading example of sustainable development?

Can the organisers reduce the environmental impact on the people of Johannesburg? Can the natural resources of the host city be protected and conserved? Can future conferences of this scale be held in an environmentally sustainable way?

Greening the WSSD is an initiative that is turning the Summit's global thinking into local action. We're making sustainable development happen – before, during and after the Summit.

**This is a world first. Greening the WSSD is pioneering the way international events will be organised.**

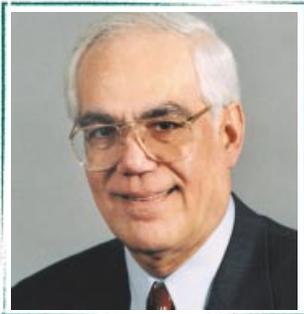
As participants, you have an important role to play. You too can make global issues work in Johannesburg.

After all, good ideas have currency when they are put into practice. We encourage you to make a positive difference during your stay here.

**Your actions will make a difference. You have choices in areas such as water, transport and waste. We encourage you to choose 'green' options wherever possible.**

Many people and many projects have been doing their bit for greening – long before the Summit. They're already making a difference. By involving local communities in these projects, the issues being discussed at the Summit are being made real – and they're improving the quality of their lives.

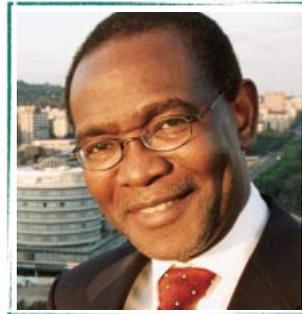
Greening the WSSD is ambitious. But our initiative will be something we can be proud of. And something others can build on.



Mohamed El-Ashry  
CEO, Global Environment Facility



Mary Metcalfe  
Gauteng MEC Department of  
Agriculture, Conservation,  
Environment and Land Affairs



John Ohiorhenuan  
Resident Representative, United  
Nations Development Programme,  
South Africa



Yolanda Kakabadse Navarro  
President, IUCN – The World  
Conservation Union



I'm doing my bit.  
Are you?

David Manamela. Plumber.

## Monitoring and evaluation

# Every little action will make a difference

We've put an extensive monitoring and evaluation mechanism into place. Our initiative is not some feel-good "green-wash", but a real effort to put sustainable development into practice – before, during, and after the Summit.

**We are measuring the effectiveness of our efforts to reduce the environmental impacts of the Summit.**

The results will form a major part of a "Lessons Learnt" report. We'll present the report to the United Nations and other organisations world wide, so that future events can build on our experiences.



## Training

# Greening your hosts. Greening the nation.

Five thousand volunteers are hosting you in Joburg. Mainly students, they are helping run the WSSD. Charged with such an important role, rest assured, they've been sensitised to the principles of sustainable development.

Our volunteers will:

- Give you tips on reducing your impact on our natural resources and environment
- Show you where and how to recycle waste
- Show you where to take tours to our community-based sustainable development projects

After the Summit, these same 5 000 volunteers will take their knowledge back to their communities where they will help to clean and 'green' their neighbourhoods. When it comes to protecting South Africa's environment, they're doing their bit.



Above: Each unit of electricity consumes 1,2 litres of water during generation and contributes 1kg of CO<sub>2</sub> to the atmosphere. Energy efficient light bulbs at home go some way towards combating these effects.

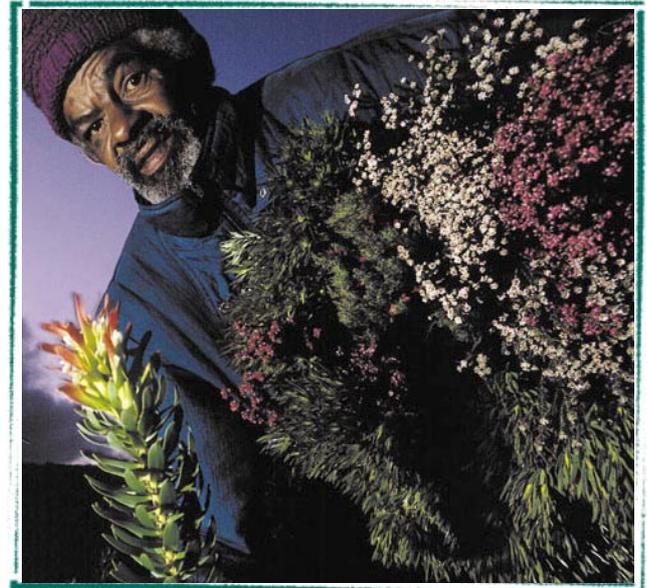
## Procurement

# The green value chain

We've attempted to ensure that goods and services being used at the Summit are produced, used and disposed of in an environmentally responsible way.

