

Greener Governance in Southern SADC

Success Report on Medium Sized Local Authorities



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Executive Summary

In 2002, a collaborative environmental management training series was launched at the local government sphere in seventeen medium-sized cities within the southern South Africa Development Community (SADC) region, Africa. The training focused on the Greening of Governance (improved environmental performance) at local government sphere. The Centre for Environmental Management, North-West University, Potchefstroom (CEM) (project initiator, management and course presenter), the Konrad Adenauer Stiftung (KAS) (funding agency) and the International Council for Local Environmental Initiatives (ICLEI)–Africa, were main stakeholders in this project. Other supporters were Seneca College, Toronto, Canada and the Development Bank of Southern Africa (DBSA).

The final workshop in the series of six, took place in May 2004. In June 2004, a task team of the CEM visited the participatory municipalities in the countries of Mozambique, Namibia, Swaziland and South Africa in order to compile a comprehensive case study based report on the impact, outcomes and success stories that resulted from the Greener Governance training workshops. The driving force behind the compiling of the report was to try and quantify in real terms, and not only in anecdotal way, the results of the Greener Governance training.

This report and its addendum of fifteen case studies, reflect in real terms the impact and potential of environmental training at local government sphere in medium-sized cities of developing countries, based on the information gathered from the participatory southern SADC cities. The findings of this report are based respectively on knowledge and feedback gained since the launch of the Greener Governance training project in 2002, and additional information on specific environmental projects that was documented during the case study/site visits in June 2004.

This report and the Greener Governance training project as such, serve to prove that local governments in developing countries are in need of environmental management training and benefit from training programs

tailored for this need. This report advocates that, in most instances, environmental management training at local government sphere, may make a world of difference in the global environmental drive towards a sustainable future.

This finding is supported by the following outline and is based on the case study reports contained in the addendum to this report:

- o Background to the Greener Governance Training Project;
- o Profile of Partners, Participatory Countries and the Medium-sized Cities Involved in the Greener Governance Training Project;
- o The Greener Governance Training Objectives and Outcomes;
- o Summary of Successes and Lessons Learned; and
- o Conclusion.

Following the conclusive findings, remarks and recommendations of this report, a list of all key contacts of the Greener Governance training programme is attached. The addendum to this report contains 15 case study reports on the Greener Governance projects from South Africa, Mozambique, Namibia and Swaziland's local authorities respectively. These case studies enable the reader to gain an understanding of the important environmental issues, backlogs, successes, possible benefits and potential for environmental management performance as were identified and addressed by the Greener Governance training project.

The purpose of this case study report is to highlight the potential of Greener Governance at the local sphere and to inspire training providers, local governments, funders and others to form partnerships aimed at the improvement of environmental management practice, not only in Africa but also globally.

Background

After a decade of largely unsustainable development, the livelihoods and lives of many people and the economic prospects of most Southern African countries continue to be threatened by environmental degradation.¹ With this in mind, the SADC region strives for the promotion of inter-dependence of member States, the achievement of complementariness between national and regional strategies and programmes, the achievement of sustainable utilisation of natural resources and effective protection of the environment.² Most SADC countries are, however, confronted with a formidable series of critical political, social, economic, demographic, agricultural, energy, technological and institutional transitions that challenge the move towards a future that will be economically, socially and environmentally sustainable.

The twenty-first century may be described as the first true urban century. There has been a rapid rate of urbanisation in Southern Africa since the 1950's. Today, 57% (or 21 million) of all South Africans, for example, live in towns and cities, an average level of urbanisation for a Third World country. By the year 2010, 73% (43.7 million) of the population will be urban. Rapid urbanisation goes hand in hand with many problems as it places tremendous demands on land, water, housing, transport and employment. Current environmental resource needs, as well as pollution and waste generation capacities of cities, combined with rapid growth rates are inherently unsustainable when compared to sustainable yields of resource bases. Entrenched in this unsustainable relationship between cities and the general state of the environment, is a significant deterioration in the quality of life of urban dwellers. As a result of this, potential investors are discouraged from investing in the cities of the developing world. Local authorities within the SADC region are, however, not only challenged by problems related to urban development, but also by problems resulting from large numbers of rural poor families that live within their jurisdictions.

¹ SADC Subregional Report on the Implementation of Agenda 21. <http://www.un.org/esa/earthsummit/sadc-cp.htm>.

² SADC Subregional Report on the Implementation of Agenda 21: Review of Progress made since the United Nations Conference on Environment and Development, 1992 (hereafter the SADC Subregional Report on the Implementation of Agenda 21). <http://www.un.org/esa/earthsummit/sadc-cp.htm>

With the above in mind, it has been acknowledged increasingly that local governments of developing countries need to become as innovative as their counterparts in the private sector or local authorities of developed countries, when issues of attracting investment and local economic initiatives are concerned. Local governments should reduce their ecological footprint, improve the quality of life of their citizens and strengthen their local economic base pro-actively. Agenda 21, the global action plan for environment and development adopted at the 1992 Earth Summit and expanded in Johannesburg as Local Action 21, provides a policy framework for national and regional action in moving towards sustainable development. Local Action 21 repositioned local governments on the global environmental map. To break away from unsustainable practices and to adopt sustainability strategies, environmental concerns need to be incorporated increasingly as an integral part of the development policies and decision-making processes of local governments.³ In order to reverse and minimise environmental degradation and unsustainable development at local government level in specifically developing parts of the world, it is proposed that governance should be greened.

It is important to point out that Greener Governance includes the social dimension of the sustainability equation. With widespread poverty and poor access to basic services in the developing world, greening of governance should be primarily focused on poverty alleviation, job creation as well as improvements in the quality of life for all. A central theme of any Greener Governance programme in the developing world should, therefore, be to achieve a win-win-win scenario for both the environment per se and quality of life issues of people.

In 2002, in the spirit of excitement and expectation preceding the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, the Konrad Adenauer Stiftung (KAS), the Centre for Environmental Management (CEM) together with the African office of the International Council for Local Environment Initiatives (ICLEI) and Seneca College, Toronto, launched an inter-active and extensive Greener Governance training project. This project aimed at achieving three main goals at local government sphere of medium-sized local authorities specifically in the southern SADC region which included:

³ Chapter 28 of Agenda 21 is dedicated to sustainability issues at the local level. It argues that *'so many of the problems and solutions being addressed by Agenda 21 have their roots in local activities, the participation and co-operation of local authorities will be a determining factor in fulfilling its objectives'* (UNCED, 1992).

- o Promoting awareness for Greener Governance Issues and environmental management at the local sphere;
- o Building capacity to implement Greener Governance principles; and
- o Creating a network of 'green municipalities' in the southern SADC region.

The Greener Governance training project endeavoured, as a principle objective, awareness raising and capacity building in the local authorities of intermediate size in the southern SADC region. The general tenet of this objective was based on the reality that the larger local authorities, especially in South Africa, have been exposed to previous environmental management initiatives, but that medium-sized local authorities and the capitals of the other southern SADC countries have not yet been exposed adequately to the principles of sustainable urban governance. The Greener Governance training project focused on the selection and mobilisation of intermediate-sized cities in the southern SADC region that have, to date, been neglected by other environmental governance capacity building programmes. The expectation, on the other hand, was that in the end the local authorities of these 'neglected' medium-sized cities would be empowered by newly discovered and developed Greener Governance principles. The expectation was for these principles to allow municipalities to manage their immediate 'neglected' environmental problems at local government level effectively and sustainably.

Another important tenet of the programme was that both the resource base and will to make a difference were present within the region. The sharing of experiences also seemed to be significant. The Greener Governance training project exposed participants not only to the challenges of the developing world, but also to the positive and less positive results from developed countries such as Canada. The sharing of these experiences demonstrated to local authority representatives what can be done in Greener Governance terms. What was required was an innovative and inspirational combination of access to resources and skills with the willingness to learn and share experiences within a network of collaborative endeavour, the output of which was to be an African success story that may act as catalyst for others to follow suit.

This report focuses on the Greener Governance training project and the unique success stories that resulted from the dissemination of Greener Governance principles to serve as an inspiring example for medium-sized local governments, not only in the region, but also internationally.

Profile of Partners

The Greener Governance training project has been a collaborative and creative endeavour of two main initiating partners, whilst the success of the project depended also on the establishment of several other partnerships and the co-operation and initiatives of the local authorities involved.

The four initiating Project Partners were:

- **The Centre for Environmental Management (CEM)** - Responsible for initiation of the project, project management, administrative support, Greener Governance course development and presenters;
- **Konrad Adenauer Stiftung (KAS)** - Responsible for project funding and the management thereof;
- **ICLEI Africa** - Responsible for assistance in the Greener Governance course design, in initially linking the Greener Governance training programme with the World Summit on Sustainable Development (WSSD) and to act as co-presenter and facilitator; and
- **Seneca College, Toronto** - Responsible for Greener Governance course-design, source funding in North America and to act as co-presenter and facilitator.

The valuable role that the Development Bank of South Africa (DBSA), private sector presenters and presenters from provincial and national southern African Governments have played should, in addition, not be underestimated.

CEM

The Centre for Environmental Management (CEM) (Potchefstroom Campus of the North-West University) is respected as a Centre of Excellence in South Africa and internationally. The vision of the CEM is to play a leadership role in finding innovative solutions and in providing flexible awareness and competence training interventions of exceptional quality in environmental management and related fields. The CEM aims to facilitate organisational and personal growth and a change towards building a more sustainable

future. The central tenet of the CEM's training philosophy is that prosperity can only be sustainable if due regard is given to the dimensions of and interrelationships between people and the planet and profit.

As far as developing countries are concerned, the CEM is committed to finding innovative and relevant environmental management solutions through, *inter alia*, flexible capacity building programmes. These programmes aim to facilitate environmentally responsible and sustainable –

- development;
- business practices; and
- governance.

The CEM is, in addition, committed to assist organisations (such as local governments), to adopt more sustainable strategies and practices, to conduct relevant integrated research programmes and to form partnerships. Forming partnerships with organisations that support or mandate sustainable development is high priority for and a principle advocated by the CEM in order to ensure both eco-effectiveness and efficiency.

The CEM is serious about rendering an environmental service to the broader southern African community and in so doing, contribute to the region's striving towards sustainable development. The CEM is actively involved in many non-profit initiatives, including the facilitation of Greener Governance at local government level. In 2002, the CEM initiated the Greener Governance training project because it possesses the skills, knowledge and infrastructure to build environmental management capacity among local government representatives. The CEM used in-house skills to design, develop and deliver the Greener Governance programme and where in-house skills were absent, suitable tutors were identified from the CEM's vast network of local and international experts.

The overarching aim of CEM's contribution to the Greener Governance training series was to transfer skills in environmental management and the Greening of Governance to the local sphere of government from a co-operative governance perspective and in a developing country context. It focused on conveying the necessary knowledge to understand the role and responsibilities of local government to adopt more sustainable practices with regard to Environmental Governance, whilst it aimed to ensure development of essential skills to facilitate Integrated Environmental Management.

<http://cem.puk.ac.za>

KAS

The Konrad Adenauer Stiftung (KAS) acted as main sponsor of the Greener Governance training series since the launch thereof in 2002 and as the single sponsor of the subsequent case study project.

KAS was established in 1956 as an independent and non-profit-making German Foundation, directed by the principles of the Christian Democratic Union party in Germany. The Foundation supports and promotes European unification, international understanding as well as co-operation in development policy. KAS activities include, *inter alia*, political education and training, scientific fact-finding research as a basis for future projects, scholarships to gifted students and international co-operation and dialogue. The foundation recognises that in times of globalisation, political and economic systems are becoming increasingly interdependent. KAS accordingly does not stand oblivious towards the worldwide call for close attention to safeguarding peace and freedom, consolidating democracy, combating poverty and preserving the natural basis of subsistence for future generations.

For more than 40 years KAS has been co-operating with partners worldwide. Partners include political parties, parliaments, governments, education and research institutes, universities, industry confederations and trade unions, youth, women and environmental organisations. All KAS projects serve a similar purpose, that is to promote democracy, to develop and improve understanding across national and cultural borders, to provide assistance geared at 'self-help' and to alleviate the root causes of poverty and environmental destruction.

Many political analysts consider South Africa as the motor for the development of the Southern African region as a whole. Regional initiatives such as the Southern African Development Programme (SADC), the New Partnership for Africa's Development (NEPAD) and the African Union (AU) play a vital role in this regard. KAS promotes regional networks in order to address regional issues adequately. The Foundation's activities generally have a long-term approach. Such was KAS's approach towards the Greener Governance training series. KAS's aim is to have an impact on policy makers, to build capacity and to be sustainable. With specific areas of engagement, especially at local government level (such as the Greener Governance training project), KAS sets political trends.

It was evident from all evaluation reports on the Greener Governance training series that KAS's important contribution was not only vital for the project's success, but that it was also widely appreciated and recognised by all partners involved.

www.kas.org.za

ICLEI

The International Council for Local Environmental Initiatives (ICLEI) is a membership association of local governments and national and regional local government associations that have made a unique commitment to sustainable development. Founded in 1990, ICLEI's mission is to build and serve a worldwide movement of local governments to achieve tangible improvements in global environmental and sustainable development conditions through cumulative local actions.

Approximately 400 cities, towns, counties and their associations worldwide represent ICLEI's growing membership. They are engaged in ICLEI's international campaigns and programmes and regional projects. ICLEI supports community-based action, participatory governance and working alliances and partnerships for sustainable development. The Council links local action to global programmes and policies through partnerships with key organisations such as the International Union of Local Authorities, the UN Environment Programme, and the UN Human Settlements Programme (UN-Habitat).

Through its international campaigns and programmes and a variety of thematic or regional networks and technical projects, ICLEI fosters a movement of local governments to accelerate sustainable development. ICLEI's campaigns (Cities for Climate Protection, Local Agenda 21 and Water) and programmes (Eco-Procurement and Environmental Management), provide resources, training and professional support. Projects such as the Latin America Network for Local Agenda 21, the Africa Sustainable Cities Network and Success Factors in Local Environmental Policy for Local Agenda 21 and European Enlargement in the Baltic Region are some of the ways in which ICLEI responds to regional priorities. Through its campaigns and programmes, ICLEI helps local governments generate political awareness of key issues, builds capacity through technical assistance and training and evaluates local and cumulative progress toward sustainable development.

As it supports local governments to develop and apply innovative management instruments to ensure the integration of environmental issues in decision-making, ICLEI Africa became an obvious partner for the Greener Governance Training Project in 2002. The ICLEI Africa regional coordination office was established in 1995 in Harare and later (June 2001) transformed into the Africa Secretariat, and now based in Johannesburg, South Africa. ICLEI Africa has programmes in all three international ICLEI campaigns. These include the Water Campaign, Local Agenda 21 Campaign and the Climate Change Campaign (CCP).

Local authorities are the major partners of ICLEI Africa. ICLEI Africa is, however, not only concerned about the big and prominent cities of the region. It became involved in the Greener Governance training project with the African Mayors and Senior Local Government officials consultation that was held in June 2002 in Johannesburg, preceding the World Summit on Sustainable Development. ICLEI Africa acted not only as presenter and supporter of the Greener Governance training project, but will also serve as a forum for future partnerships between the medium-sized cities involved in this project. ICLEI Africa's contribution in disseminating the success stories and lessons learned from the Greener Governance training series is hereby acknowledged with appreciation by all partners involved.

www.iclei.org/africa

OTHERS

- **SENECA COLLEGE OF APPLIED ARTS & TECHNOLOGY, TORONTO**

Seneca College of Applied Arts & Technology's Center for the Built Environment aims to deal with the great environmental challenge of building and maintaining urban places. City living will be even more popular in the 21st Century and it is estimated that within ten years over sixty percent of the world's population will reside in an urban area centre. Their environmental impacts on the entire earth and its resources will threaten its survival and ours.

The world needs people with the knowledge and skills to design and manage a sustainable environment. These are people who can recognise our human impact on water, land, air and climate and who can develop appropriate solutions for their use, re-use and health.

The Center's programme addresses the needs for skilled practitioners in the emerging field of urban sustainability. Their definition of Urban Sustainability is: Sustainability redefines wealth to include natural capital such as clean air, fresh water, an effective ozone layer, fertile land, green house gas reduction, species diversity, site rehabilitation, waste management and other natural features as these contribute to the healthy lives for present and future generations in urban settings throughout the world.

Seneca College's aim is to provide the educational means through which the principle of sustainability and efficiency are embedded in decision-making about urban systems in areas such as climate protection, building retrofit, active sustainable transportation, green tourism, urban ecology, community energy systems, energy efficiency, renewable energy and green infrastructure development. The Center wants to pay particular attention to the role of the technicians and technologists who are often forgotten in the emphasis placed on the role of the architects and engineers.

The collaborative efforts of Seneca College on the Greener Governance training project were carried out through Jean Bilodeau, Visiting Professor, Urban Sustainability Management, Seneca College, Center for the Built Environment, who with his comprehensive knowledge of and experience with the Government of Canada, Environment Canada (the Environment Agency for Canada) has been seconded to Seneca College. Prof Bilodeau, supported by his team, (EOG) Environment Operations for Government at Environment Canada, has led Environment Canada and the Government of Canada's initiatives in 'greening government' in incorporating environmental stewardship principles, Environmental Management Systems (EMS) and greener procurement (including energy procurement) into policy, advisory and operational culture of organisations. Prof Bilodeau continues to work with national, state and local governments around the world in assisting them in 'greening' their governance and operations. The valuable contribution that Prof Bilodeau and Seneca College made to the Greener Governance training project is hereby acknowledged with appreciation of all partners involved.

www.senecac.on.ca

- **DBSA**

The Development Bank of Southern Africa (DBSA) was established in 1983. In 1996 it was transformed to ensure it met the needs of the new South Africa and the SADC region as a whole. The DBSA's key purpose is to

address socio-economic imbalances and help improve the quality of life of the people of South and Southern Africa. The DBSA's mandate is to invest in infrastructure and facilitate the provision of infrastructural development finance, to finance sustainable development in partnership with the public and private sectors and to respond to development demands and to act as a catalyst for investment.