We've adopted the principal, 'environmental responsibility is part of social responsibility' all the way along the supply chain.

- Many of the flowers you'll see at conference venues are indigenous South African fynbos – from the globally important Cape Floral Kingdom – harvested sustainably
- Gifts are wrapped in minimal packaging. The packaging is reusable, recyclable or biodegradable
- We have scrutinised suppliers – even those supplying catering, medical goods and security systems
- The paper you use at the Summit has come from sustainably managed forests, and produced at mills with an environmental management plan



Above: The Cape floral kingdom is home to a large percentage of South Africa's plant species. Several conservation areas in the Cape have been declared to preserve this diverse vegetation type. Juan Pablo Moreiras – FFI.

## Johannesburg Climate Legacy

# A carbon neutral Summit

The Summit will produce an estimated 500 000 tonnes of carbon dioxide, the gas that contributes towards global warming.

Most of it will be generated by you as participants, flying to Johannesburg and while in South Africa.

We would like the Summit to be 'carbon neutral.' If you would like to offset the impact you make, you can invest in corporate or individual "Climate Legacy Certificates". A R100 or US\$10 legacy certificate is worth about one ton of carbon.

Purchase your certificate at [www.climatelegacy.org](http://www.climatelegacy.org) and become part of the Johannesburg Climate Legacy (JCL)

project. JCL is led by a South African association of business, government, NGO's, business and academia working in partnership with the World Business Council for Sustainable Development,

IIEC, Future Forests, KPMG, the Development Bank of Southern Africa, IUCN, and others.

The project aims to raise US\$5 million. The funds will be used to support South African projects that permanently reduce carbon emissions. The aim is to invest in enough projects to offset the carbon emissions produced by the Summit.

**You can use the website to calculate how much carbon you generate during the Summit. A Summit Carbon Calculator will also show you how emissions from the Summit are being offset.**

Your contribution will become part of an investment in energy-saving technology, helping replace 'dirty' fuel sources, and improve quality of life in poor communities in South Africa.

## Green energy

# Two Summit venues are powered by green electricity

**The Summit is hosting an innovative pilot project: one that aims to show that ‘green’ electricity is entirely feasible.**

The pilot will provide the Ubuntu Village and the NASREC Expocentre with electricity that is certified green by South Africa’s National Electricity Regulator (NER) and supplied by green sources.

Green electricity is produced in a sustainable manner from renewable energy sources—the sun, the wind, biomass and small hydro-electric stations.

This pilot project will lay the basis for a regulatory and trading regime for green electricity in South Africa.

The project is enabled by a grant under the National Department of Environmental Affairs and Tourism – Climate Change Programme, which is supported by USAID.



Above: Wind energy is a source of green power



**I'm doing my bit.  
Are you?**

AA Dube. Bus driver.

## Transport

# Coming and going clean

We're proud to say we're using the Summit to promote "cleaner" technology in South Africa's public transport systems.

- 200 new buses for the Joburg public transport fleet are fitted with emission control technology
- Bus drivers have been trained to drive in ways that improve fuel efficiency and reduce emissions

You can visit an exhibition of Emission Reduction Transport and Fuel Technology for developing countries – Fueling the Future. Electric, liquid petroleum gas and compressed vehicles are on display.

The exhibition is supported by the Gauteng Economic Development Agency (GEDA), South African energy companies, and academic and scientific institutions.

## Water management

# Every drop is precious

South Africa has the third best tap water quality in the world. It is completely safe to drink – which reduces the need for bottled water and the resulting waste.

But in a country where water is a precious commodity, we are extremely conscious of saving water. And keeping it clean.

The South African Department of Water Affairs and Forestry (DWA) has launched a project to ensure that our hotels, conference venues and restaurants use water efficiently.