Within the scope of its mandate, the DBSA contributed to the Greener Governance training project as valued supporter and participant. The final workshop in 2004 addressed 'Funding Sustainability at the Local Level' where the DBSA presented a paper on, *inter alia*, the Building Foundations for Development. The Greener Governance training project served as a platform for local government project funding and the establishment of such partnerships in the southern SADC as is evident from several of the case studies attached.

www.dbsa.org

LOCAL GOVERNMENTS OF THE SOUTHERN SADC

From a statement presented by the hosts, the South African Local Government Association (SALGA) and the City of Johannesburg, as endorsed by the full plenary at the Local Government Session at the World Summit on Sustainable Development in August 2002, it was evident that the local governments (also of medium-sized cities) of Southern Africa, commit themselves to the sustainable development of the planet and its people. In addition, these local governments urged national and international bodies to make all efforts to strengthen institutions of organised local government. Part of these efforts may said to have been the fulfilling of training needs and the broadening of medium-sized local governments' vision pertaining to sustainable development.

However, without local government participants in need of training, the Greener Governance training endeavour would have been pointless. Since 2002 two delegates have been identified per medium-sized local authority involved – one senior political decision maker (preferably the mayor of the city) and a senior environmental administrative official. Medium-sized cities in South Africa, which include the provinces supported by KAS and the North West Province, as well as the capitals of the other SADC states, namely Lesotho, Swaziland, Mozambique and Namibia were selected since they have previously not been adequately exposed to the principles of sustainable urban governance previously. Committed political leaders and senior

implementing officials, tasked with the environmental portfolio, were deemed to be the most suitable to facilitate environmental change throughout the various local authorities. Local potential networks and at that stage, existing ICLEI Africa networks, were used to identify and source the desired medium-sized local authorities to establish the target audience.

In many instances, the same local authority representatives attended all of the six Greener Governance workshops since 2002. The initial idea with this project was for the same local government representatives also to personally develop new skills that could be expanded and developed with involvement of the complete Greener Governance curriculum. This ideal was not fulfilled in all instances, due to the changing nature of politics, functions and leadership at local government level.

The medium-sized cities elected within the southern SADC, included:

South Africa

1. Potchefstroom Local Municipality (ICLEI member)
2. Klerksdorp Local Municipality
3. Rustenburg Local Municipality
4. Mafikeng Local Municipality
5. Tzaneen Local Municipality
6. Drakenstein Local Municipality (previously Paarl)
7. George Local Municipality
8. Mangaung Local Municipality (previously Bloemfontein) (ICLEI member)
9. Emfuleni Local Municipality (previously Vereeniging and Vanderbijlpark)
10. uMhlatuze Local Municipality (previously Richards Bay and Empangeni) (ICLEI member)
11. Hibiscus Coast Local Municipality (previously Port Shepstone)
12. Dr JS Moroka Local Municipality (previously Siyabuswa)
13. Mbombela Local Municipality (previously Nelspruit)

Namibia

14. City of Windhoek

Mozambique

15. Maputo City Council

Swaziland

16. Mbabane City Council

Lesotho

17. Maseru City Council

From the above it is evident that a training project such as the Greener Governance training project strongly depends on the establishment and maintenance of partnerships. The success of a training project such as the Greener Governance training project is rooted in the identification and establishment of valuable partnerships and in obtaining the buy-in of experts and participating stakeholders.

Training Objectives and Outcomes

The Greener Governance training project was developed and presented by the CEM and partners in order to configure a series of environmental orientation, awareness and capacity building workshops exposing the target group to several environmental management initiatives and issues, as well as the variety of tools that may be used in Green Government operations at the local level. The programme specifically focused on environmental management systems, local governments' responsibilities especially towards water and waste related aspects and opportunities for funding infrastructural developments and improvements.

In creating an overarching programme that would equip the identified medium-sized local authorities with the necessary tools to green their governance, key programme themes were identified and presented by specialists and skilled environmental and other related practitioners. The Greener Governance training project was tailored for southern Africa with international links and consisted of six different workshops and each made a unique and important contribution to the overarching aim of Green Governance at the local government level in medium-sized cities of the southern SADC:

WORKSHOP 1

The first workshop addressed several inter-related and introductory principles for local governments' Greening of their Governance.

THEMES
<ul style="list-style-type: none"> • Rio to Johannesburg and Beyond • Introduction to Local Agenda 21 • The meaning and importance of Greener Governance • Intermediate Cities' statement for the World Summit on Sustainable Development, Johannesburg • The Environmental Story of the City of Potchefstroom • Integrated Model: Local Governments' interface with the Environment • Introduction to Urban Environmental Management and Potential of EMS

THEMES

- Application for Local Authorities and Integration with Local Agenda 21
- State of the Environment Reports (SoER-s) at the Local Level
- Sustainability Indicators at the Local Level
- Environmental Injustices at the Local Level
- Legal Environmental Mandate of South Africa
- Greener Fleet Management
- Green Procurement at the Local Level
- Handling of Hazardous Chemicals at the Local Level
- Integrated Planning Tools: Integrated Development Planning and Integrated Environmental Plans
- Local Entrepreneurs' Waste Company: case study
- Legal Compliance Auditing: case study
- Sustainable Waste and Waste Water Management
- Sustainable Water and Sanitation Service Delivery
- Energy Efficiency at the Local Level: Building Design, Energy use of Building and Street lighting

WORKSHOP 2

The second workshop focused on Environmental Management Systems (EMS) and the implementation of Local Agenda 21.

THEMES

- A de-brief of the World Summit on Sustainable Development (WSSD) discussion
- Interactive sessions:
 - Local government case examples
 - Local governments' personal commitments
 - Training on Local Agenda 21
- Urban Environmental Management Initiatives in Africa
- Environmental Management Systems (EMS): Meaning and Importance
- Case study based training:
 - Melbourne Principles for Sustainable Cities
 - Strengthening the Role of Non-Governmental Organisations: Partners for Sustainable Development
 - The Sustainable Development Challenge: a summary of Durban's Local Agenda 21 Programme
 - The Principle of Local Agenda 21 in Windhoek: collective action and the urban poor
 - Local Agenda 21: Experiences in Nakuru – Processes, issues

THEMES

and lessons

- Moving towards Local Agenda 21 in Rufisque, Senegal
- Cities and Sustainable Development
- A Pathway to Sustainability: Durban's Local Agenda 21 Programme – 1994-2001
- Urban Environmental Policy Statements
- Help create the right environment – City of Calgary Portal

WORKSHOP 3

The third workshop addressed Environmental Management Systems (EMS) and Management Systems Standards (ISO 14001:1996).

THEMES

- An Introduction to Environmental Management at the Municipal Level
- Why Management Systems Standards and ISO14001:1996?
- Understanding the ISO 14001 Standard and ISO14004: 1996 Guideline Document
- What Senior Urban Managers and Politicians should know before implementing an Environmental Management System
- How does EMS work?
- EMS Planning Sessions:
 - Overview of the initial review and planning process
 - Understanding activities, products and services
 - Understanding site-specific legal requirements
 - Identifying environmental aspects
 - Evaluating environmental aspects
 - Developing an environmental management programme

WORKSHOP 4

The fourth workshop highlighted specific Environmental Management Systems issues and objectives such as the implementation thereof and document control.

THEMES

- Revisiting the basics of Environmental Management Systems at the Local Level
- EMS Implementation and Operations:

THEMES

- Structure and Responsibilities
- Training and Awareness
- Communication and Reporting
- Documentation
- Document control
- Operational control
- Emergency preparedness

- EMS Checking and Corrective Action
 - Monitoring and Measurement
 - Non-conformance, corrective and preventive action
 - Records
 - EMS Audit

WORKSHOP 5

The fifth workshop focused on an introduction to the different components and key-issues of Integrated Waste Management at the Local Level.

THEMES

Introduction to Integrated Waste Management for Local Governments

- Background to Integrated Waste Management
 - Environmental Issues at the Local Level and Principles of Sustainable Environmental Governance
 - Waste Issues, Integrated Waste Management and IWM and IWM Planning
- Atmospheric Emissions
 - Air Quality Management Responsibilities of Municipalities
- Water Resource Management
 - Water Pollution Arising from Urban Areas
 - Water Resource Management
- Waste Disposal on Land
 - Sources of Land Degradation and Ground and Surface Water Pollution in Urban Areas
 - Developing the Potchefstroom Municipality Waste Management by-law
 - Sustainable Waste Disposal on Land: Duties and Responsibilities of Local Government as 'regulator' and 'regulated'

- Harmonised and Integrated Co-operative Government
 - The Role of Local Government in Integrated and Harmonised Environmental Governance
 - Duties and Liabilities: pollution prevention, remediation emergency incidents

WORKSHOP 6

The final workshop addressed the process of applying for funds when a local authority is launching an environmental or other sustainable development programme.

THEMES

Funding Sustainability at the Local Level

- Building Foundations for Development
- Application Procedures for Funding Sustainability at the Local Level

Summary of successes and lessons learned

Success stories on environment management, sustainable development or the greening of governance in Africa are not the order of the day. Some of the key outcomes of the World Summit on Sustainable Development, 2002 were to improve capacity in African cities, to adopt Greener Governance principles and to implement sustainability programmes at the local sphere. In retrospect, seventeen medium-sized local authorities have successfully been empowered and capacitated to, not only green their governance practices, but also to implement sustainability programmes and establish networks and partnerships within the southern SADC region that may outlive the life of the training project. The Greener Governance training project, as supported by the success stories attached hereto, has been a very successful and pioneering African programme. This statement is made, essentially, in light of the fact that all previous Greener Governance or sustainability programmes in Africa focused almost exclusively on large local authorities.

Summary of Successes

- The case studies attached to this report, emphasise the Greener Governance training project's general scope of success and the impacts, big and small, that environmental training had at local government sphere in the southern SADC region. Local government representatives returned to their respective cities and innovatively incorporated the principles of Greener Governance in at least one or two existing municipal projects and the planning of future projects. Many of the medium-sized local governments also walked an extra mile to launch new and strictly Greener Governance-based projects enthusiastically.
- As far as could be established, the focus on Greener Governance capacity building and an environmental training program developed for medium-sized

local authorities has been a world first. The focus on environmental management training of medium-sized local authorities may be said to have influenced other service providers and donors to focus on the projects and endeavours of medium-sized local authorities.

- The Greener Governance training project has been an inspiration to other service providers, donor agencies and provincial governments to launch similar programmes. The CEM, KAS, DBSA and Seneca College are currently involved in extensive Greener Governance training in the provinces of the Western Cape and Mpumulanga, South Africa.
- Having been exposed to Environmental Management and Greener Governance Principles as a Greener Governance training participant, Dr AR Monjane from Maputo, Mozambique is currently exploring opportunities for an internship at the CEM. His aim is to establish a similar training centre in Mozambique to disseminate important environmental and Greener Governance principles, information and knowledge at local government level in Mozambique. Currently the partners also consider internationalising their endeavours by developing a distance learning component of the Greener Governance training program. The former developments clearly show the possibility of replication of the Greener Governance program in Southern Africa and worldwide.
- At the final workshop in May 2004 the Greener Governance delegates established a Greener Governance forum under the leadership of Mr Mahesh Roopa of the Potchefstroom Local Municipality. This forum accentuates leadership participation and is currently in discussion with ICLEI (Africa) in order for the Greener Governance delegate assembly to affiliate as a group member.
- The individual successes of the medium-sized cities involved in the Greener Governance training project are discussed in the separate case studies and may be summarised as follows:

Local Authority	Key Greener Governance Successes
Potchefstroom Local Municipality	<ul style="list-style-type: none"> • Implementation of SAEDES Guidelines for all new buildings in the city – Green Buildings are promoted that will reduce energy demand. • Generation of a series of environmental bylaws for the city, in collaboration with the CEM. • Being part of ICLEI’s CCP project and in line with the Greener Governance Project, the local

Local Authority	Key Greener Governance Successes
	<p>authority launched a project to radically reduce greenhouse gases emitted by the City Council.</p>
<p>Klerksdorp Local Municipality</p>	<ul style="list-style-type: none"> • In innovatively improving the aesthetic value of an unkept cemetery in one of its townships, the local authority showed a commitment to improve the living environment of the area’s residents. • With its Invader Plant (Blue Gum Tree) Eradication Project, the local authority succeeded in saving valuable water resources as it established partnerships with the South African national government and the private sector. • By installing 240 litre refuse containers to suit the needs of one of its townships, healthier living conditions were created for local residents by the local authority. This project also brought the city in line with its national legal obligations in terms of pollution caused by waste/refuse and municipal service provision requirements.
<p>Tzaneen Local Municipality</p>	<ul style="list-style-type: none"> • In order to minimise ongoing water pollution of the water streams in the surrounding area, the local authority designed and installed screens/meshes in the local storm water drains of the city to screen especially solid waste. • The local authority facilitated the successful re-location of the city’s hawkers and the local taxi rank to a site that serves to be more acceptable for aesthetic and socio-economic reasons. The open, participative approach of the local authority has resulted in a voluntary relocation that has not only enhanced the sense of place, but also safety, service provision and local authority control.
<p>Drakenstein Local Municipality</p>	<ul style="list-style-type: none"> • Since the local government has no exclusive environmental department, the Greener Governance representative established an environmental management committee within the local municipality. Environmental issues and concerns are now part of local authority decision-making processes in each strategic municipal department.

Local Authority	Key Greener Governance Successes
	<ul style="list-style-type: none"> • In launching an Alien Species Clearance project in Paarl's rivers, the city contributed to national biodiversity conservation endeavours by reducing the lowering of the local water table, the uncontrolled evaporation of water and polluting congestion caused by alien trees obstructing the river flow. • A Low Flow Stormwater Diversion Project was launched to prevent continued contamination of the Berg River's water that also negatively affects the Paarl biodiversity and ecosystem in the city of Paarl. Public participation procedures were also followed that raised awareness especially about the illegal dumping of waste.
George Local Municipality	<ul style="list-style-type: none"> • Resultant from the Greener Governance training on SAEDEC building standards, the city erected a 'greener' municipal building with a reduced need for resources and energy. This endeavour raised Greener Building awareness in the city that may show a ripple effect in future.
Mangaung Local Municipality	<ul style="list-style-type: none"> • As a result of the Greener Governance training on indoor air quality, a chimney project was launched that improved the health and environment of the biggest part of 161 households in a township of the city called Kathrada Square. • Its Ventilated Improved Pit (VIP) Latrines Programme succeeded in improving the sanitation facilities of workers of some of the city's Small Holdings areas, in creating sanitation awareness and in improving the general living standard of workers, whilst promoting healthy environmental conditions. • Resultant from the Greener Governance training, a business survey programme/municipal health and environment data-base was designed that now enables the city's Environmental Health Department to manage and control the activities of its main businesses strictly, in so far as the


Local Authority	Key Greener Governance Successes
	<p>activities may influence or effect health and environment.</p>
<p>Emfuleni Local Municipality</p>	<ul style="list-style-type: none"> • Both the Emfuleni Local Municipality and the Sedibeng District Council were represented at the Greener Governance training, which culminated in a collaborative partnership between district and local sphere in order to tackle sustainability challenges. The following initiatives, among others, have resulted from the above-mentioned partnership: <ul style="list-style-type: none"> - appointment of an environmental official at the Emfuleni Local Municipality; and - the establishment of an environmental department at district sphere. • Functions in different departments now allow for improved governance and centralised environmental control. • To raise local environmental awareness, the Emfuleni Local Council initiated the Clean and Green Awareness Competition in 2002. This project also involved the participation of and environmental awareness raising amongst councillors. • The Waste Recycling Buy-back Centre Project involved the community as well as the local private sector and resulted in reduced illegal dumping. Three waste buy-back centres were erected that reduce local waste, whilst being of economic importance in the community and private sector.
<p>UMhlatuze Local Municipality</p>	<ul style="list-style-type: none"> • In order to manage and improve its environmental management and its service delivery function, the local authority is currently implementing an Environmental Management System. Its success may be attributed to the three-phase nature of this project. • The Greener Governance training contributed to the local authority's Strategic Catchment Assessment programme that serves as a

Local Authority	Key Greener Governance Successes
	<p>catchments-based environmental impact assessment tool. This tool aims to integrate environmental issues into Land Use Planning that is vital in ensuring municipal control and management of development in ecologically sensitive areas.</p> <ul style="list-style-type: none"> • Recently, in order to improve the general environment and living conditions of its local residents, the municipality identified the need for crime prevention to be a determining factor in the city's planning. The local authority accordingly aims to prevent crime through environmental design.
<p>City of Windhoek</p>	<ul style="list-style-type: none"> • In collaboration with the CEM and KAS Namibia, a Councillor Environmental Awareness and Training project was launched. As the city is known for its sensitive environment and associated environmental challenges, the city and its people now benefit from the fact that their local and regional councillors take environmentally responsible decisions based on the spirit of Local Agenda 21 and sustainable development in general. • As part of its Greener Governance obligations, the city developed an Environmental Structure Plan (ESP) and Policy Project. The ESP will ensure a definite increase in environmental and socio-economic sustainability because of environmental issues now being addressed meaningfully and seriously. These will also be considered for proper mitigation with alternatives when, for example, development proposals are prepared.
<p>Maputo Local Municipality</p>	<ul style="list-style-type: none"> • The Greener Governance training enriched current environmental projects, such as the Erosion Protection programme, which has not only obtained international funding but also resulted in successfully minimising erosion and enhancing the aesthetic value of the city. • Another project enriched by the Greener

Local Authority	Key Greener Governance Successes
	<p>Governance training, is the Great Maputo Project, which is an integrated environmental plan for Maputo and its area of jurisdiction. The Greener Governance training has specifically assisted in regard to waste management planning.</p> <ul style="list-style-type: none"> • The establishment of partnerships and enhancing co-operation and communication. Fortunately the Greener Governance workshops were attended by delegates from the Ministry for the Coordination of Environmental Affairs as well as the Maputo Pedagogical University and the City Council of Maputo. These delegates were inspired and the training and partnerships were therefore established as they realised the importance of co-operation. • It was also realised that environmental training should be spearheaded at school and university levels in Mozambique.
Mbabane Local Municipality	<ul style="list-style-type: none"> ○ Resultant from the Greener Governance training, the City Council initiated the development of its own Environmental Management System (EMS) and associated requirements. ○ A distinct and important project within the local authority's operating structure, is the strengthening of its existing Environmental Management and Pollution Control (EMPC) section. Improved functionality of this section will contribute to the successful implementation of Local Agenda 21's aims in the country of Swaziland. ○ The Greener Governance training was also of key importance in enhancing cooperation between the local authority and local community with regard to the minimising of illegal dumping and the supporting of Greener Governance initiatives such as the waste buy-back centres.
Dr JS Moroka Local Municipality	<ul style="list-style-type: none"> ○ In order to successfully launch, manage and complete several environmental related projects, the local authority needed a dedicated funder's

Local Authority	Key Greener Governance Successes
	<p>buy-in. The local authority succeeded in obtaining an amount of US\$ 204 906 from the Development Bank of Southern Africa (DBSA), that has been utilised for environmental awareness programmes, the implementation of several Integrated Development Planning projects and the improvement of the city's environment in general. Some of the local authority's biggest achievements include the development of a Procurement Policy, an Integrated Waste Management Plan (IWMP) and an Investment Plan.</p>
<p>Mbombela Local Municipality</p>	<ul style="list-style-type: none"> • Several community-inspired projects have been enriched by the Greener Governance knowledge gained through local council officials. The local authority played a facilitating role in assisting the community to formalise projects such as the KaBokweni Bakery Project, the Matsulu Vegetable Garden Project and the Vendors' Stall Project. • Waste management has been greatly inspired and assisted by Greener Governance training and assisted the local authority in establishing and formalising its waste sorting. The training contributed to the obtaining of municipal funds for a new waste transfer station and environmental training of local authority officials. • The local authority has also initiated the process of implementing an Environmental Management System (EMS) that it aims to upgrade to an integrated system to help the local authority in the management of its safety, health and environment (SHE) obligations.

Summary of Key Projects, at Different Spheres of Local Governance, that Resulted from the Greener Governance Training Project

	NOTE: Shaded local authorities have acquired external funding for environmental projects. 	Governance							Services				Conservation			Own Activities						
		The Establishment of Partnerships	Environmental By-laws	New Environmental Dept / Committee	Environmental Policy	Improving the sense of place (aesthetics)	Undertaking a Business Survey Programme	Addressing Sanitation Challenges	Integrating Spatial Planning into decision-making	Preventing Crime Through Environmental Design	Upgrading of Cemeteries	Providing Environmental Innovations for Health Assistance	Community / Informal Sector Upliftment	Awareness and Training	Improving Waste Management	Invader Plants Eradication	Storm Water Management	Erosion Protection	Green Procurement Policy	Green Building	Developing an EMS	Greenhouse Gas Reduction
Drakenstein	1,2	✓				✓				✓			✓	✓	✓							
Dr JS Moroka	1,2				✓						✓	✓	✓									
George	1,2				✓														✓			
Hibiscus Coast *																						
Klerksdorp	1,2				✓			✓	✓				✓	✓								
Mafikeng *																						
Mangaung	1,2,3				✓	✓				✓		✓										
Maputo	1,2,3,4				✓				✓				✓				✓					
Maseru *																						
Mbabane	1,3,4	✓	✓	✓							✓	✓	✓								✓	
Mbombela	1,2,3			✓							✓	✓	✓								✓	
Potchefstroom	1,2,3,4	✓		✓							✓	✓						✓				✓
Tzaneen	1										✓	✓			✓							
Umhlatuze	1,2,3			✓			✓	✓				✓									✓	
Windhoek	1,2,3,4	✓	✓			✓	✓					✓										

[Not all projects reflected have necessarily been successfully completed. Also note that only general project categories are reflected.]

KEY:

Partnerships were often established to assist municipalities with Greener Governance challenges:

- 1) Between different departments within the same local authority
- 2) Between municipalities, local communities and the private sector
- 3) Between municipalities and other spheres of government (in the same country)
- 4) Between different local authorities (on an international level)

NOTE:

* Not all local authorities implemented Greener Governance Projects mainly because of hindrances such as a lack of capacity and conflicting priorities.

Summary of Lessons Learned

Although the Greener Governance training project proved to have been an immense success, the 'lessons learned' since the launch of the project in 2002 may be summarised as follows:

- A pre-determined assessment of the state of environmental management and environmental projects at the local level in the southern SADC, would have made this report even more factually complete. In order to determine the impact of environmental management training fully, it is important to establish the pre-training base line of environmental management performance.
- Originally the Greener Governance training was planned to be a once-off, WSSD-related project in 2002. Had the Greener Governance partners foreseen the potential of long-term partnerships, the training programme would have been tailored to disseminate comfortably over a longer period of time.
- It needs to be emphasised that continuity is extremely important for the success of any training project. Ideally and as far as possible, the same delegates should attend the complete workshop series to be fully equipped with the complete set of Greener Governance tools.
- The case-studies of the Hibiscus Coast Municipal Council and Mafikeng Municipal Council respectively show that the stringent nature of a lack of infrastructure and municipal or other funds, should not be underestimated in cherishing certain Greener Governance project expectations at the local sphere.
- Do not endeavour it alone. Establish sustainable partnerships.
- Learn from one another. All participants have stories to tell that may inspire others.
- Research, document and disseminate Greener Governance successes so that others may learn and benefit from them.

Conclusion

The Greener Governance training project introduced environmental change at the local government level in seventeen medium-sized cities in the southern SADC. This change is not only evident in the different environmental projects documented in the addendum to this report, but also in new approaches adopted to decision-making processes, structural reform in local authorities, adoption and use of sustainability tools and partnerships that were established. Peer to peer learning inspired many delegates to improve environmental management performance.

When keeping in mind that the CEM and KAS initially agreed on a once-off training workshop to precede the WSSD and that it then escalated into a three year training project with much broader scope, it is fair to argue that the Greener Governance training project is indeed a success story. The fifteen case studies reflected in this report highlight the individual success stories, whilst alluding to the success stories and lessons learned from the overarching Greener Governance training endeavour.

An analysis and documentation of the Greener Governance training project's results allow for an objective evaluation of the project and, to a certain extent, also the level of sustainable development at local government level in some southern SADC's medium-sized cities. It is possible to say that all of the medium-sized cities that participated in the Greener Governance training project are aiming at development and a way of governance that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. It holds true, however, that certain political, economic and social backlogs still exist, that infrastructure and co-operative governance are often times inadequate and that training alone cannot change or improve the state of a city's environment.

The Greener Governance training project was a first-of-its-kind project in not only the southern SADC or Africa, but in the world. It has proven to be a successful amalgamation of partnerships, training and funding expertise and a mutual will to bring about environmental change at the local government

level. The issues addressed as part of the project are universal. May the outcomes, lessons learned and success stories of this project serve as an inspiration and guideline for Africa and all other continents concerned about their local governments' management of the environment.

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Annexure

Case-Study 1 - Dr. J.S. Moroka

Case-Study 2 - Drakenstein

Case-Study 3 - George

Case-Study 4 - Hibiscus Coast

Case-Study 5 - Klerksdorp

Case-Study 6 - Mafikeng

Case-Study 7 - Mangaung

Case-Study 8 - Maputo

Case-Study 9 - Mbabane

Case-Study 10 - Mombela

Case-Study 11 - Potchefstroom

Case-Study 12 - Sedibeng

Case-Study 13 - Tzaneen

Case-Study 14 - uMhlatuze

Case-Study 15 - Windhoek

Dr. J.S. Moroka



Location:

Dr JS Moroka Municipality



One of the major challenges for the municipality – a culture of illegal dumping exists that is coupled with a lack of awareness

- **Full name of the Municipality and Country**

Dr. J.S. Moroka Municipality is also known as Siyabuswa and is situated in the Limpopo Province, South-Africa.

- **Municipal Profile**

- Population: 243 313
- Land Area: 250 km²
- Municipal Budget: US\$ 21 254 180
- Environmental Budget: There is currently no environment budget. However, funding was obtained (US\$ 204 906) from the Development Bank of Southern Africa (DBSA) for the financial year 2003 – 2004.

- **Issue Addressed**

Local Environmental Programmes as initiated in the Dr. J.S. Moroka Local Council area as a result of Greener Governance training (2002-2004).

Key Words: Funding, Environmental Awareness Raising

- **Key Management Concept**

Environmental challenges can be faced at the local level, even with limited capacity, by the education and awareness raising of officials, who are often able to transfer inspiration into viable current and future local projects/initiatives. In order to increase municipal capacity while enhancing adoption of Greener Governance projects or initiatives, it is imperative not only to involve and train a municipality, but also to involve and empower the local community in order to facilitate ownership of municipal initiatives.

- **Programme Name**

The following initiatives in the Dr. J.S Moroka Local Municipality were influenced by the Greener Governance training received by municipal delegates in Potchefstroom, South Africa:

- Funding has been obtained from the Development Bank of Southern Africa (DBSA) for a number of environmental related projects, including environmental awareness raising of the local community and to initiate various Integrated Development Programme (IDP) identified projects (see Abstract).

- **Programme Goals**

To enhance environmental awareness and support while implementing sustainable environmental management projects in the Dr. J.S. Moroka Local Municipality's area of jurisdiction.

- **Abstract**

Delegates of the Dr. J.S. Moroka Local Municipality participated in the Greener Governance training in Potchefstroom, South Africa from 2002-2004. The delegates were inspired by the training and realised the potential benefit of Greener Governance in assisting the municipality to address socio-economic and environmental challenges and legal liabilities in its municipal area of jurisdiction and to gain control over environmental aspects and impacts. Due to the inspiration of the Greener Governance training, the delegates were able to obtain funding for a number of environmental related projects through the Development Bank of Southern Africa (DBSA). Projects that were funded include the following: Environmental awareness raising projects and developing a municipal Integrated Environmental Management Programme (IEP). DBSA funding was also obtained for various other projects identified by the municipality's Integrated Development Programme (IDP), including *inter alia* to develop an Integrated Waste Management Plan, a Human Resource Management Plan, a Local Economic Development and Tourism Plan, an Infrastructural Plan/Investment Plan, a Water

Services Development Plan, a Transportation Plan and a Procurement Policy.

- **Importance of the Issue**

The Dr. J.S. Moroka Local Municipality has various socio-economic and environmental challenges in its area of jurisdiction combined with infrastructural and capacity related municipal challenges. Their municipality is also further challenged by the fact that there is currently no existing environmental municipal budget. However, due to the fact that delegates were able to participate in the Greener Governance training in Potchefstroom, South Africa (2002-2004), the Dr. J.S Moroka Local Municipality was able to obtain external funding in order to launch and assist local environmental management programmes and initiatives. This case study, therefore, demonstrates the importance of well-conducted environmental training as provided by the Greener Governance training in Potchefstroom, as it not only inspires and empowers municipalities and communities, but the knowledge provided is also able to convince funding agencies to contribute to a municipality's environmental responsibilities.

- **Case**

The Dr. J.S. Moroka Local Municipality (established in 2000) is situated in the western part of Mpumalanga (the former KwaNdebele) and experiences a rural setting, where the land use is predominantly agricultural. The majority of the Dr. J.S. Moroka people are employed in the services sector, while many are also employed by the construction, commerce and transport sectors.

According to the Dr. J.S. Moroka Municipality (2004), some of the challenges that exist include the fact that the municipality generally experiences a lack of integrated planning, community awareness and lack of resources.

The incidence of environmental degradation is high and there are no meaningful programmes to educate the community about the consequences of their negative environmental impacts.

Unfortunately, the municipality still has to develop a State of the Environment Report (SoER), which must provide baseline environmental information, so as to assist the municipality in managing its area of jurisdiction.

Due to the lack of baseline information, there is also a lack of Land Use Planning and currently there are no restrictions on physical locations (e.g. wetlands) and economic activities that require specific requirements for environmental impacts. The existing reserves are also not protected and do not have communicative signs.

There is a general lack of protection, sustainable management and conservation of all indigenous trees and plants in the area, due to the fact that firewood is still being applied as energy source in many homes.

The municipality is also challenged by electricity infrastructure problems. Eskom, South Africa's main electricity supplier and service provider, is responsible for the Siyabuswa electricity maintenance (including streetlights). However, as the local municipality doesn't have the financial capacity to pay for this service (partly due to the small municipal budget), the street lights are not serviced regularly, leaving large areas of Siyabuswa in the dark.



Illegal dumping on the side of the road

Illegal dumping is also not sufficiently addressed in the Siyabuswa Municipal area of jurisdiction (refer to the opposite photograph). The issue of undermined public open spaces, undeveloped areas, unallocated sites and unprotected streams contribute to illegal dumping and littering, which poses threats to human and environmental health. There is also no local environmental policy or by-law which makes it even more difficult to act legally on unlawful disposal of waste.

The municipal waste collection service is not as well developed everywhere as in the former urban areas. Waste collection is done



Waste collection services by tractor

only in some villages and where collecting is done, it is not effective due to transport issues (waste is transported by tractor – refer to the opposite photograph). There are, therefore, areas where waste is not collected by public services. The lack of waste removal services often results in a burn-and-bury method, posing potential risks of contaminating underground water (Dr. J.S. Moroka Municipality, 2004).

A new, licenced municipal waste site is currently being constructed, and it is envisaged that this site will be operated in compliance with legal requirements. However, the new waste site will not necessarily address illegal dumping. It is, therefore, also envisaged that waste transfer stations will be constructed in the future in order to minimise the excuses for illegal dumping, while also managing waste in accordance with the principles of waste minimisation and job creation.

The Dr. J.S. Moroka Municipality has no correct records and accurate HIV/AIDS figures available. Presently HIV/AIDS patients are not institutionalised in the Dr. J.S. Moroka Municipality area. The involvement and linkages of NGO's and other support initiatives are not participative enough, hence the ineffectiveness of campaigns. The Department of Health, both nationally and provincially has budgeted for this challenge and in most cases there is no gap within the Municipal Budget for the execution and implementation of the responsibility for community awareness raising in terms of HIV/AIDS liabilities (Dr. J.S. Moroka Municipality, 2004).

Due to the lack of municipal resources, it is difficult for the municipality to meet the need for municipal services. Relatively few people in the community have access to municipal services such as sanitation facilities or a telephone at home. About 80% of the Dr. J.S. Moroka citizens had access to drinking water in 1996 (Statistics South Africa, 1996).

At present, it is difficult for decision-makers to decide on projects and to propagate certain actions because of the lack of information.

The present situation causes uncertainty because the impacts and consequences of the present and the future are also unknown.

The Green Governance workshop was of great importance to this municipality because through knowledge they managed to approach the Southern African Development Bank to assist them in coming up with Integrated Environmental Programme and Waste Management Plan for Dr. J.S. Moroka Municipality (Mahlangu, 2004).

- **Case Description (& Lessons Learned)**

As stipulated above, the Greener Governance training received by delegates of the Dr. J.S. Moroka Municipality resulted in municipal funding from the Development Bank of Southern Africa (DBSA) for a number of environmental related projects. The projects are briefly described below:

- **Obtaining Development Bank of Southern Africa (DBSA) funding for environmentally related projects**

Due to the current lack of an environmental budget at the Dr. J.S. Moroka Local Municipality, environmental challenges could not be sufficiently addressed, leading to a *legio* of problems, including the fragmentation of functions and a lack of priority for environmental concerns, as well as a lack of training and awareness raising.

However, the funding obtained (US\$ 204 906) from the Development Bank of Southern Africa (DBSA) was able to assist the municipality in initiating various projects. Not only was the municipality able to enhance municipal and community environmental awareness, but it was also able to implement the following prioritised IDP projects: a Human Resource Management Plan, a Local Economic Development and Tourism Plan, an Infrastructural Plan/Investment Plan, a Water Services Development Plan, a Transportation Plan, a Procurement Policy and an Integrated Waste Management Plan.



Women often take the lead in environmental matters in the municipal area

Prior to 2002, environmental awareness raising initiatives were mostly driven by an ambitious group of women in Siyabuswa. The same group of women assist the municipality in arranging community environmental awareness raising programmes.

In 2003, a “Mass Meeting” was held with the community and was also attended by the Department of Environmental Affairs and Tourism (DEAT), as well as the Department of Water Affairs and Tourism (DWAF). The meeting addressed the following issues: waste management, water issues, the placement of graveyards and deforestation. During this workshop, various funds and donations were given to the above mentioned group of women, in order to implement the following two environmental initiatives:

1) A Tree Adoption Project

In order to ensure that trees that are planted by the municipality survive, it was decided that the newly planted trees be “adopted” by members of the community.

2) A Greening of Schools Initiative

“Letswela la Setshaba” means “the greening of schools”. Endangered wetlands were identified in order for the schools to take care of them and to try and address the loss of wetland biodiversity.