Their intention is to promote:

- Improved plumbing technology and fixtures
- The repair of leaks in hotels, conference venues and restaurants
- The reduction of effluent
- A water saving campaign for staff and guests
- The evaluation of water usage

## Water neutral

It is estimated you will consume 200 litres of water per day during the Summit – 90% of which will return to the sewage system. You can purchase a Water Neutral Certificate for R340 (\$35). There are 5 000 certificates, the sale of which will raise R1,7 million to fund water and sanitation supply projects in poor communities in South Africa. You have the opportunity to make a difference.

[www.waterneutral.org](http://www.waterneutral.org)

## Waste

# “No more waste”

## Joburg’s waste management company, Pikitup

Pikitup is busy, right now, recycling the waste generated by the Summit. Even with thousands of participants and visitors in Joburg, it won’t all end up on the city’s landfills.

As participants, we ask you to help. Recycle your waste. Separate the materials you want to dispose of before you throw them away.

Our recycling bins are marked for plastics, cans, paper and glass.



**Please use glasses made from recycled bottles, with the Greening the WSSD logo. Their manufacture has helped enrich communities and transfer skills.**

Dry waste is separated at source and collected from the major Summit venues by recycling companies. Only

non-recyclable material – a small portion of the waste created by the Summit – will be sent to landfill.

**A hundred previously unemployed people are helping us. After the Summit, they’ll be employed at the city’s buy-back centres, having been trained to separate grades of waste.**

After the Summit our bins will be used in the Joburg central business district. They’ll be part of the Inner City Clean-up campaign.

We hope that by creating awareness, household recycling programmes can be set up in the long term.

**Right: South Africa’s open spaces are often used as dumping grounds for unwanted waste. Several education and awareness raising campaigns are underway to reverse this trend.**





I'm doing my bit.  
Are you?

Theodorah Mvula. Chef.

## Responsible tourism

# A new tourism ethic

Tourism is one of the fastest growing industries in the world. Managed responsibly, it promotes the social and economic development of local communities, and protects the environment.

In contrast, inappropriate development – coupled with high demands – can destroy natural resources and cultural diversity.

Right: The rich biodiversity of Southern Africa's oceans attracts tourists. Whale-watching is a popular activity.



Right: The Sandton Convention Centre.



## The Sandton Convention Centre (SCC)

# The host venue stands proud

Many South African establishments have committed themselves to creating a “responsible tourism” industry. Guidelines for its development have been drawn-up by the South African Department of Environmental Affairs and Tourism (DEAT). Members of the industry have been asked to sign a Statement of Intent, committing them to implement a responsible tourism programme.

All signatories are listed in a Responsible Tourism Guide to South Africa.

The Federated Hospitality Industry of South Africa (Fedhasa), in partnership with Greening the WSSD, have launched the Imvelo Awards. *Imvelo* is the Zulu word for nature. The awards showcase the hospitality industry’s economic and social development, and environmental management programmes.

The Sandton Convention Centre has been given a stamp of approval by Greening the WSSD.

With good reason.

The SCC has a range of environmental management and recycling policies in place. It actively pursues a detailed “Green Plan”.

Two small examples. All glass used at the SCC is sent for recycling. And each administration office has a recycling bin for paper, cardboard, plastic and cans.

The Centre conserves lighting and air conditioning in many ways:

- Lights in public areas are dimmed or switched off when they are not needed.
- Preference is given to indoor plants that consume small amounts of water.
- Sensors in restrooms save water by switching taps off and by controlling flushing.
- Guards make it their duty to close doors left open – reducing the load on the air conditioning system.

In conjunction with Greening the WSSD, the SCC is supplying delegates with the option of free-range and organic foods.

## Public awareness

# Greening hearts and minds



The Summit runs for 10 days only. But we'd like to leave our host city – and the province – with an awareness of the need to protect the environment.

For this to happen, ordinary people need to become involved.

We're running an awareness and education campaign, calling on decision-makers, business leaders and youth to become involved.

At the Summit itself, information terminals, exhibitions and tours to sustainable development projects will show the amazing things already being done by the people of Gauteng.



## Bontle ke Botho: “Being human is being beautiful”



The Bontle ke Botho campaign to find the cleanest school, ward and town in Gauteng was run by the provincial government ahead of the Summit. By entering, communities took a conscious decision to keep their environment clean, green, and beautiful and to leave a legacy for the next generation.

The objective of Bontle ke Botho – and other initiatives – was to change people's relationship with their environment. By targeting the leadership at schools and local government wards, Bontle ke Botho has had a substantial impact on understanding, attitudes, and behaviour.

## Gauteng Provincial Government initiatives

# Going green in South Africa's industrial heartland



Gauteng is South Africa's most densely populated province. It is South Africa's industrial heartland, with a history of environmental damage.

The Gauteng Government, through the Department of Agriculture, Environment, Conservation and Land Affairs (DACEL), is fast-tracking the province on a path towards sustainable development.

### **The Cleaner Technology and Remediation Fund**

The fund helps industries and local government find technologies that can help clean up environmental damage and produce goods in a more sustainable way.

### **Clean fuel technology**

The Gauteng Government has established a project to investigate clean fuel technology for its transport fleet. Approximately 150 cars will be converted to clean fuel technology by December 2002.

### **Gauteng air quality management strategy**

Six air quality monitoring stations will be set up across the province to address the need for a comprehensive air quality management strategy for Gauteng.

### **Gauteng Open Space System (GOSP)**

Mining has had significant environmental, public health and land use impact on Gauteng. To promote remediation, a Gauteng Mine Pollution Forum was established. To aid decision-making, the forum uses the Gauteng Open Space System, a GIS (Geographical Information System) based spatial decision support tool. The GOSP's data highlights areas of environmental concern, allowing decision-makers to make predictive decisions before any negative impacts take place, thus affording greater protection to the environment.

# Cradle of Humankind World Heritage Site

## Sharing and conserving our origins

An international centre, managed by the Gauteng Department of Agriculture, Conservation, Environment and Land Affairs (DACEL) has been established at the Cradle of Humankind World Heritage Site (COHWHS). The centre is a collaboration between two parties: the Palaeoanthropological Unit for Research and Exploration (PURE) at the University of the Witwatersrand and the Center for Advanced Spatial Technologies at the University of Arkansas. Key activities include:

- Research – advanced spatial technology, archive, analyse and disseminate information on fossils.
- Education – post-graduate student exchanges and on-site training.
- Community Development – skills and jobs are developed using the Environmental and Spatial Technology (EAST) programme and PURE's private enterprise initiative for field technicians. "Fossil Trackers" employs local people to undertake field excavation using spatial technology.

- Sustainable Development and Environmental Management – the development of a GIS-based monitoring and evaluation and decision support system for DACEL to conserve and appropriately develop the COH WHS.

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Left: Field excavation at the Cradle of Humankind

# South African initiatives that practise what the Summit preaches

## Local heroes



Above: Planting indigenous trees and encouraging residents to plant gardens will go a long way towards greening a township.

You'll be inspired by the number of ordinary South Africans who are striving towards sustainable development.

Many communities have set up projects that create jobs, enhance the quality of life and help improve the environment.

You're invited to see for yourself some key ideas in action.

Please join our tours – detailed later in this brochure.

**We know, too, that your visits will make the projects feel part of the Summit. Your comments will be valued and appreciated.**

South Africa is a signatory to many UN conventions aimed at addressing global environmental problems: the Convention on Biological Diversity, the Framework Convention on Climate Change and the Kyoto Protocol, the Convention to Combat Desertification, and the Convention on Persistent Organic Pollutants. Throughout South Africa, citizens are piloting projects that help South Africa fulfil the provisions of these treaties.

## IIEC-Africa (ECO™ House)

# Global thinking. Local action

The Soweto ECO™ House is the first energy-saving house to be built in Soweto. It achieves natural thermal comfort for Johannes Malahlela and his family, thereby reducing energy consumption and reducing the need to burn fossil fuels or consume large amounts of electricity.

Johannes will be hosting visitors interested in the energy efficient technology during the Summit. He addresses a key objective for the Framework Convention on Climate Change.

The project is a partnership between IIEC and IIEC-Africa (an international environmental NGO), PEER Africa (South African office of an international private engineering firm), and the WITS Clean Air Research Project (University of Witwatersrand).