In order to do sufficient Greener Governance planning at Siyabuswa, it is imperative that the municipality conduct surveys to obtain state of the environment information.

o **Possible Future Projects to be implemented by the Dr. J.S. Moroka Local Municipality:**

- Developing a State of Environment Report (SoER);
- Implementing an Integrated Environmental Plan (IEP) and an Integrated Waste Management Plan (IWMP)
- Developing and Implementing an Environmental Management System (EMS).

- **Results**

- **Obtaining Development Bank of Southern Africa (DBSA) funding for environmentally related projects**

Positive Results

Many environmentally related projects were initiated as a result of the DBSA funding. General environmental awareness has, therefore, been improved, as well as the prioritisation of the environment in terms of service provision such as waste management. Not only were the municipality and the community empowered to act with regard to environmental matters, but employment was also created.

Negative Results

The community does not always support environmental initiatives by the municipality, as the projects are not always seen as important, resulting in a lack of ownership.

- **Environmental Awareness Raising**

Positive Results

Overall, positive results arose from the “Mass Meeting” that was held with the municipalities, resulting in buy-in from the community who provided support to environmental initiatives.

During the above mentioned meeting, people were also mobilised to address the issue of littering and to clean their villages and the municipality.

The environmental awareness raising of school children is highly beneficial to develop a culture of environmental protection in a society, as children will also carry the message of environmental consciousness to the rest of the community.

Negative Results

Although a mass meeting was held with the community in order to address issues such as illegal dumping and littering, illegal dumping still occurs in the municipal area of jurisdiction as the culture of littering is not easily changed.

- **Key Replication Aspects**

- **Staff**

An Environmental Health Officer has recently been appointed in Siyabuswa in order to help the municipality to meet its environmental challenges. However, as the municipality is limited in terms of capacity, it is imperative that partnerships be established between different municipal departments and also with other municipalities.

- **Funding & Municipal Environmental Budget**

There is currently no environmental budget in the Dr. J.S. Moroka Municipality. However, the DBSA funding obtained has greatly supplemented the municipality and increased its capacity to implement environmental projects. In order to replicate the current successes of the municipality, it is imperative that the municipality do its homework in order to sustain current projects and not to disappoint expectations.

It is also imperative that Greener Governance delegates share their training with the local municipality, not only to ensure the sustainability of the Greener Governance message, but also to create a reason for preparing an environmental budget for the municipality.

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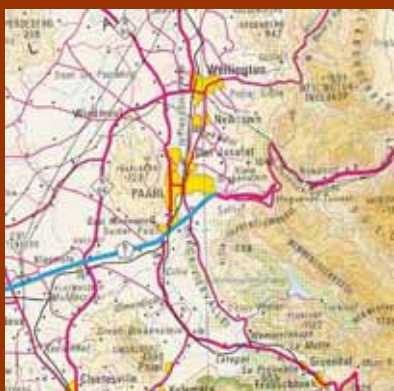
Mr Eben le Roux and Mr Joost Lommen

- **Date and Place written**
July 2004, Potchefstroom

Drakenstein



The City of Paarl



Location: Drakenstein Local Council

- **Full name of the Municipality and Country**

Drakenstein Local Council, Western Cape Province, South Africa.

The municipal area includes Saron, Wellington, Gouda, Hermon, Simondium and Paarl.

- **Municipal Profile**

- Population: +/- 195 000
- Land Area: 154 400 ha
- Municipal Budget: US\$ 87 411 096-00
- Environmental Budget: US\$ 507 191-00

- **Issue Addressed**

Local Environmental Programmes as initiated in the Drakenstein Local Council area as a Result of Greener Governance Training (2002-2004).

KEY WORDS: *Alien Species Clearance, Low Flow Stormwater Diversion, Domestic Waste Pollution, Environmental Management Committee, Implementing Environmental Projects on Local Government Level.*

- **Key Management Concept**

The environmental related problems that were addressed by the Drakenstein Local Council include issues such as water pollution resulting from the rapid increase of squatter people in the Western Cape; environmental-problems caused by alien trees in the area's riverbeds and a lack of coherent and co-ordinated environmental friendly decision-making at local government level. In Southern Africa not much can be done to prevent the increasing number of people residing in squatter camps. It is, however, possible to manage and minimise the environmental and health related problems caused by this phenomena by means of basic service providing and education.

Alien species should, as far as possible, be eradicated when becoming a nuisance or environmental problem factor and generally it may be expected of a local government to budget for both the removal of such species and the substitution thereof with indigenous species.



Part of the area within the Drakenstein Local council jurisdiction

One of the most important factors for local governments for their cities' way to environmental sustainable management is responsible decision-making based on environmental awareness. The dissemination of environmental information and responsible decision-making in all spheres of the local government structure may be achieved by instituting a co-operative body focused on environmental issues.

- **Programme Name**

The Drakenstein Local Council endeavoured:

- Alien Clearance in Rivers Project;
- Low Flow Stormwater Diversion Project; and
- Establishment of an Environmental Management Committee (EMC).

- **Programme Goals**

Alien Clearance in Rivers Project: Invasive alien plants and over-extraction of water are two of the direct threats to biodiversity in the Cape Floral Kingdom (Cape Action Plan for the Environment, 2000, 9). This programme accordingly aims to eradicate invading trees in the riverbeds of Paarl to protect the biodiversity of the city, to restore the natural water cycle and to minimise unwanted evaporation of water resources. The Western Cape region is known as the Cape Floral Kingdom to which the Drakenstein Local Municipality also belongs. This area is home to more types of indigenous plants than any other similar sized area on Earth (Cape Action Plan for the Environment, 2000, 7). This municipal project aims to maintain the natural biodiversity and the unique beauty of Paarl's landscape.

Low Flow Stormwater Diversion Project: The aim of the project is directed at protecting the water quality of the Berg River and the integrity of the receiving environment downstream. This project will achieve this goal through the elimination or at least reduction of the impact of illegal domestic waste dumping in the environment (more specifically the Berg River) of Paarl. The primary goal is to maximise the entrapment of polluted water. The abstraction and treatment of the polluted water from the stormwater channel is an emergency intervention to prevent continued contamination of the Berg River.

Environmental Management Committee (EMC): In 2000, the Drakenstein Municipality endeavoured the initiation and development of an EMC as part of its management structure. The EMC was launched in August 2000 but never came into effective operation. In order for Greener Governance to feature in the operation and decision-making processes of not



Polluted water in stormwater channel

only certain municipal departments but also the municipality as total local government body, the need for a functional coordinating body, an EMC, was identified anew in 2002. The established EMC consists of representatives from all Drakenstein Local Municipality departments and aims to facilitate communication, awareness raising and the dissemination of environmental related information among its local authority officials and key decision-makers. The EMC also provides a forum for environmental problem identification and reporting.

- **Abstract**

Alien Clearance in Rivers Project: The quality and quantity of water in rivers, streams and wetlands in the Cape Floral Kingdom are influenced by activities in the entire catchment area. Alien plants, among other factors, can affect aquatic biodiversity as much as the direct pollution and over-extraction of water (Cape Action Plan for the Environment, 2000, 7). The Alien Clearance in Rivers Project endeavours of the Drakenstein Municipality situated in the catchment area of the Cape Floral Kingdom, to help improve the negative effect of alien trees specifically, growing in and near to the riverbeds of the Spruit River (Wellington), Krom River (Wellington), Palmiet River (Paarl), Leew River (Wellington) and the Berg River (Paarl) respectively. The project entails the identification of rivers to be cleaned as well as the complete cleaning process itself. As part of implementing the principles of Local Agenda 21 and in working towards the provincial and national government goal of alien species clearance, this project is the Drakenstein Local Council's direct contribution to improving and maintaining the Cape Floral Kingdom environment.

Low Flow Stormwater Diversion Project: In order to address the environmental and health problems caused by the illegal dumping of domestic and human waste in the Berg River in the Drakensberg Municipal area, a project was launched to transport polluted water from the stormwater channels to the existing sewage facility in Paarl. The fast expanding Mbekweni informal settlement in Paarl has limited or no sewage waste disposal services. The Berg River, which lies in close proximity to the settlement, is currently being contaminated by the highly polluted stormwater channel. The abstraction and treatment of the polluted water from the stormwater channels is an emergency intervention to prevent the continued contamination of the Berg River. The stormwater channels that flow through the Mbekweni informal settlement are highly polluted with solid, liquid and human waste (Western Cape Department of Environmental Affairs and Development Planning Record of Decision: Proposed Construction



Waste-related problems within Mbekweni informal settlement

of Gabion Inlet Structures, A Pump Station and Associated Pipeline, Mbekweni, Paarl). The collected polluted water will be treated before entering the Berg River. The project involves the construction of two gabion inlet structures and an associated pump station within two of the polluted stormwater channels.

Environmental Management Committee: In August 2000, the Paarl Municipality (as it was then known), launched an Environmental Management Committee. It was primarily the national amalgamation of municipalities that hindered the effective functioning of this committee. In 2002, as part of the focus on Greener Governance, the implementation of Local Agenda 21 and the review of its Integrated Development Plan (IDP), the Drakenstein Local Municipality initiated the establishment and co-ordination of an EMC anew within the local government management structure. In March 2003, the EMC was reconstituted and strengthened as a local non-governmental organisation, Boland Environmental Forum (BEF), also came on board. This was approved as a project in the 2003 revised IDP. The mission of the EMC is primarily to maintain, preserve and enhance the biodiversity of the existing ecosystem and habitats for the well-being of present and future generations in the precincts of the Drakenstein Municipal area. The functions of the constituted EMC include *inter alia* the initiation of complete Environmental Impact Assessments (EIA's) where necessary, the dissemination of environmental information and the management of short-term environmental problems such as large sewer overflow and spillage of hazardous chemicals.

- **Importance of the Issue**

Invader species are known to take over grazing and agricultural land and they are, in many instances, also known to use vast quantities of water. Rivers have sustained ecosystems that, *inter alia*, support biodiversity. In a biodiversity-rich area such as the Western Cape of South Africa, biodiversity conservation and the control of invader species are accordingly of vital importance. One of the known tools to implement Local Action 21 at the local sphere is to reach diverse audiences. Disseminating information within a local authority itself is also part of an awareness raising strategy. Co-operation between different government officials is, therefore, of extreme importance in endeavours to Green Governance at the local sphere.

- **Case**

The Drakenstein Municipal area is situated in the Cape Floral Kingdom, Western Cape, South Africa. The Cape Floral Kingdom is a global biodiversity

asset, the smallest of the six floral kingdoms in the world and the only one to be found entirely within one country (Cape Action Plan for the Environment, A Biodiversity Strategy and Action Plan for the Cape Floral Kingdom, 2000). This fact makes it evident that the Drakenstein Local Municipality has a big responsibility with regard to the Greening of their local Governance. Paarl is the third oldest town in South Africa and is known for *inter alia* its mountain ('Paarl Rock') and the African Language Monument that represents the foundations of the Afrikaans language as combined heritage of Africa and the European mother countries. The Berg River winds its way through Paarl and the city's luxuriant vegetation, whilst the city is also the headquarters of the renowned South African wine industry, the co-operative Wine Grower's Association (KWV) and the Paarl Wine Route.

The Drakenstein Local Municipality consists of six urban areas, namely the city of Paarl, Gouda, Saron, Simondium, Hermon and Wellington and the population is 33% of the district's population. This includes a number of 42 114 households that is growing daily and at an alarming rate. All formal dwellings have access to municipal services and most informal areas are rendered basic municipal services, such as waste removal, basic sanitation services and water provision. As far as the general health situation is concerned, it needs to be said that Tuberculosis and the HIV-Aids epidemic are serious concerns. The municipal area is serviced by three hospitals, eleven permanent clinics and several mobile clinics.

The municipal area's economy is dominated largely by the agriculture sector (27%), followed by the services sector (16%) and the manufacturing sector (14%). The Drakenstein Local Council is seated in Paarl, a mere 60 kilometres from Cape Town. The central municipal administration is to be found in Paarl with satellite offices in Wellington, Gouda and Saron. The total municipal workforce is 1 800 people, working in six different departments. These include Corporate Services, Financial Services, Civil Engineering Services, Electrical Services, Community Services and Planning, Economic Development and Tourism (Drakenstein Municipality Management Structure, 2002). The local municipality does not yet have an Environmental Department, but being environmentally aware and in the public environmental eye because of its biodiversity richness, the local authority sees to environmental issues as far as possible within departments where these may become important. The Drakenstein Local Municipality aims to keep its own officials and the public as environmentally aware and participating as possible. Projects such as the celebration of National Water Week and the publication of a quarterly newsletter that reflects on the

content, scope and progress with Greener Governance endeavours, enable the municipality to keep the public informed.

It may be said that the Drakenstein Local Municipality is in a Greener Governance sense in a very fortunate position for two reasons. The first being the fact that the region and landscape is extraordinary striking and the pride of most of the residents in the formal and informal residential areas, and the second being the fact that the municipal budget allows for those officials concerned about environmental issues to make a difference. Mr J. Knaggs attended all six the Greener Governance training workshops. It is evident from the local government projects and the municipality's general operation that the Greener Governance spirit and the notion of environmental management have been communicated and disseminated. It is also evident that co-operative Greener Governance is increasingly strengthened in the Western Cape region where local authorities (such as the Drakenstein Local Municipality), the provincial authorities (such as Department of Environmental Affairs and Tourism), national environmental related departments (such as Department of Water Affairs and Forestry) and certain non-governmental organisations join hands in striving towards sustainable development.



Mr J Knaggs initiated the erection of the municipal environmental committee

- **Case Description**

Alien Clearance in River Project: In the line of basic environmental management principles and the spirit of Local Agenda 21, the Drakenstein Local Council recognises its responsibility to participate and co-operate in the national Department of Water Affairs and Forestry's (DWAF) efforts to control alien vegetation in order to ensure sustainable supplies of fresh water, while at the same time creating jobs and building capacity (Cape Action Plan for the Environment, 2000 36). The Alien Clearance in Rivers Project has been initiated and managed by the Drakenstein Municipality, being situated in the catchment area of the Cape Floral Kingdom, to help improve the negative effect of alien trees specifically, growing in and near to the riverbeds of the Spruit River (Wellington), Krom River (Wellington), Palmiet River (Paarl), Leeuw River (Wellington) and the Berg River (Paarl) respectively. The project entails the identification of rivers to be cleaned as well as the complete cleaning process itself for which approval from provincial government was required (Drakenstein Municipality Official Newsletter, May 2004, 6). The cleaning process necessitates the cutting of trees with trunks smaller than 150 mm in diameter; pruning of trees with trunks bigger than 150 mm in diameter; cutting of other vegetation like bushes, reeds and grass; removal from the riverbeds and banks and loading

of material on heavy vehicles and finally, transporting to and offloading at the dumpsite. The lessons learned from this project include that a local authority needs to make itself aware of national environmental goals and when acting upon those goals or perhaps obligations, make the local community aware of the content and scope of the required environmental project. The majority of communities and individuals within a community do not easily accept the removal and eradication of trees. Primarily since trees, being an important component of a city's landscape, have aesthetic value. The Drakenstein Local Municipality put effort into making the local residents aware of the national legislative requirements pertaining to alien plants and also into keeping them informed of the progress made in the local authority's cleaning process (Drakenstein Municipality Official Newsletter, May 2004, 6). The former information is communicated by means of the free monthly municipal newsletter that is distributed in the Drakenstein area community.

Environmental Management Committee: It was primarily the national amalgamation of municipalities in South Africa that hindered the effective functioning of an EMC that was already in existence in the Paarl Municipal Structure in 2000. In 2002, as part of the focus on Greener Governance, the implementation of Local Agenda 21 and the review of its Integrated Development Plan (IDP), the Drakenstein Local Municipality's Greener Governance representative, Mr J Knaggs initiated anew the establishment and co-ordination of an EMC within the Drakenstein local government management structure. In March 2003, the EMC was reconstituted and strengthened as a local non-governmental organisation and Boland Environmental Forum (BEF) also came on board. The establishment of the new EMC was approved as a project in the 2003 revised IDP of the Drakenstein Local Municipality.

The EMC operates within the cadre of 'environment' as defined in South Africa's *National Environmental Management Act*. The committee consists of one representative from each of the following departments of the local authority:

- Planning and Economic Development;
- Civil Engineering Services;
- Electrical Services;
- Community Services;
- Corporate Services; and
- I.D.P Management.

In addition to the former, the Boland Environmental Forum (BEF) as local non-governmental organisation is represented together with a local councillor and any specialist required for a specific environmental issue or problem that serves before the committee. The Terms of Reference of the EMC specifically state that it is preferable that all EMC representatives have some background, experience or training with regard to environmental management. The EMC meets at least once a month and it reports directly to the Municipal Manager of the Drakenstein Local Municipality (EMC: Terms of Reference).

The mission of the EMC is to maintain, preserve and enhance the biodiversity of the existing ecosystem and habitats for the well-being of present and future generations in the precincts of the Drakenstein Municipal Area. The mission accordingly fits the scope and spirit of Local Agenda 21 exactly. The EMC aims to identify and preserve the biodiversity of the ecosystems within the Drakenstein Municipal Area (starting with Paarl Mountain Nature Reserve, the Wit River Property, the Saron Nature Area and Groenberg to be actively engaged in environmental education, to facilitate sustainable development and economic activity, to practice co-operative governance and to facilitate the appropriate recreational use of the conservation areas in the municipal area.

The EMC identified several short-term and long-term functions in order for this institution to reach its goals successfully. The long-term functions include the development of policy and sectoral plans, the preparation of state of the environment reports (SoER's) and the establishment of an Environmental Management System (EMS). The short-term functions (whilst the Drakenstein Local Municipality awaits a permanent Environmental Management Department or section), include the initiation of EIA procedures and the processes of application and exemption connected therewith, the management of short-term environmental problems such as pollution of rivers and threats to cultural heritage sites, the evaluation and approval of any municipal applications with an environmental component attached thereto, the giving of input in the IDP process of the municipality, the evaluation and report on incidents affecting the environment and participation and assistance in any local events that deal with, or have relation to the environment.

It is accordingly clear that the EMC project serves as the key to local environmental co-operative governance in the Drakenstein municipal area.

The lessons learned from this project are primarily that a local authority need not have an Environmental Management Department as such to see to cooperative Greener Governance at the local level. Co-operative governance may also be said to include the bringing on board of non-governmental parties or stakeholders that serve the community and aim to conserve and protect the environment. One of the lessons learned is also that continuity in the local municipal structure is required to make a success of an endeavour such as this.



Contaminated water in stormwater channel

Low Flow Stormwater Diversion Project: Housing shortages and problems related thereto is a reality in Southern Africa that the environment can unfortunately not escape from. The rapid influx of people in the Drakenstein Municipal area leaves the local authority with many environmental, health and safety problems related to the conditions and circumstances under which many of these people need to live. Currently the Mbekweni informal settlement has limited or no sewage waste disposal services. The Berg River lies in close proximity to this settlement and is currently contaminated by three stormwater channels' water that is highly polluted with, *inter alia*, human and solid waste. Since the local residents do not make use of the waste containers provided by the local authority, waste is dumped within or close to the stormwater channel next to which a number of informal settlement houses were build. The waste (solid, liquid and human waste) ends up in the stormwater channel and finally in the Berg River itself. The abstraction and treatment of the polluted water from the stormwater channels is an emergency intervention to prevent the continued contamination of the Berg River.



Illegal waste dumping in Mbekweni

The project involves the construction of two gabion inlet structures and an associated pump station within two of these stormwater channels. The purpose of the gabion inlet structures is to catch polluted water from the stormwater channels. This polluted water will be piped to an existing sewerage treatment facility for purification and will prevent the contamination of the Berg River. A stormwater and PVC pipe is used to transport water from the stormwater channels (Record of Decision: Proposed Construction of Gabion Inlet Structures, A Pump Station and Associated Pipeline, Mbekweni, Paarl). The gabion inlet structures and pump station will be positioned within the stormwater channels. This project will have a positive effect on the quality of the water that will enter the Berg River in the summer months. In the winter months, the increased water levels dilute the concentration of pollution, so the extraction and treatment of water is

deemed unnecessary. The proposed system will, therefore, only operate in the summer months.

As part of this project, a public participation process was conducted and an EIA procedure as expected under national law was followed. The public participation process comprised the distribution of notification letters to all surrounding residents in the Mbekweni area. English and Xhosa versions of the letter were distributed. Interested and affected parties were allowed twenty one days within which to provide comments, queries or alternative proposals relating to the project.

The lessons learned from this project are centred around the fact that even if there are seemingly easier ways in which to protect the environment, radical intervention is sometimes required to save the environment. The Drakenstein Local Municipality initially tried to prevent the dumping of waste by increasing the number of waste containers in the Mbekweni area. It may be said that due to a lack of education, the Mbekweni residents did not cooperate. The stormwater diversion 'emergency' project had to be launched and its success may be attributed to the complete EIA application, the public participation process and the local authorities' cooperation with the national Department of Water Affairs and Forestry.

- **Results**

- *Alien Clearance in River Project*

- **Positive:** This project showed many positive results, of which the most evident (in a Greener Governance sense), may be local government participation in national biodiversity conservation endeavours. In addition, the project resulted in job creation, public awareness and the improvement of the Paarl riverbeds and environment. The Drakenstein Local Municipality actively contributed to biodiversity conservation by reducing the lowering of the local water table and uncontrolled evaporation of water whilst also reducing pollutive congestion as a result of the alien trees obstructing the river flow.
 - **Negative:** A negative result may possibly be the change in landscape. It is suggested that programmes like these make provision for not only the eradication of alien species, but also for the substitution thereof with indigenous species.

Environmental Management Committee

- ***Positive:*** The positive results are that the Drakenstein Local Municipality does not stand indifferent towards its environmental obligations because of the fact that there is no municipal department aimed at environmental management in place. The EMC's goals and long and short-term functions enable the local authority to contribute to the national, provincial and local strive for sustainable development and responsible environmental management. Environmental issues and concerns become part of the local authority decision-making processes in the strategic municipal departments. The EMC also accommodates a non-governmental organisation in its operation, which gives access to the community to participate in a process of environmental friendly decision-making at local government level.
- ***Negative:*** The successful operation of the EMC may cause the addition of an Environmental Management Department to become less of a priority in the local municipal structure.

Low Flow Stormwater Diversion Project

- ***Positive:*** The water from the stormwater channel is polluting the Berg River which is an important source of water for farmers downstream (Record of Decision: Proposed Construction of Gabion Inlet Structures, a Pump Station and Associated Pipeline, Mbekweni, Paarl). Accordingly, agricultural land that has been impacted previously has been drastically reduced through the installation of the gabion inlet structures and pump station. In addition, the project prevents the continued contamination of the Berg River's water that also negatively effects the biodiversity and ecosystem of Paarl. The public participation process involved the public and accordingly raised awareness about illegal waste dumping and the unsustainable environmental effects thereof.
- ***Negative:*** The mere diversion of polluted water does not address the problem of illegal waste dumping at root level. It may perhaps be the case that the community will continue dumping domestic and human waste, when there is no immediate and pressing need for the local authority to solve the problem through awareness raising and education.

- **Key Replication Aspects**

- **Staff**

Alien Clearance in Rivers Project: The Drakenstein Local Municipal Officials worked together with local community workers, contracted specialists and representatives from DWAF to launch and finalise this project.

Low Flow Stormwater Diversion Project: The Drakenstein Local Municipal Officials endeavoured this project in collaboration with DWAF and two private consultancy firms, Kantey and Templer Consulting Engineers (David Winter) and Lyners Consulting Engineers and Project Managers (Marie Filippi).

Environmental Management Committee (EMC): The establishment of the EMC was initiated by Mr J. Knaggs who now also serves as chairman of the committee. The delegated representatives from the municipal departments, the BEF representatives and required specialists are all on board in this project.

- **Budget**

Alien Clearance in Rivers Project: The total budget for this project was US\$ 4 949-00 / R 30 000-00.

Low Flow Stormwater Diversion Project: A total amount of US\$ 296 913-00 was budgeted for this project. R 300 000 –00 was budgeted for professional fees and US\$ 247428-00 for construction costs.

- **Financing**

Alien Clearance in Rivers Project: This project is financed by means of a limited storm water maintenance budget of the Drakenstein Local Municipality. In order to ensure the ongoing success of this project within the limitations of a limited budget, the rivers and streams are cleaned in an order of priority, as decided upon by the local authority (Drakenstein Municipality Official Newsletter, May 2004 ,6).

Low Flow Stormwater Diversion Project: US\$ 49486-00 for professional fees was provided in the Drakenstein Local Municipality budget. US\$ 32990-00 of the construction costs were paid from the Drakenstein Local Municipality budget and the remaining US\$ 214437-00 was funded by the CMIP.

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- **Date and Place written**

July 2004, Potchefstroom

George



City of George



Location: George Local Council

- **Full name of the Municipality and Country**

George Local Council, Western Cape Province, South Africa.

- **Municipal Profile**

- Population: +/- 185 000
- Land Area: 6 871.6 ha
- Municipal Budget: US\$ 22 117 974-00 / R 135 000 000-00

- **Issue Addressed**

Local Environmental Programmes as initiated in the George Local Council area as a Result of Greener Governance Training (2002-2004).

KEY WORDS: *Green Building*

- **Key Management Concept**

The design, construction and maintenance of buildings have a tremendous impact on developed and developing countries' environment and their natural resources. Traditional building practices often overlook the interrelationships between a building, its components, its surroundings and its occupants. Any typical building structure consumes more of the natural resources than is necessary, whilst also negatively impacting on the environment and generating a large amount of waste. Buildings that have been erected without keeping the former in mind are costly to operate specifically in terms of water and energy consumption and often have poor indoor air quality. The modern approach to this problem is the planning and erecting of environmental-friendly or so-called, Green Buildings according to international or national Green Building standards.



Outeniqua Area within the jurisdiction of George Local Council



Fancourt Golf Course – famous tourist attraction in George

- **Programme Name**

As a direct result of the Greener Governance training in 2002, the George Local Municipality implemented a specific environmental project to be reported on in this report:

- The George Green Building Project

- **Programme Goals**

Since the George Local Municipality had to design and build new municipal offices after the Wilderness Municipality was incorporated into the Greater George Municipal area, an energy efficient municipal programme was launched. The purpose of the new building being built according to Green Building standards is to reduce energy consumption and/or demand of the Municipal Building. The goal of this pilot project is for the George Local Municipality to save energy and money whilst protecting the environment and conserving valuable resources.

- **Abstract**

As a result of the new South African Demarcation Law that came into effect in 2000, Wilderness Municipality and the Greater George Municipal area had to merge. Accordingly, more municipal office space was required in George. In order to see to the need for more office space, the George Council agreed to the design and building of an annexure of 1000m² at the southern side of the existing municipal main building. Between this decision and the Local Municipality's final Building Team's committee meeting, preceding the opening of building tenders, the Greener Governance training of 13-15 August 2002 cut in. This specific Greener Governance training workshop reflected on energy efficiency as part of environmental management in terms of the Canadian Standards for Efficient Building Design and the South African Energy and Demand Efficiency Standard (SAEDES). As part of the workshop, a site visit to the Potchefstroom Local Municipality's new council chambers was conducted. The new Potchefstroom council chambers were built strictly according to the SAEDES Standard (see Case Study 11 - Potchefstroom of this report). As a result of the training, George's Greener Governance representatives returned to George and claimed

to reverse the initial decision of the Council on the building of the annexure. The original plans for the new building were drafted according to conventional planning methods and for the building to be built in ordinary fashion. After the claim for reversal, several municipal procedures followed, the decision had in fact been reversed and today it is possible to report on George Local Municipality's Green Building that complies with the SEADES Standard.

- **Importance of the Issue**

Traditional building practices often overlook the interrelationships between a building, its components, its surroundings and its occupants. These buildings, that have been built in the 'customary' way, consume more of the resources than necessary, negatively impacting the environment and generating a large amount of waste. Often, these buildings are costly to operate in terms of energy and water consumption and they may result in poor indoor air quality that can lead to health problems. Currently, most of the ordinary building structures in South Africa are not well insulated and utilize excessive energy. Building a Green Building provides environmental benefits now and will in the future, by reducing the need for resources and energy. The overall design utilizes fewer of the limited resources available on earth. Green building practices offer an opportunity to create environmentally sound and resource-efficient buildings by using an integrated approach to design.

- **Case**

The George magisterial district forms part of the Western Cape Province, the "middle" (fifth largest or fifth smallest) province of the nine South African provinces. The George Municipal Area consists of areas previously under the jurisdiction of the Municipalities of George and Wilderness as well as areas previously under jurisdiction of the Outeniqua and Bo-Langkloof Rural Councils. The area consists of the suburbs of George, Wilderness, Herolds Bay, Thembaletu and Pacaltsdorp.

In 1996, the Western Cape contributed almost 10% to the 41 million people in South Africa (Development Profile; George Municipality WC044, Fourth Draft). A population boom occurred from 1980 to 1996 with the strong influx of Black migrants originating mostly from the Eastern Cape. In this boom, the population structure of George, once again, underwent structural changes. The Black population's share increased dramatically from a mere 5% in 1980 to 21% in 1996. George dominates the Southern Cape region and forms a cluster with the medium-sized towns of Oudtshoorn, Mossel Bay and Knysna in its immediate vicinity. This situation (as well as the respective size of the town) is comparable with Phalaborwa, Pietersburg and Tzaneen in Mapumalanga Province and Rustenburg, Klerksdorp and Potchefstroom in the North West Province (Development Profile; George Municipality WC044, Fourth Draft). Although George is, therefore, situated centrally between two metropolitan areas (435 km from Cape Town and 330 km from Port Elizabeth), the immediate landscape surrounding George displays typically small town rural characteristics. The surrounding landscape includes the Overberg and Central Karoo region as well as the Eastern Cape (Development Profile; George Municipality WC044, Fourth Draft). The municipality operates eight community health centres throughout George. Primary health services provided by the municipalities involve preventative care as well curative care. Substance abuse and low socio-economic standards increase the demand for free health services in the area, whereas the lack of public transport facilities hampers access to health services (Development Profile; George Municipality WC044, fourth Draft). George is the only town in the Southern Cape that experienced an exceptionally high output growth rate since 1980, accommodating an equally high growth in population, resulting in a slight increase in per capita incomes. The sectoral composition of output in 1998 still suggests the dominance of the service, finance and trade sectors especially relative to the manufacturing sector. The rural base of the magisterial district is evident from the relatively large contribution of the agriculture sector. Since 1980, the electricity sector of George experienced exceptionally high growth and consequently increased its distribution (Development Profile; George Municipality WC044,

Fourth Draft). Although prehistoric hunters/gatherers probably caused some modification of the environment by burning fields to chase or attract game, the earliest real environmental impacts were caused by permanent settlers who were attracted to the area because of the availability of abundant timber, fairly good soil and a comparatively high rainfall. Grazing licences and agricultural activities followed soon after.

George is situated in an area of great natural beauty where the quality of the environment can rightly be regarded as its greatest asset. Environmental issues were neglected in the past with little being done to protect the rugged coastline and the mountain. There are environmental sites identified by interest groups as of conservation interest in the George area. These include *inter alia* wetlands, Victoria Bay, the Gwaing River, natural forest areas and steep riverbanks (Development Profile; George Municipality WC044, Fourth Draft).

- **Case Description**

In 2000, during the National Local Government Elections, the new South African Demarcation Law came into effect. The Wilderness Municipality was incorporated into the Greater George area as a result of the demarcation process. As a result of this, the George Local Municipality had to plan and budget for additional office space in order to accommodate all local council officials and personnel.

The George Municipal Council consented to the design and building of an annexure of 1000m² on the southern side of the existing main municipal building in George. After this decision was taken, but before the final Building Team's committee meeting, the first Greener Governance Workshop was held in Potchefstroom. Councillor A. van Zyl and Mr J. Vrolijk (Head Town Planning) attended this workshop where one of the curriculum issues to be discussed was energy efficiency at the local government level.

At the launching workshop of the Greener Governance training series, Professor Jean Bilodeau, *inter alia*, emphasised the need for



Mrs A van Zyl reporting back on the Green Building at one of the Greener Governance workshops

an environmental paradigm shift at the local government level. He explained to the delegates that Local Governments are one of the gatekeepers and stakeholders of democracy, sustainable development, the ecology and the democracy crisis. He also said that the former is vital in the enactment of Greener Governance as the science of decision-making and the art of public leadership at the Local Level. Within this framework of Greener Governance principles, the workshop curriculum also included training pertaining to energy efficiency at the Local Government level. In order for the delegates to see and experience the scope and practical implications of energy efficiency, a site visit to the new council chambers of the Potchefstroom Local Council was planned. This building carried the label of a Green Building having been strictly built according to the South African Energy and Demand Efficiency Standard Guideline. The aim of erecting this Green Building had been the improvement of energy-efficiency as from the design stage to avoid costly retrofits in future (see Case Study 11 - Potchefstroom of this report). Professor J Bilodeau introduced to the delegates some of the Development Standards for new buildings that were in existence at that stage in light of countries' obligations under the United Nations' Kyoto Protocol and its mission to reduce Greenhouse gas emissions. These included *inter alia* the Canadian Standard for Efficient Building Design and the South African Energy and Demand Efficiency Standard (SAEDES).

Since George Local Municipality was in the process of planning and building their own new municipal building, the new Greener Governance knowledge gained could not leave the George municipal representatives indifferent and unconcerned. Councillor A van Zyl accordingly approached George's Mayor of the time, Mayor Marius Swart. She asked permission to attend the Municipal Building Team's committee meeting in order to determine whether the building plans had been submitted to the Municipal Building and Planning Department for approval, whether the Municipal Aesthetic committee approved the plans and whether a public participation process had been followed. None of these approval processes had been followed. This resulted in a Special Council meeting where the original decision

for the extension of the existing Municipal Building, was changed. At this meeting an architect who also serves on the Aesthetic Committee of the Municipality, submitted a new master plan for the entire Municipal Building complex. This plan took into consideration any future needs and expansions of the Municipal Building complex. At the Special Council meeting, the plans for a much bigger but less costly, environmental-friendly Municipal Building had been accepted. This building would accommodate all municipal officials, executive councillors and would host enlarged Council Chambers. The Special Council meeting decision was then advertised in the local newspaper, the George Herald. In order to provide for a public participation process, local residents (the public) were invited to comment on the reversed decision as well as the fact that the new plans for the municipal building would require a building (the building that housed the Municipal Town Planning Department) to be demolished.

In order to ensure that the new Municipal Building could indeed carry the label of 'Green Building', Councillor van Zyl obtained the SAEDES Standard detail from the Centre for Environmental Management. The contracted architect for the new Municipal Building then drafted all the plans for the new seven-story building according to the SAEDES Standard requirements. The SAEDES Standard provides minimum new building and equipment design requirements and methods for energy surveys, guidance for operation and maintenance, education and training protocol and equipment prescriptive requirements for existing building replacements and building design performance. It is accordingly clear that their Greener Governance training equipped the George representatives with knowledge that resulted in the reversal of a decision that was almost in its final stages of implementation. It is possible to say that a 'wrong' or uninformed decision was taken in the first place. Since the Integrated Development Plan (IDP) of George and the budget had to be reviewed from 3 million Rand to 11 million Rand in order to execute the new building plans, it is clear that the reversal had costly implications. These amounts were reflected in the 2003/2004 draft budget and the 2004/2005 budget reflected an amount for this project of nearly 20 million Rand. The lessons learned from this case



The Green Building's first phase, June 2004

study include primarily that for Greener Governance to have practical meaning in the Local Government sphere, it is often necessary for councillors and municipal officers to make responsible choices. The George Case Study shows that their enthusiasm enabled the Greener Governance representatives to reverse a decision in order for a new decision to be taken in a Greener Governance way. Another valuable lesson may be that all municipal officials and councillors should consider all options and methods available in advance when making important decisions on projects that may possibly influence or effect the environment. In a developing country with constrained municipal budgets, it is always more cost effective to take well-planned decisions from the very beginning.