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### **Take the tour to Soweto.**

At the Ecohouse you'll meet Johannes Malahlela and his family, who will share with you the benefits of living in the house. Then you'll visit SOMOHO. At Mandla Mentoor's house you'll receive an overview of the project and you'll see people sculpting from re-cycled paper. Next, it's time to walk up to the Mountain of Hope and be taken on a brief tour. As a finale, you'll take part in an African drumming session.

For more information or to make a reservation, please contact Worldchoice on +27 11 463 4300 or visit their website: [www.wssdtravel.com](http://www.wssdtravel.com)

Left: A simple pitched, tiled and insulated roof with 600mm overhang on the northern side allows maximum solar radiation in winter and shades the house in summer.



## Soweto Mountain of Hope (SOMOHO)

# Out of the darkness, light.

Tshiawelo Koppie was once a dangerous and barren hill. Now it is being transformed into an art, culture, and environment hub for the local community.

SOMOHO is a working example of sustainable development in the heart of Soweto. It contributes towards the alleviation of poverty. It promotes sound waste management. It helps to restore the Klip River. And it encourages the people of Soweto to find ways to enhance the quality of their lives.

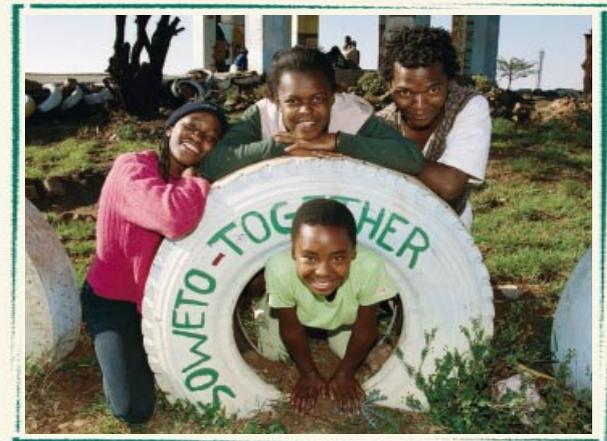
SOMOHO's working groups include: turning waste into art; catering in traditional South African meals; drumming circles and performances; Children Loving Nature after-school programme; and organic gardening.

Left: George Skosane. Making art from waste paper encourages recycling and re-use.

Right: The SOMOHO Children Loving Nature group educates local children about cleaning their own environment.

SOMOHO has an international partnership with World Voices, based on sharing of skills and experience. The British High Commission provides the primary funding.

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# Alexandra Renewal Project

## How green will your valley be?

Not far from Sandton is one of the oldest, poorest and most densely populated areas of Joburg: Alexandra.

Here you'll find overcrowded shacks, run down hostels – and newly built houses with beautiful gardens.

The Alexandra Renewal Project is tackling the poverty of Alexandra and the many aspects of its unhealthy environment.

It will do this by encouraging community involvement, civic pride and sustainable local authority administration over a seven year period. Approximately 130 sub-projects will integrate social, economic, physical and institutional objectives. These will form the basis for long-term sustainable development.

From left: The development of new housing and the removal of informal shacks and settlements is a key aspect of the project. The Pan Africa market is being upgraded as part of a small business development programme. Local schools are involved in the cleaning and maintenance of the Jukskei River that runs through Alexandra

Poverty alleviation will be addressed through youth skills development and the development of economic hubs.

Environmental benefits will include:

- Rehabilitation of the Jukskei River
- The clean up of schools
- Ongoing greening of the area – planting of an indigenous forest and domestic permaculture gardens
- Monitoring of air and water quality

Partnerships will involve all spheres of government, community-based organisations and NGOs.

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### Take the tour to Alexandra

Take in the ongoing developments that are transforming Alex and its quality of life. You'll stop at the Altrec Centre where you'll learn about the history of Alex. From there you'll have the chance to plant a tree at the indigenous forest. Then you'll drive to Mandela House. Nelson Mandela lived here for three years and the house is now a museum. The tour then takes in the Catholic Church, the Pan Africa commercial hub, the Iputheng cluster of four schools, the rehabilitated Juksei River, and finally the award winning garden at River Park.

For more information or to make a reservation, please contact Worldchoice on +27 11 463 4300 or visit their website: [www.wssdtravel.com](http://www.wssdtravel.com)

## Banareng Project

# Feed the children, feed the nation

Hungry children were arriving at school complaining of headaches and dizziness. As a result, Banareng Primary School, with the support of BMW, established a permaculture vegetable garden on its school grounds.

The project has grown. It now has a self-sustaining garden with indigenous plants, roses in the cut-flower section, a rockery developed on old tyres painted by the children, and the “Hanging Gardens of Babylon”.

The gardens are included in the school curriculum and form an interactive educational programme; it teaches pupils about vegetable production, land management, water conservation, alien plants, and recycling. The project demonstrates, too, how to reduce the use of pesticides. It is compatible with the objectives of the Convention on Persistent Organic Pollutants.

The school now feeds 670 children, which has resulted in a dramatic drop in the absentee rate. By improving the nutrition of its pupils, the school has enhanced the quality of their education.

Banareng is a partnership between teachers, pupils, and the community. A joint research project is underway between Banareng,

### Take the tour to Banareng

En route you'll pass one of the typical poor schools in the area. This will help you understand the difference that Banareng has brought about. Clever Shikwamebane, a teacher from Banareng, will direct the bus to one of the nearby informal settlements, where you'll see where his pupils live. Then you'll be shown around Banareng itself by the Principal, Paulina Sethole.

For more information or to make a reservation, please contact Worldchoice on +27 11 463 4300 or visit their website: [www.wssdtravel.com](http://www.wssdtravel.com)

Right: Paul Sebea, Banareng head gardener and parent.

BMW, DSG Pretoria, Outreach (NGO) and the University of Witwatersrand to develop a funding proposal for the Sustainable Energy and Environment for Development (SEED) gardens in students' backyards.

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AFRIBIKE

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powered  
cycles  
bike.org

TOUR DE FRANS

## Johannesburg EcoCity Initiative

# Naturally better living

The Johannesburg EcoCity Initiative demonstrates alternative ways of planning and organising communities that can put sustainable development into action.

The residents of the village are the first to benefit. Their homes cost less to maintain and run. They benefit from communal living. And their health has improved through major reductions in air and water pollution.

Over 150 permanent jobs have been created through projects such as waste recycling, product-making from waste paper, bicycles, organic food gardening, and running the eco-village as a tourist destination.

There are environmental benefits too. Recycling reduces the consumption of coal, fuel, paper, metal and water. Non-motorised transport decreases pollution. Organic farming means a reduction in the presence of Persistent Organic Pollutants (POPs). Biodiversity will be protected with the creation of natural areas and parklands – and the clean-up of rivers.

Left: The entrepreneurs of the Shova Lula Cycle Co-operative sell and maintain bicycles to promote low-cost, non-polluting transport.

Right: The Iteke paper making project collects waste paper for recycling and re-use.

Roasting mealies (corn) forms part of a staple diet for many. The “Smokeless *Umbawula*” developed through this programme uses one-third of the coal of ordinary braziers, reducing both fuel costs and emissions.

The EcoCity Trust is a public private partnership with the City of Johannesburg which oversees the management of the programme. The project has involved a range of partnerships including government (local, provincial, national and international), international aid agencies, non-governmental agencies (local and international), private sector and the community.

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## The GreenHouse Project

# In-house greening



How do you develop a public centre in a crime hot-spot and poor inner city area?

The GreenHouse is an environmental learning centre. It is developing a People's Environmental Centre from which a range of sustainable development initiatives can be demonstrated and catalysed.

These include:

- Energy efficiency and conservation
- Renewable energy generation

Left: An American invention, the 'straw bale' wall, is made entirely of bales of straw and red earth. Traditionally a small window is left in the wall to show the straw inside