- **Results**

- *Green Building*

- *Positive:* Building a green building provides environmental benefits now and into the future by reducing the need for resources and energy. The overall design utilizes fewer of the limited resources available in the George Municipal area and there are economic benefits. The overall savings from conserving resources such as water and energy are quite significant. In the case of George's Green Building, many positive comments and remarks were received, also from different political parties. Having followed the correct environmental-friendly and sustainable procedures, George's Local Municipality will have a legacy for future generations. It is also possible to say that since the contracted architect has also come to terms with the idea and principles of Green Buildings, the SAEDC Standards might be incorporated in more buildings to be planned and built in the George area where this consultancy firm operates.

- *Negative:* -

- **Key Replication Aspects**

- **Staff**

The success of this Green Building project may be attributed to the collaborative endeavours of council officials (specifically of the Department Town Planning), councillors, members of the municipal Aesthetic Committee and private sector contractors. The private sector contractors involved in this project included two architects, namely Mr Reinard Retief and Mr Jaap van Lille.

- **Budget**

The budget of the Green Building increased during the development phases thereof. The initial budget had to be reviewed from US\$ 491 750-00 / R 3 million to about US\$ 1 800 996-00 / R 11 million for executing the new plans. These amounts were reflected in the draft budget of 2003-2004 and reviewed again in the budget of 2004-2005 to be close to US\$ 3 273 780-00 / R 20 million.

- **Financing**

No external funds were used. The Municipal Budget provided for the funds needed.

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July 2004, Potchefstroom

Hibiscus Coast



Location: Hibiscus Coast Municipality



The KwaZulu-Natal South Coast as tourist attraction relies heavily on municipal services



The waterfront at Margate: a popular tourist attraction

- **Full name of the Municipality and Country**

The Hibiscus Coast Municipality on the KwaZulu-Natal South Coast includes towns such as Hibberdene, Umzumbe, Melville, Umtentweni, Port Shepstone, Shelly Beach, Uvongo, Margate, Ramsgate, Southbroom, San Lameer, Munster and Port Edward.

- **Municipal Profile**

- Population: 211170
- Land Area: 796 km²
- Municipal Budget: US\$ 29257638
- Environmental Budget: US\$ 0-00

- **Issue Addressed**

Discussion of the extent to which local environmental programmes were initiated in the Hibiscus Coast Local Municipality area of jurisdiction, as a result of the Greener Governance training (2002-2004) received in Potchefstroom, South Africa.

KEY WORDS: Local Municipal Capacity

- **Key Management Concept**

In order to address environmental challenges at the local government level successfully, the Greener Governance ideology dictates environmental management concepts, which demand information dissemination and communication, co-operation, the establishment of partnerships and stakeholder involvement throughout decision-making processes. However, due to a lack of capacity and political will, the Greener Governance message is often not supported by a local municipality.

- **Proramme Name**

No initiatives/projects have been launched by this local authority as a result of the Greener Governance training received in Potchefstroom, South Africa (2002 – 2004).

- **Abstract**

Although the Hibiscus Coast Local Municipality was represented at the Greener Governance workshop series, no specific Greener Governance projects have yet been implemented due to a lack of capacity and other developmental priorities, as well as the municipality's involvement in other national environmental initiatives, as opposed to local based environmental initiatives.

- **Importance of the Issue**

The Greener Governance ideology is often misunderstood, as its strength also lies in the fact that sufficient funds or infrastructure are not pre-requisites. The Greener Governance ideology motivates responsible local governance and development through environmental management, as it demands alternative and creative decision-making while involving role players such as the local community. As demonstrated in other local government case studies, successful Greener Governance projects often empower both the local municipality and the community, while contributing to overall environmental awareness. However, in order to influence local governance thinking, the dissemination of information is a priority. Information-dissemination is unfortunately often hampered at local level by the lack of capacity, infrastructure and political will.

- **Case**

The Hibiscus Coast Municipality (established in 2000) which is situated on the KwaZulu-Natal South Coast, comprises the following areas: Hibberdene, Umzumbe, Melville, Umtentweni, Port Shepstone, Shelly Beach, Uvongo, Margate, Ramsgate, Southbroom, San Lameer, Munster and Port Edward.



Mr Madlala in front of an environmental awareness poster at the municipal buildings



Coastal zone management provides many challenges (De la Porte, 2004)



Out of sight from the tourism industry, the Port Shepstone waste site serves as a reminder of the influence of tourism on the coastal municipality

As the Hibiscus Coast Municipality's coastline forms an integral part of the national coast, it is important that the municipality considers legal requirements, principles and visions for coastal development. As described by De la Porte (2003), coastal zone management implies the effective conservation and utilisation of the coast as a dynamic ecosystem at the interface between the land and sea. De la Porte (2003) further stipulated in his presentation at the Greener Governance Workshop (2003) that it is imperative to ensure that development in the coastal zone, which should be regarded as a heritage of the nation, is regulated in a such a way as to benefit the greatest number of people possible, while at the same time safeguarding the intrinsic environmental features and ecological processes of the coast.

Due to the increasing and accelerating demand on the economic and recreational coastal resources, there is an ever-increasing need for managing developmental influences on the sensitive coastal zones. The Hibiscus Coast Local Municipality, therefore, has an increased responsibility to ensure the Greening of its Governance, as the degradation of its area of jurisdiction has important negative social, economic and ecological consequences, including the possible decline of revenue from tourism and recreational use, eroding beaches, reduced productivity of estuaries and coastal waters and severe flooding in floodplain areas (De la Porte, 2003).

- **Case Description**

No Greener Governance related projects and initiatives have yet been initiated.

Lessons Learned:

Greener Governance is also "DIY"

According to the Head of the Environmental Department, Mr De la Porte, NGO's and service providers are playing an ever increasing role regarding environmental matters with emphasis on development control and ecological processes. It can, therefore, be said that the

involvement of various uncoordinated environmental initiatives can contribute to the environmental scope and awareness of local municipalities.

However, such dependence on external service providers can possibly lead to a lack of ownership of environmental initiatives by the local authority. It is, therefore, imperative that the Hibiscus Coast Local Municipality prioritise own environmental/Greener Governance initiatives while involving the local community, in order to not only enhance environmental awareness and facilitate ownership of initiatives, but also to empower the municipality and community.

- **Results**

As stipulated above, no specific Greener Governance projects have yet been implemented by the Hibiscus Coast Local Municipality, due to a lack of capacity and other developmental priorities and also due to the municipality's involvement in national initiatives. There is also no formal training currently at the municipality with regard to environmental issues and Greener Governance.

However, according to the current Head of the Environmental Department, Mr De la Porte (2004), the Hibiscus Coast Local Municipality will be able to implement the recommendations and lessons learned from the Greener Governance Workshops in Potchefstroom, South Africa (2002 – 2004), should the priorities, budget and capacity issues be addressed.

- **Key Replication Aspects**

- **Staff:**

The Hibiscus Coast Local Municipality Environmental Department currently consists of only one person, while no environmental training is available at municipal level. However, it is envisaged that municipal training will be prioritised when the local municipal environmental department is capacitated.

- **Budget:**

As stipulated above, the Hibiscus Coast Local Municipality Environmental Department currently only has a minimal budget, as it is mostly involved in national initiatives of the Department of Environmental Affairs and Tourism (DEAT).

- **Financing:**

The Hibiscus Coast Local Municipality has mostly been funded through the involvement in national initiatives with the national Department of Environmental Affairs and Tourism (DEAT). No funding has, therefore, been obtained for local projects and is seldom available to make use of service providers.

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Mr Madlala and part of the Greener Governance task team in Margate, one of the tourist attractions of the municipality

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Klerksdorp



Location: Klerksdorp Local Council

- **Full name of the Municipality and Country**

Klerksdorp Local Council, North West Province, South Africa.

This local council covers an area that was previously covered by four different municipalities. These were the municipalities of Klerksdorp, Stilfontein, Hartebeesfontein and Orkney respectively.

- **Municipal Profile**

- Population: +/- 532 000
- Land Area: 3623.49 km²
- Municipal Budget: US\$ 73 656 735-00
- Environmental Budget: US\$ 319 889-00

- **Issue Addressed**

Local Environmental Programmes as initiated in the Klerksdorp Local Council area as a result of Greener Governance Training (2002-2004)

- **Key Management Concept**

The core of the environmental related problems and issues in the Klerksdorp Local Council area evolves around a lack of available funds and the magnitude of the land area to be governed and managed by this municipality. The specific problems to be reported in this report, entail the illegal dumping of refuse, double standards in delivering municipal services (specifically the maintenance and development of cemeteries) and invader plants (Bluegum trees) causing different environmental problems in Klerksdorp. Generally, illegal dumping may be controlled by stricter local policy and municipal control, whilst a problem with double standards may be addressed by incorporating municipal policy against political differentiation that manifest in the delivery of basic municipal services. A municipal budget should provide for the eradication and removal of problem causing invader species.

- **Programme Name**

The Klerksdorp Local Council endeavoured three projects:

- The Container Pilot Project in Alabama, Klerksdorp;
- Project on the Aesthetic Improvement of Cemeteries in Kanana, Klerksdorp and
- Invader Plant (*Eucalyptus*/Bluegum tree) Eradication Project

- **Programme Goals**

The Container Pilot Project in Alabama addresses the Klerksdorp Local Council's problem with illegal dumping of domestic waste in Alabama, a township in Klerksdorp. In so doing, the municipality tries not only to improve the immediate health and environment conditions of 700 households living in Alabama, but also to improve the appearance of the city and the citizen's and visitors' impression of Alabama and the Klerksdorp Local Council area in general.

The Project on the Aesthetic Improvement of the Cemeteries in Kanana, Klerksdorp aimed to bring an end on a very small scale to a system of double municipal standards. As a result of political differentiation in the past, the cemeteries in the traditionally black townships of Klerksdorp were not as neatly developed or maintained as the cemeteries in the traditionally white areas. This project accordingly aimed not only to demolish the remaining signs of the past political system, but also to clean and repair the cemetery to such an extent that it improves Kanana's aesthetic appearance.

The Invader Plant (*Eucalyptus*/Bluegum tree) Eradication Project addresses environmental related problems such as the enormous consumption of water and the impact on natural fish breeding by eradicating the more or less 10 000 Bluegum trees in the Klerksdorp Local Council area. It also aims to help the national Department of Water Affairs and Forestry in eradicating invader plant species in the North West Province and in South Africa.

- **Abstract**

Container Pilot Project Alabama: The Klerksdorp Local Municipality provides citizens (also the citizens of the township Alabama) with 85 litre refuse containers. The nature of the municipal refuse service rendered requires of residents to put the content of these containers in plastic bags that should be placed on their pavements on the specific day of refuse collection by the municipality. As Alabama's residents cannot afford plastic bags, it hindered the ordinary system of municipal refuse removal in this area and the refuse was illegally dumped directly from the refuse containers. In order to address this problem, the Klerksdorp Municipal Council now



Mr Hein Binderman who coordinated the cemeteries project in Kanana

provides more or less 700 households in Alabama with a 240 litre roll-on refuse container that requires no plastic bags.

Aesthetic Improvement of Cemeteries: Resulting from the strive towards the implementation of Local Agenda 21 in practically incorporating a change in land-use and in moving away from differentiated treatment on local government level, the Kanana cemetery in Klerksdorp was reconstructed and repaired as part of Greening Governance in this area. This project entailed the reconstruction, restoration and improvement of the cemetery area by the equalization of soil, the removal of weed and refuse and the renumbering of identified graves. This project addresses ten percent of the total backlog per year and in so doing slowly but surely improves the aesthetic appearance of cemeteries and to a larger extent, of the townships in the Klerksdorp Local Municipal area.



The reconstructed cemetery area

The Invader Plant (Eucalyptus/Bluegum Tree) Eradication Project: In order to get rid of a plant species that not only consumes litres of water on a daily basis in a water scarce area, but that is also alien to the North West Province and South Africa, ten thousand Bluegum trees need to be eradicated in the Klerksdorp Local Municipal area. This eradication project is in line with the spirit of Greener Governance since it has an immediate positive effect on the environment and there is also a positive social effect as this sponsored project created jobs and training opportunities for at least sixteen people in the community. This project serves to be an example of small-scale co-operative Greener Governance where a local environmental issue has been addressed with the national government department, the local government, residents of the local area and the private sector as mutual stakeholders.

- **Importance of the Issue**

Urban and rural waste management is drawing increasing attention world-wide. In developing countries it is important for local authorities to improve waste management and to raise awareness amongst poor and rural communities regarding disposal of waste. Initiatives such as the Container Pilot Project in Alabama assist in improving general waste management in South Africa and in greening Klerksdorp area's governance. The eradication of invader species is of extreme importance especially in dry areas since these species influence indigenous biodiversity whilst often also consuming a vast amount of water. Part of greening a local authority's governance is the general improvement of its citizens' environment. By adding aesthetic value to the environment, a local authority makes its citizens aware of its

environment that may also assist in launching other successful Greener Governance related projects.

- **Case**

Klerksdorp Local Municipality is situated on the N12 route between Potchefstroom, Ventersdorp and Maquassi Hills Local Municipalities in the North West Province, South Africa. Currently the various urban centres in the Klerksdorp area are separated by tracts of non-urban land, but because of the proximity to each other and intensive communication between the various centres, it actually functions as a single urban entity (Klerksdorp Spatial Development Framework, 2002). The city of Klerksdorp is known for *inter alia* its old cemeteries, its station building and also for being the birth place of Desmond Tutu. The City of Klerksdorp is situated in the southern part of the province and the Klerksdorp Local Municipal area includes the towns of Orkney, Stilfontein and Hartbeesfontein. This metropole area is approximately 3 600 km² in size.

The entire municipal area lies within the catchment area of the Vaal River with smaller streams such as the Schoonspruit and Palmietspruit traversing the area. The groundwater potential of most of the municipal area is poor to moderate (Klerksdorp Spatial Development Framework, 2002). The most prominent indigenous vegetation occur on the ridges (koppies) as well as on the banks of the Vaal River and its smaller streams. The vegetation is, however, negatively impacted by invasive plants species, veld fires and firewood collection. The Klerksdorp Local area hosts several natural assets such as the greenbelt areas (the various ridges, Vaal River, Schoonspruit and smaller streams) and several nature reserves (such as the Faan Meintjies Nature Reserve). Environmental pollution is a reality and includes air and water pollution that are *inter alia* caused by dumping sites, mining activities, abattoirs situated in the area and the deep floatation processes.

Klerksdorp is the centre of a large mining and agricultural economy in South Africa and boasts the second largest grain co-operative in the world. The first magistrate of the originally small community that settled on the banks of the Schoonspruit in 1837, Jacob de Clerq, gave his name to this town founded by the Voortrekkers and a town that expanded as a result of the growing gold mining activities in the region. In 1886, thousands of prospectors descended on the quiet rural aggregation of Klerksdorp, and today the city enjoys a healthy economy based primarily on mining and agriculture.

As far as its economics is concerned, the mining sector comprises the biggest income (58% of total income) factor of the Klerksdorp district whilst the trade, finance and governmental sectors do not fall that far behind. As far as health is concerned, it may be said that the Klerksdorp district hosts the largest number of health facilities in the North West province. These include two public hospitals, seven private hospitals, twenty-two clinics and three psychiatric community services.

- **Case Description**

Container Pilot Project Alabama: The Klerksdorp Municipal Council was challenged with a problem with its refuse removal system in the township, Alabama. Illegal dumping occurred *inter alia* as a result of the fact that the provided 85 litre refuse containers required plastic bags that the residents simply could not afford to buy. The refuse-filled plastic bags are usually collected by the municipality on a weekly basis – each part of the council area is appointed a specific day of the week. In Alabama, however, the municipality had no plastic bags to collect since the residents dumped their household refuse in open spaces surrounding their dwellings.

To address this problem, the Klerksdorp Municipality decided to buy 240 litre refuse containers for the Alabama region. These containers need not be layered with a plastic bag as a refuse compaction vehicle is used to lift the filled containers directly into a compaction unit whenever refuse gets collected by the municipality. The Klerksdorp Local Municipality in addition renders a garden removal service in Alabama so that there is no longer any reason for the illegal dumping of household or garden refuse.

To ensure the success of this project, the Alabama residents were educated on the use of the new 240 litre refuse containers as well as on the positive impact on the environment, should dumping of household and garden refuse be stopped. Klerksdorp Local Council officials, as well as the ward councillors, participated in this training process.

Aesthetic Improvement of Cemeteries in Kanana: In 2002, the Klerksdorp Local Council launched a Greener Governance initiative that entailed the aesthetical improvement of cemeteries in one of its traditionally black townships, Kanana. Resulting from the strive towards the implementation of Local Agenda 21 in practically incorporating a change in land-use (the cemetery area may now be regarded as a municipal recreational park) and in moving away from differentiated treatment on local



Aesthetic Results of Cemetery Project in Kanana

government level, a project was launched for the reconstruction and repair of the Kanana cemetery.

This project entailed the reconstruction, restoration and improvement of the cemetery area by the equalization of soil, the removal of weed and refuse and the renumbering of identified graves. The cemetery and its planning had to be completely reconstructed as, in the development thereof, no logical planning procedure had been followed or advised. The planning of the cemetery also hindered effective management and maintenance thereof since it required the grass to be cut by hand which is extremely labour intensive and accordingly very expensive. The lack of proper management and maintenance over a period of time resulted in the cemetery becoming an unkept and unsafe area.

In realising this project, the Klerksdorp Local Council mobilised more or less forty local residents. These workers' tasks include the cleaning of the area, documentation and recording of all grave numbers, removal of existing tombstones and headstones after such recording, equalizing of the soil (a caterpillar is used) and the replacement of the tombstones and headstones afterwards, according to the registered information. The local residents get paid US\$ 2-00 per m² cement that is laid or otherwise a fixed amount of US\$ 12-00 per day. The cleaning, reconstructing and soil-equalization processes enable the municipality to maintain this previously neglected and shabbily treated municipal area properly. The 'new' cemetery radically improved in its appearance and the local residents perceive the area now as a charming asset in their immediate environment.

The project allows for the planning of the lay-out and situation of new graves in the cemetery, whilst it addresses ten percent of the total backlog per year. In so doing, the municipality slowly but surely improves the aesthetic appearance of cemeteries and townships in general in the Klerksdorp Local Municipal area.

The Invader Plant (Eucalyptus/BluegumTree) Eradication Project: Local Agenda 21 (as one of Greener Governance's steering documents) may be said to require of local governments to strengthen the national government departments in striving towards sustainable development. The Klerksdorp Local Council is currently involved in a project where the local environment is improved as a result of an environmental project launched on national level.

The Klerksdorp Municipal area is proliferated with an invading species called the *Eucalyptus* or Bluegum tree. Invading species may *per se* cause many environmental problems but, the *Eucalyptus* has even more environmental detrimental effects since it consumes an enormous amount of water per day that evaporates and gets lost. A single *Eucalyptus* tree may consume up to five thousand litres of water daily. It is accordingly clear that valuable water resources are lost that may influence environmental aspects such as natural fish breeding and the available water resources for agricultural and domestic use in the area. For this reason, the national Department of Water Affairs and Forestry (DWAF) in 2003 initiated and now support a project in the Klerksdorp Municipal area for the eradication of at least ten thousand *Eucalyptus* trees. The project became a joint venture as the Klerksdorp Municipal Mayor of the time, Dr MA Masike, in planning for a five year eradication programme managed the election of a steering committee on this project and also cooperated with DWAF in this regard.

As part of the project, DWAF has trained and equipped sixteen teams of people (more or less ninety local residents as identified by the Klerksdorp Local Municipality) for the cutting down and complete eradication of these trees. These people are remunerated between R 35-00 per day to R 60-00 per day, depending on the nature of the work done. The removal and utilisation of the trees that have been cut are managed by private companies who find useful purposes for the wood. The local mining companies for example, make use of the Bluegum trees' wood in the making of support strips used for supporting structures in the mining process.

As part of the project, the Bluegum trees will be replaced by indigenous trees in order to maintain the environment. The completion of this project may take a long time since the eradication and substitution processes are slow. These processes are essential in ensuring the survival of the existing ecosystem while keeping the aesthetic value of the big Bluegum trees in mind.

- **Results**

- *Container Pilot Project Alabama:*

- *Positive:* As the local municipality's management of the newly installed 240 liter refuse containers seems to be more labour intensive, more job opportunities arose from this project. In addition, Alabama is now relatively free of dumped refuse, which ensures healthier and better living conditions within the immediate environment of the residents. It should, however, be mentioned that the success of such a project

strongly relies on the education and training of the residents. Since the amount of plastic on the local landfill site is also reduced, pollution is prevented and the environment benefits in general.

Due to the visibility of the 240 litre containers and the training of the residents, this project also gave rise to public awareness of the effective management of household and garden refuse. The possibility exists for the extension of this successful and job-creating project to the whole of Alabama and possibly also to other areas under the management of the Klerksdorp Local Municipality. It should, however, be said that this is a labour extensive project that is also more expensive than ordinary refuse removal systems because of the 240 litre containers' unit price and the required compaction unit.

As the Greener Governance Workshop training (2004) addressed waste management, the Klerksdorp Local Council obtained confirmation on its initial supposition that this project is also in line with the required legislative control of pollution caused by refuse/waste on national level.

- o *Negative:* -

Aesthetic Improvement of Cemeteries in Kanana:

- o *Positive:* Although this project may seem to have little value in a sustainable development sense, the importance thereof in a political and Greener Governance sense should not be underestimated. In improving the aesthetic value of an unkept cemetery in the centre of one of its traditionally black townships, the local government showed a commitment to improve the living environment of the areas' residents. As it is often difficult for the political leaders of a developing country to practically (on local government level) restore the imbalances of the past, an endeavour like the aesthetic improvement of cemeteries in a township serves as a good example of how to win ground. The positive results of this project also include the improvement and safeguarding of the living environment of the Kanana residents, a change in land-use with recreational value and the local council's commitment to the spirit and scope of Local Agenda 21.

- o *Negative:* -



Results of the Aesthetic Improvement of Cemeteries in Kanana

The Invader Plant (Eucalyptus/BluegumTree) Eradication Project:

- **Positive:** The most important positive environmental result of the eradication of the Bluegum trees is the saving of important and valuable water resources in the Klerksdorp Municipal area. But equally important is the resultant greener cooperative governance between a local government, DWAF (as a national government department) and the private sector, in fulfilling an environmental related goal, namely the eradication of invader species (such as the Bluegum tree) in South Africa. Another positive result is the job creating and training possibilities that arose for local residents who were chosen to work in the project teams. More or less ninety people in the Klerksdorp Local Municipal area receive training and remuneration from this project.

Some of the negative results, however, include the fact that public sector industries may not find it as important to co-operate on a standing basis in completing this project in the way the local government and the national department do. This project also shows that in putting available large amounts of money into a project like this, the sponsor or funder should ensure that competent people deal with the available budget responsibly. This project has been hindered by the fact that some of the project money was spent in a fraudulent way.

- **Negative:** -

- **Key Replication Aspects**

- **Staff**

Container Pilot Project Alabama: The staff of the Klerksdorp Local Municipality, Department Cleansing, was actively involved in the launch and implementation of this project. Mr D. van Zyl, in collaboration with the ward councillors and private mobile container provider, saw to the successful implementation of this project.

Aesthetic Improvement of Cemeteries in Kanana: The staff of the Klerksdorp Local Municipality, Department of Parks and Recreation, were actively involved in the launch and implementation of this project. Mr H. Binderman saw to the successful implementation of this project. Local residents of Kanana were mobilized and remunerated for their work in the cemetery.

The Invader Plant (Eucalyptus/Bluegum Tree) Eradication Project: The staff of the Klerksdorp Local Municipality, Department of Parks and Recreation as well as the mayor of the time, Dr MA Masike was actively involved in the launch and implementation of this project. The project team also consisted of DWAF officials, local residential workers and different public sector companies.

- **Budget**

Container Pilot Project Alabama: The 700 containers that were required for the launch of this pilot project cost US\$ 28 867-00 in 2003. An additional amount of US\$ 16 495-00 was required for the installation of the lifting mechanism on the municipality's refuse compaction vehicle. The total budget for this project was US\$ 45 362-00.

Aesthetic Improvement of Cemeteries in Kanana: The Klerksdorp Local Council budgeted an amount of US\$ 4 124-00 within their capital budget for this project.

The Invader Plant (Eucalyptus / Bluegum Tree) Eradication Project: The North West Provincial budget of DWAF for this project is US\$ 247 428-00. Klerksdorp Municipal Council receives a percentage of this amount as required for the local project's needs.

- **Financing**

Container Pilot Project Alabama: The Klerksdorp Local Municipality's budget for 2003 allowed the US\$ 45 362-00 expenditure for this project and no private or governmental sponsorships were required.

Aesthetic Improvement of Cemeteries in Kanana: No external funds were required as the Klerksdorp Local Municipality annually budgets for this project.

The Invader Plant (Eucalyptus/Bluegum Tree) Eradication Project: The North West Provincial Department of DWAF is financing this project. Accordingly no local municipal funds are required.

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Men at work as part of the Eucalyptus Eradication Project

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- Mr Wouter Bluemer and Ms Anél du Plessis

- **Date and Place written**

- July 2004, Potchefstroom

Mafikeng



Mafikeng, North-West Province, South Africa



Location: Mafikeng Local Council

- **Full name of the Municipality and Country**

Mafikeng Local Council, North West Province, South Africa.

During the era of Apartheid in South Africa, Mafikeng became part of the city Mmabatho ('mother of the people'), the capital of the supposedly independent homeland of Bophuthatswana. In 1994, Bophuthatswana was re-incorporated into South Africa and the name Mmabatho was replaced by the historical name of Mafikeng.

- **Municipal Profile**

- Population: +/- 260 000
- Land Area: 370 300 ha
- Environmental Budget: US\$ 0-00

- **Issue Addressed**

Local Environmental Programmes as initiated in the Mafikeng Local Council area as a result of Greener Governance Training (2002-2004).

KEY WORDS: *Infrastructural and Budget Constraints*

- **Key Management Concept**

To address environmental problems at local government level successfully, many aiding factors should converge and several projects should be initiated to address identified environmental problems. One of these aiding factors may, arguably, be environmental training of local government officials and councillors. However, without all of the other supporting factors in place, such as a substantial municipal budget and sufficient infrastructure, Greener Governance and environmental management-based training may not serve to ensure responsible environmental management at the local government level.

- **Programme Name**

For the reasons provided in the discussion of the Mafikeng Case, this local authority could not initiate or launch any programmes or projects based on the Greener Governance training.

- **Abstract**

This case study serves to emphasise the fact (and concern) that a number of medium-sized local municipalities in the SADC region are still deterred from greening their governance. Although representatives from the local Municipality of Mafikeng attended the Greener Governance workshop series in Potchefstroom, a municipal backlog exists in terms of important social and service-related issues. These currently prevent the initiation and management of Greener Governance projects.

- **Importance of the Issue**

Greener Governance does not always ask for available funds or a sufficient infrastructure. Often a difference in thinking, ways of decision-making and the dissemination of information to influence the daily activities of the local authority can make a vast difference in a local government's move towards sustainable development.

- **Case**

The city of Mafikeng is the capital of the North West Province, South Africa. Mafikeng is a word from the traditional South African language, seTswana, that means 'place of stones'. Mafikeng deserves its place on the history map of South Africa since it attracted the attention of the world during the Anglo-Boer War of 1899 – 1902. The small British garrison, under the command of Colonel Baden Powell, held out for 217 days against Boer forces who had surrounded this town. Today Mafikeng is often said to be a vibrant provincial and commercial capital and tourism attraction because of the history, culture and wildlife of this unique region. The western suburb of Mafikeng houses the provincial parliament at impressive government offices known as the Garona. The North West Institute of Hotel & Tourism Management is also located in Mafikeng. The international Scout Centre of Excellence for Nature & Environment is located on the borders of the Mafikeng Game Reserve and provides skills training in management, leadership and team building for both local and international students.

The total municipal area covers twenty-eight wards. Eighteen wards are located mainly within the Mafikeng urban area and the remainder cover the



Mr KD Mogwe and local council colleagues that were willing to discuss some of the existing backlogs in their local council and municipal area

rural hinterland. The total area is approximately 3 703 km² and includes a total of fifty-four villages outside the Mafikeng urban area.

The Mafikeng Municipal Budget for 2001/2002 period was approximately US\$ 25.7 million. Of this amount, approximately US\$ 21.9 million was constituted by Grants-in-Aid and funds within the national Reconstruction and Development Plan (Mafikeng Integrated Development Plan, 2003 96). The breakdown of the utilization of this capital budget showed no item directly aimed at improving or sustaining the environment. The items of priority instead include Service Provision (water, sewerage and parks for example), Land Development Objectives, Housing (Imperial Reserve, Danville and Montshiwa) and Municipal Equipment.

In order to understand the critical position of the Mafikeng Local Municipality, some facts surrounding the current basic municipal needs should be highlighted. The Executive Mayor, the Mayoral Committee, members of Council and senior officials within Council, including the Municipal Manager attended a strategic workshop during 2001. The purpose of the workshop was to create an understanding of the current contextual challenges facing the Mafikeng Municipality and to build a vision for the municipality. The results of the analyses that had been done, *inter alia* showed the following alarming and key-weaknesses within the Municipality:

- Internal cash flow problems
- Low morale of employees
- Dysfunctional organisational structure
- Lack of trust between politicians and employees
- Available resources of mayoral Committee
- Defining the roles of municipal structures
- Deterioration of infrastructure
- Outdated by-laws
- Level of skilled employees
- Illiteracy
- Inadequate resources

In addition to the above, it is important to note that as far as municipal services are concerned, water provision is a critical area of concern in Mafikeng, especially when compared to levels of access to treated water in the Central District Municipality (estimated at roughly 78%) and the North West Province as a whole (in excess of 80%). It appears that water provision is of particular concern in the rural areas in the southern and

central parts of the Mafikeng Local Municipality. The lack of appropriate sanitation infrastructure, which is closely associated with water provision, is illustrated by the fact that approximately 70% of all households in the Mafikeng area are reliant on pit latrines as their source of sanitation. Only 25% of the population have access to a flush or chemical toilet system. Approximately 42% of households in the Mafikeng area have access to electricity, with the remainder reliant on alternative energy sources for lighting purposes. The latter category consists of 47% of households reliant on candles and 12% on paraffin. As many as 77% of households in Mafikeng do not have access to any formal refuse removal service. As far as Health Services are concerned, the area is served by twenty-five clinics as well as a mobile clinic service in the rural areas.

There is a total of 142 schools located within the Mafikeng Local Municipality but the main concern (as was evident from a community and stakeholder analysis), is the quality of available facilities and services at the existing schools. Approximately 66% of households within the Mafikeng Local Municipality earn less than US\$ 247-00 per month. The poverty rate for the Mmabatho district was estimated at 54.7% in 2000. This implies that more than half of the total population in the Mafikeng Local Municipality are living in a situation of poverty (Mafikeng Integrated Development Plan, 2003 43).

Greening a municipality's governance, in essence, focuses on environmental information, the identification of areas of concern and the sustainable and effective management of the environment in all of the local authority's functions. There is currently no detailed strategic environmental assessment available for the Mafikeng Local Municipality area. Based on existing available information, a number of key aspects can, however, be highlighted from an environmental perspective. There are a number of water courses and dams in the Mafikeng Local Municipal area. There are also significant areas of degraded forest and woodland as well as degraded thicket and bush land. The Mafikeng Integrated Development Plan 2003 states that these areas should be targeted for specific intervention measures to prevent further degradation taking place within these areas. There are a number of conservation areas in the Central and Northwest parts of the Mafikeng Local Municipality that should be protected. The most notable feature is the Mafikeng Game Reserve, east of Mafikeng. It is interesting to note that during a public participation process, people indicated that all disused quarries and mines should be fenced or filled for safety purposes and that the necessary EIA regulations should be enforced at all mining operations in the area. There are a significant number of heritage sites and places of



The management of the Mafikeng land-fill site has been outsourced to private contractors

cultural and historical importance within the municipal area that should be protected as such. It is important to note that the IDP document recognize these areas of concern and that no actual plans or programmes are provided to realize these environmental strategies.

Conserving and responsibly managing the environment, or greening its governance, is currently of no immediate importance to the Mafikeng Local Municipality. Six issues may currently be considered as key aspects and priorities relating to development in the Mafikeng Local Municipality. Unfortunately, sustainable development and environmental management are not categorised as any of these issues. In preparing their Integrated Development Plan (IDP), six issues appeared amongst the top ten list of the community and ward level process, as well as the municipal wide stakeholder analysis. These included:

- o Roads and storm water;
- o Need for employment creation and local economic development;
- o Provision of electricity and street lighting;
- o Provision of water;
- o Provision of clinics and health facilities; and
- o Provision of parks, recreation and sport facilities.

In the light of the above, it is evident that environmental issues are no point of immediate attention for Mafikeng's Local Authority. This local authority faces too many other service providing backlogs. Because of a limited budget and poor infrastructure, the fighting of the backlog is not taking place at rapid speed. It may be argued that the Mafikeng Municipality can address the listed issues with the Greener Governance tools in mind, but the limited municipal budget does complicate the matter.

The writers of this case study visited the local authority of Mafikeng in June 2004. During their visit they, *inter alia*, met with the Cleansing Superintendent, personnel of the Town Planning Department and the Head of Community Projects of the Municipality. A few more of the local municipal officials were present at this meeting. This meeting accentuated several of the frustrations and constraints that the Local Municipality of Mafikeng experiences. A limited budget, no effective network-basis other than with provincial government, few training possibilities, poor infrastructure and a lack of co-operative communication and governance make the greening of Mafikeng's governance an idea that is merely a pie in the sky.

- **Results**

Mafikeng Local Municipality was represented at the Greener Governance workshop series but, due to key physical limitations, no specific Greener Governance projects derived therefrom. It will be erroneous to say that the representatives did not buy into the Greener Governance principles and framework of governance ideas. The municipal officials are not blind to the Greener Governance opportunities in their own municipal area also. There is an enthusiasm to bring about change in their way of governance, but it is suppressed by the discussed constraints. It is, however, wrong to justify the absence of Greener Governance projects based on the discussed constraints alone. As is clear from several case studies contained in this report, Greener Governance does not always ask for available funds or a sufficient infrastructure. Often times a difference in thinking, ways of decision-making and the dissemination of information to influence the daily activities of the local authority can make a vast difference in a local government's move towards sustainable development.