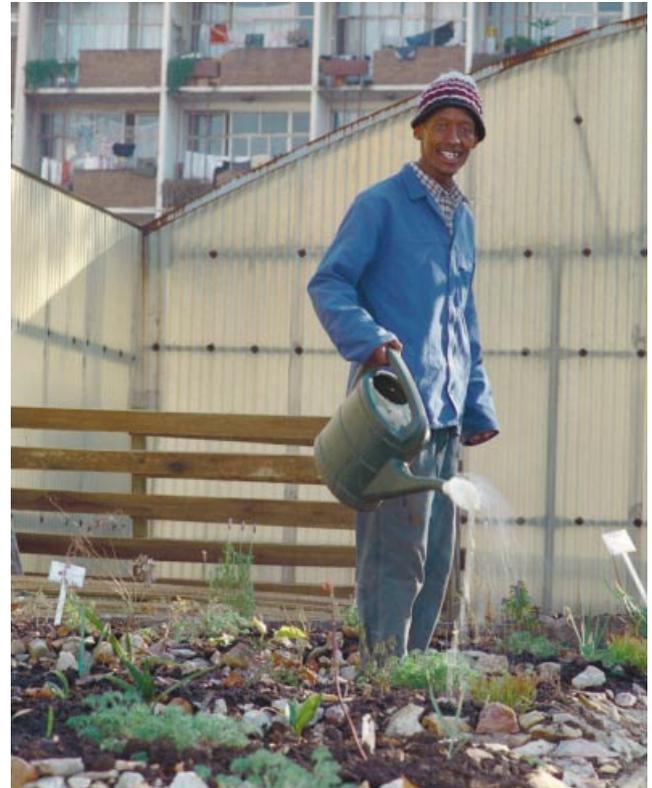
## I'm doing my bit. Are you? Batho Seela. Gardener.

- Water conservation and harvesting
- Ecological processing for re-use of waste water
- Recycling of building materials
- Organic growing methods.

To prove that construction can be economical and environmentally responsible, the GreenHouse uses various examples of environmentally appropriate technologies. Poverty alleviation is addressed by employing local labour and small businesses. The GreenHouse Project is also trying to raise funds to continue building and improving the Centre.

The GreenHouse Project has received its primary funding from the Danish Government Funding agency, DANCED. Additional partners include the National Lotteries Trust and the Development Bank of South Africa. There is a formal partnership between the City of Johannesburg, and the Sustainable Energy and Environment for Development (SEED) programme. The GreenHouse Project networks extensively with other environment and development organisations, particularly those in Joubert Park.

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**[ghouse@earthlife.org.za](mailto:ghouse@earthlife.org.za)**





## Beekeeping for Poverty Relief

# Beekeepers for prosperity

Beekeeping is a traditional African practice, except in South Africa. Nevertheless, with the right training, it is a viable option to help alleviate poverty in disadvantaged communities.

- The project produces trained beekeepers.
- The 35 communities involved have started their own businesses, selling honey, beeswax, propolis, pollen and beeswax candles. Their biggest challenge is to successfully market their products and run their own businesses.
- The benefits to biodiversity are huge. Besides producing honey, bees play a crucial role as plant pollinators, helping to maintain the integrity of natural ecosystems.

Partnerships exist between the community, local city council, local tribal authorities, the National Department of Agriculture and Land

Left and right: In a finely balanced ecosystem the loss of pollinators like the honeybee would be catastrophic. Educating surrounding communities about the value of bees encourages support for these rural initiatives.

Affairs, the Agricultural Research Council (ARC), and local churches. The Department of Arts, Culture, Science and Technology has funded the bee projects. The ARC implements and manages the projects.

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## ROSE Foundation

# Recycling oil saves the environment



ROSE manages the collection, storage and recycling of used lubricating oil throughout South Africa. The oil is collected from a myriad of places: car and truck workshops, bus depots, mines and DIY motorists. It is converted into industrial fuel for re-use.

All stages of the recycling process ensure sound environmental practices. The

environment benefits, as recycled oil does not contaminate the soil, surface and ground water.

ROSE has collected 202 million litres of used oil since it first began operating in January 1996. Funding is provided by 13 members of

the South African Lubricants Industry. They each make a contribution to every litre of New Lube Oil sold. ROSE uses a collection company (OILKOL Pty Ltd), employing over 100 staff and drivers. The ROSE Foundation is an NGO operated by the private sector and receives no support from national or local government.

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Opposite – clockwise from left:  
Collecting used oil from cars, taxis, buses, mines, farms and factories.  
Oilkol pumps out the storage drums.  
Oil stored at the depot before conversion or re-use.



## Rietvlei wetland rehabilitation

# Nature's pure genius

The Rietvlei Wetland Rehabilitation project lies within the Rietvlei Nature Reserve – owned and managed by the City of Pretoria/Tshwane. The Rietvlei Dam provides 15% of Pretoria's water and the area contains Bankenveld – grassland under threat in the Gauteng region.

The rehabilitation of Rietvlei is important because it:

- Promotes waste water purification through a natural system
- Addresses the control of alien, invasive plant species
- Protects vital habitats associated with the globally important wetland and grasslands ecosystems
- Exemplifies innovation in combating land degradation
- Protects carbon sinks
- Creates wetland awareness and education

Rietvlei addresses poverty through labour intensive job creation and training, while conserving the water resources of a dry country. Sixty percent of Rietvlei's budget uplifts the poor and women make up 60% of its workforce.

### Take the tour to Rietvlei

At Witkoppies in the Southern Peatland area you'll view a gabion in the process of being built. (You can add a stone if you'd like to contribute to the rehabilitation process!) You'll also be able to experience how the smell of sewerage-water dissipates as the wetland does its work. You'll also be able to squeeze fresh, clean water from a 7 000 year old piece of peat.

For more information or to make a reservation, please contact Worldchoice on +27 11 463 4300 or visit their website: [www.wssdtravel.com](http://www.wssdtravel.com)

The Rietvlei wetland rehabilitation project is part of Working for Wetlands. It is a partnership between the Working for Water Programme (Department of Water Affairs and Forestry), Department of Environmental Affairs & Tourism (DEAT), Mondi Wetland Project, as well as the Rietvlei LandCare Programme and City of Tshwane.

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Left: 7 000 year old peat – nature's sponge.  
Right: Margaret Futhane, lead contractor. Workers are trained to operate their own contracting businesses and 60% of the workforce at Rietvlei are women.



## Waste management challenges

# A world-wide challenge. And three South African ways to tackle it.

### **EnviroServ: POPs and obsolete pesticides**

Obsolete pesticides are an international dilemma. They are a particular problem in developing countries, frequently found in stockpiles close to subsistence communities.

EnviroServ Waste Management is the only company on the African continent with the ability and experience to clean up Persistent Organic Pollutants (POPs). The company identifies, collects, decontaminates and disposes of stockpiles. This increases the safety, health, and quality of life of communities living nearby. Steps are taken to rehabilitate contaminated soil and water.

EnviroServ ships the pesticides to Europe for incineration. The incineration of stockpiles of POPs is controversial, but this is the only practical method of disposal at the moment. Other means of disposal are being actively pursued.

EnviroServ Waste Management and AVR International (Netherlands) have teamed up to provide the resources and experience for a range of chemical cleanup services, as well as “best practice” disposal solutions. Their current focus is Sub-Saharan Africa.

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### **EnviroServ: Leachate**

Hazardous leachate is a result of rain and liquid waste entering landfill cells. EnviroServ embarked on an extensive Research and Development Programme four years ago to address the treatment of leachate generated by the Holfontein landfill site. The most appropriate process was found to be a combination of chemical treatment and evaporation, followed by aerobic treatment of the condensate, and polishing with activated carbon.

This particular solution allows effluent to be discharged to water courses or be used on site.

The project is currently awaiting a Record of Decision from the Gauteng Department of Agriculture, Conservation, Environment & Land Affairs.

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### **Linbro Park Landfill**

Scavenging on landfills by desperately poor people is a problem all over the world. More than anything, it endangers their lives.

Pikitup, Joburg's waste management company, has come up with an innovative way to employ the poor – and to reclaim usable material that has found its way into landfills.

At Linbro Park, Pikitup's recycling project has created well over 30 jobs. The community collects and cleans reusable material – saving valuable landfill space – and then sells it to the contracted recycling company, Shabalala Recycling. The project has been running successfully for about two years, and will be applied to other areas.

Pikitup has spent R3,7 million on a refurbishment programme at Linbro Park. The company has made the site more appealing to surrounding communities by greening sections of the tip face.



Above: South Africa generates about 500 000 tonnes of waste a year. About 80% of this is generated in Gauteng, host province of the WSSD.

They've improved storm water drainage, installed a water pollution monitoring system and improved access – with the installation of a weigh-bridge and security booms.

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**If you ask a member of this generation two simple questions: ‘How do you want the world to be in fifty years’ and ‘What do you want your life to be like five years from now?’ the answers are often preceded by ‘Provided there is still a world’ and ‘Provided I am still alive’.**

**Hannah Arendt (Philosopher)**



[www.greeningthewssd.com](http://www.greeningthewssd.com)