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- **References**

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- **Date and Place written**
June 2004, Potchefstroom

Mangaung



Location: Mangaung Local Council



Mangaung City, Free State Province, South Africa

- **Full name of the Municipality and Country**

Mangaung Local Council, Free State Province, South Africa

The municipality was formerly known as Bloemfontein Local Council

- **Municipal Profile**

- Population: +/- 400 000
- Land Area: 46 550 ha
- Municipal Budget: US\$ 209 719 885

- **Issue addressed**

Local Environmental Programmes as initiated in the Mangaung Local Council area as a result of Greener Governance Training (2002-2004)

KEY WORDS: *Chimneys for Chests Project, VIP (Ventilated Improved Pit Latrines) Programme for Small Holdings, The Business Survey Programme.*

- **Key Management Concept**

The Mangaung Local Council identified environmental and health-related problems with the sanitation facilities of workers on small holdings (bucket systems and pit latrines) of the city that *inter alia* influence the quality of Mangaung's groundwater; the indoor air quality in townships as well as the lack of municipal control over and licensing of local industries' activities that may adversely effect the health and environment of citizens respectively. The Ventilated Improved Pit Latrines Project entailed the installation of 249 semi-permanent toilets, the Chimneys for Chests Project reduced the high SO² and paraffin levels in squatter houses as chimneys were installed and a comprehensive electronic data base for the identification, licensing and control of 1 502 industries in Mangaung was developed.

- **Programme name**

The Mangaung Local Council put effort in three specific projects:

- Chimneys for Chests Project

- VIP (Ventilated Improved Pit Latrines) Programme for Small Holdings
- The Business Survey Programme

- **Programme goals**

The Chimneys for Chests Project: This aims specifically to promote a better quality of life by lowering the risk of respiratory diseases especially amongst pre-school children, the elderly and housewives residing in informal shelters. This is achieved by reducing indoor air pollution within township dwellings to the lowest possible level. In addition it aims to decrease the number of respiratory diseases, the greenhouse effect and the occurrence of acid rain, whilst creating public awareness of indoor pollution and empowering people to care for the physical health of their families and friends.

The Ventilated Improved Pit (VIP) Latrines Programme for Small Holdings: This enabled the Local Council to improve the basic sanitation facilities (old bucket and pit latrine systems) of workers on small holdings as part of the aim to improve the standard of personal hygiene and general living standards of these workers. The programme in addition creates awareness of poor sanitation facilities and practices on small holdings. The aim is also to keep Mangaung's groundwater quality as high as possible while preventing the spread of diseases related to poor sanitation such as diarrhea, worms, cholera and typhoid.

The Business Survey Programme: This is a data related project that has as its aim the identification, detailed documentation and licensing (with resulting local municipal control) of key industries in Mangaung such as food businesses, childcare centres, chemical industries and dairies in order for the local municipality to have better environmental and health control and to relate certain environmental and health problems directly to the activities of specific industries or to industries located in a specific part of the municipal area.

- **Abstract**

The Chimneys for Chests Project: This entailed the manufacturing and installation of metal chimneys in a Mangaung Township called Kathrada Square and accordingly addressed the diverse range of problems related to indoor air pollution.

The Ventilated Improved Pit (VIP) Latrines Programme: This is a collaborative endeavour of the Mangaung Local Council's Departments of



Mr J van der Merwe with one of the woman that benefited from the VIP Programme

Environmental Health and Rural Development, as well as the national Department of Water Affairs and Forestry that see to the provision and installation of VIP's and accordingly improve sanitation facilities and standards of personal hygiene of people working on small holdings in parts of the Mangaung Municipal area.

The Business Survey Programme: This is a collaborative endeavour of the Mangaung Local Council's Information Technology and Environmental Health Departments that aim to keep and update all data related to industries in Mangaung (specifically chemical industries) that may reveal environmental or health risks. The programme accordingly assists municipal officers in identifying and managing these risks and results in better municipal control.

- **Importance of the issue**

Indoor air pollution in developing countries mostly arises from the indoor burning of solid fuels such as wood, animal dung and crop residues in open fires or poorly functioning stoves. The incomplete combustion of these fuels releases pollutants such as particulate matter (PM), carbon monoxide (CO), sulphur dioxide (SO₂), nitrogen dioxide (NO₂) and other organic compounds (Smith, 1987). It is estimated that at least two-thirds of all households in developing countries are still primarily dependent on biomass fuels and coal, affecting approximately 2 to 3.5 billion people worldwide (The World Resources Institute, 1998). (A Behavioural Intervention to Reduce the Impact of Indoor Air Pollution on Child Respiratory Health: Identifying Target Behaviours)

The sanitation problem which Mangaung is attempting to handle is very important. The Framework for Action on Water and Sanitation, produced in conjunction with the WSSD, indicates that close to 6,000 children die each day from diseases related to inadequate sanitation and hygiene and a lack of access to safe drinking water. The health risks associated with the current state of sanitation in the world require immediate action. (Article: The Sanitation Crisis.)

A sufficient environmental database is nowadays essential in every company, industry or organization. With a data-system, documents can be located by people who need them, periodically reviewed, revised, and approved. Current versions are available where appropriate, obsolete versions are promptly removed and obsolete versions are retained if necessary.

- **Case**

The Free State is the third largest province in South Africa and covers 10.6% of the country's surface area. This province is ranked the second least densely populated area in the country, while it is the third most urbanized province with 71% living in urban settlements (Integrated Development Plan 2003/2004, 7). Mangaung Local Municipality consists of three urban areas, namely the city of Bloemfontein and two 'peri-urban' towns, Botshabelo and Thaba'Nchu as well as a vast rural area.

Bloemfontein is the hub of this municipal area and since 1996, the local authority has spent most of its budget to provide basic infrastructure in the poor areas to catch up with service backlogs. The estimated urban population for 2001 was 700 000 and the rural population 40 000. The community, social and personal service sector is the strongest economic sector and biggest job provider in the city. Key service sector employers include provincial and local government, education and health facilities and training institutions, sport and cultural events and facilities, services to the agricultural sector and financial services. Of the Municipal Area, 23% is farmland with a further 2% covered with smallholdings. The rural area with its commercial farms has been identified as a new challenge to the expanded municipality. Although the area has basic infrastructure like roads, electricity and telephones, the main services are in the urban areas. The municipality has little experience of dealing with the problems of rural areas. One such problem is a backlog in sanitation and while water has been delivered to South Africa's RDP standards (a standpipe within 200 m), people want water on their stands. The Free State has the third highest prevalence rate of HIV infection in South Africa, namely 27.9%, reaching 29.8% in Mangaung in 2001. The gross geographic product of the Mangaung Local Municipality's economy was US\$ 1 438 874-00 in 2001 and it is dominated by the community service sector (36% in 2001). This sector is followed by the finance sector (18%), trade (16%), transport (13%) and manufacturing (8%). On the whole and at present there are no large scale environmental problems experienced in the Mangaung area. The municipal area, like most of the Free State Province might not boast the largest variety of natural resources, but, however, has large untouched areas and alluring open planes which identifies it as Big Sky Country (Mangaung State of the Environmental Overview Report, 2003; 6). Specific small scale environmental problems do, however, occur such as the poor air quality in townships in winter due to the effect of, for example, coal burning. The general financial state of Mangaung

Local Municipality is healthy in comparison with many other municipalities and of the current total municipal budget of US\$ 209 454 752-00, an amount of US\$ 940 141-00 has been allocated for environmental related operations and projects.

- **Case Description**

Chimneys for Chests Project: Indoor air pollution is said to be one of the most serious environmental problems in developing countries (Chimneys for Chests Report, 2003). Several people are, on a daily basis, exposed to high levels of indoor air pollution in the form of smoke or gases from open fires or poorly designed paraffin stoves. This exposure results from the fact that to keep warm in cold weather conditions, fires are used for heating and cooking purposes. These fires are made in rooms or small houses with little or no ventilation and for extended periods of time. It is accordingly obvious that women at home, children, the elderly and those people that are terminally sick within poor communities are particularly exposed, over a period of time, to high levels of combustion emissions.

In most developing countries biomass fuels such as wood, crop residues and animal dung are used for domestic fuel purposes. As a result thereof air quality has become a serious hazard to health especially in poorly ventilated dwellings. The biggest health risk lies in the inhalation of smoke coming from fires made from biomass fuels. Decreased lung function, respiratory symptoms such as coughing and acute respiratory infections are, amongst others, associated with biomass fuels. Not only biomass fuels influence health but also fossil fuels such as coal, lignite or processed fossil fuels such as oil and paraffin. The smoke, gasses and chemicals from fossil fuels are hazardous to the health of people in that these emissions include, for example, sulphur oxide and nitrogen oxides that cause broncho constriction, infectious respiratory diseases, increased asthmatic problems and eye irritation.

Resulting from the Greener Governance training on the implementation of Local Agenda 21 and the curriculum of Workshop II (2002) that addressed indoor air quality, the Chimneys for Chests Project was initiated in parts of the Mangaung Municipal area as part of the Mangaung Healthy City Programme. This project specifically aimed to improve the indoor air quality, and accordingly the quality of everyday life of people living in townships in the Mangaung Local Council area. Although the Mangaung area enjoys relatively good air quality due to the absence of major industrial and



An installed chimney in Kathrada Square

transport activities, there are accounts where air quality is threatened by, *inter alia*, the high concentrations of household fires.

Air quality measures were taken with a Metro Sonics 513 Indoor Air Quality Monitor before the installation of the chimneys and the results showed that the Carbon Dioxide and Sulphur Dioxide measurements per household did not comply with the standards as laid down in the national *Occupational Health and Safety Act*, 85 of 1993. As no standards for private dwellings exist, these are the only standards against which measurement can take place.

In order to reduce the number of respiratory diseases and to improve the general health and quality of life of people living in small township houses or shelters with no ventilation specifically, simple flat metal chimneys were designed, manufactured and installed in approximately one hundred township houses. These chimneys serve to remove combustion products such as smoke fumes, CO² and CO that were, as part of a survey, identified as the products specifically causing cold, flu, asthma, tuberculoses and eye irritation. The only sheet metal products manufacturer in Mangaung, Eddle's Plumbers, advised the municipality on the type of chimney to be designed and manufactured for the purpose of the project. A proto-type chimney was designed (200 mm X 1,2 m flat metal chimney pipe with 400(2) mm base plate, 4 fixing brackets and wing nuts, 2000 mm X 150 mm water proofing membrane and 250 ml heat-resistant water sealant) and installed in one of the township houses in order to determine its efficiency and effective functioning as well as its stability and water-resistance. The result was satisfying and a hundred and one of these chimneys were then installed.

A mere hundred and one chimneys were installed in the Kathrada Square area, Phamaleng in the Mangaung Municipal area, however many more people that belong to these hundred households benefited from the respiratory relief. Kathrada Square consists of 161 houses with a total population of 514 inhabitants. The largest part of Kathrada Square now has access to cleaner indoor air. As part of the project, women were trained and educated on the causes of indoor air pollution and the diseases it may cause, whilst pamphlets written in the local language, Sotho, were also distributed in the community.

In order to determine the scope of the success of this project, follow up air quality measures will be taken over a period of time in order to determine

the true impact of the chimneys on not only the indoor air quality as such, but also the overall quality of life of people living in Kathrada Square.

The Ventilated Improved Pit (VIP) Latrines Programme: The Government's Policy to address the backlog in basic household sanitation is contained in the White Paper on Basic Household Sanitation, 2001 (hereafter the White Paper). The policy makes provision for the eradication of all bucket systems and also the addressing of all needs in other areas of sanitation by the year 2010. The Mangaung Local Municipality has responded to this call by Government and the first Area Business Plan of its kind in South Africa was unconditionally approved in 2002 by the Department of Water Affairs and Forestry (Mangaung Local Municipality, Infrastructural Services Directorate, VIP Toilet Implementation Progress Report, 2004).

As a result of the Greener Governance Local Agenda 21 training of 2002 (Workshop II), a VIP project was launched in the Bloemspruit and Bainsvlei areas within a bigger Mangaung Municipal project, the VIP Toilet Implementation Project. This project is part of the local council's aim to comply with its legal obligations deduced from the White Paper.

VIP's are intended to replace unacceptable bucket systems, to upgrade sub-standard pit latrines and to provide upgradeable toilets in the short term to accelerate the installation of waterborne systems (Mangaung Local Municipality VIP Toilet Implementation Progress Report, 2004). The advantages of VIP's are that they are hygienic and inexpensive when properly designed, used and maintained. Similar to the ordinary pit latrines, faeces and urine enter into a pit where a process of natural breakdown or digestion by bacteria occurs. An external ventilation pipe draws air through the toilet when the wind blows to keep it free of odours which ensure that flies and other insects are not attracted to the pit. Usually the VIP is built over an open pit, dug in the ground, but in areas with unstable soil conditions, or where the risk of groundwater contamination exists, a pit lining is used. Additional advantages include that VIP's use no water, that human wastes are decomposed and that no removal is required, that no maintenance other than normal cleaning is required, that the cost of manufacturing is relatively low and that foreign objects will not block the system.



An installed VIP that replaced the bucket system

The VIP's used for this project are panel type of structures consisting of lightweight precast concrete panels that are fixed together to form a toilet structure. It is a permanent toilet structure made of a high quality cement

based material that does not corrode. It is lightweight (450 kg) and movable as the components can be handled and erected by two persons. Accordingly, the VIP structure can be moved when the pit is full or converted into a water-borne system in the future. These structures are manufactured by the privately managed CEMFORCE EASY LOO and have been approved by the national Department of Water Affairs and Forestry. The structures comply with all minimum standards with regard to strength and the materials used.

A great need for improved sanitation for workers on the Bloemspruit and Bainsvlei small holdings was identified by the Mangaung Environmental Health Division. Very few of the houses in these areas are supplied with a waterborne sewage system and in many instances, either very basic pit-latrines are in use (poorly constructed structures) or no sanitation facilities exist at all. The environmental and health related risks associated with this sanitation problem include the spread of diseases such as diarrhea, worms, cholera and typhoid and the contamination of underground water when borehole water is used for domestic purposes.

Mangaung's Department of Environmental Health accordingly launched a project for the improvement of sanitation facilities on small holdings (Ventilated Improved Pit Latrines Project for Workers on Small Holdings Project Report, 2003). The project entailed the provision and installation of VIP's and the determination of other possible sanitation, health or environmental needs in Mangaung's small holding areas. A Project Schedule and Action Plan were drafted to establish the broad outline of the project and also to get the community to participate. Ventilated Improved Pit latrines were obtained from Rural Development that runs a main stream VIP project in line with the White Paper. Small holding owners of Bainsvlei and Bloemspruit were invited to apply for VIP Toilets. These invitations were in fact application forms that were distributed among businesses in Bainsvlei and Bloemspruit. The number of toilets needed was established where-after a date and location for collection was decided and communicated. The small holding owners and workers to benefit from the project (in other words, those people that successfully applied for a VIP) are responsible for the installation of the VIP's and it should be conducted within 30 days after collection. As part of the project and after the VIP's are installed, inspections by the area Environmental Health Officers are conducted and health and sanitation awareness training takes place.

The first VIP toilets were received by the Mangaung Local Municipality on 26 November 2003 and the first distribution effort (249 toilets) took place

during the period of December 1, 2003 and December 11, 2003. By the time of the writing of this report (July 2004), the Mangaung Municipality was awaiting the second round of its VIP distribution process. Some of the lessons learned from this project include the fact that due to a lack of proper information on sanitation and the operation of VIP's, people may resist the installation of these structures and that the VIP structures should be carefully positioned as they may collapse due to heavy rains when not supported by stable foundations. Mangaung overcame the former problem as lintels were provided and careful consideration is now given to the placing of these structures to avoid rainwater overflowing the pits. An additional lesson is that in ensuring the success of a sponsored programme like this, marketing is important, especially where people need to 'apply' to benefit from the programme.



Mangaung Local Council's data base on industries and activities in the area that may affect health or environment

Business Survey Programme: In 2003, and as a result of the Greener Governance training of that year, the lack of municipal control over business activities in the Mangaung area that may detrimentally affect citizens' health and environment was identified. Mr Lam Kok-Liang's programme as part of the 2003 Greener Governance curriculum, emphasized the fact that in order to implement Local Agenda 21 successfully, all stakeholders need to know exactly what is going on in the local municipal area and for that reason Mangaung identified the need for a complete data basis on the city's businesses, their location, their authorized activities and the effects these activities may have on citizens or the environment.

The programme was a collaborative endeavour between the Departments of Environmental Health and Information Technology of the Mangaung Local Municipality. The programme entailed the listing of 1 502 industries in Mangaung. These industries are divided into twenty-two wards with seventeen operating Environmental Health Officers. The programme does, however, not only list the different industries but also provides for the documentation of their exact location, the nature of their activities as well as their registration and licensing (or progress in becoming registered or licensed). The data base accordingly improved local municipal control.

Some of the problems that were experienced before the incorporation of this data programme include illnesses caused by dairy products that could not be traced back to a specific industry or dairy manufacturer. A situation, for example, also occurred where the Municipality could not link certain water pollution problems with specific businesses that are, for example, situated above or below a certain point of the local river flow. These problems are

now eliminated since location and all other updated detail on a specific industry are easily accessible in electronic format. The data programme has two sub-headings that were specifically designed to facilitate Environmental Health Officers in capturing their data and creating reports. These headings include Business Licenses Administration and Childcare Centres. The heading 'Samples/Monsters' on the other hand assists Environmental Health Officers in capturing their sample data and creating reports. This project accordingly enables Mangaung's Environmental Health Officers to operate more efficiently as they have improved control and access to information.

- **Results**

Chimneys for Chests Project:

Positive: The project aim has been reached in that the indoor air quality of at least 101 houses in Kathrada Square has been improved. The scientific extent to which the air quality has improved still needs to be determined. It is anticipated that especially pre-school children, the elderly, all house bound people and HIV/AIDS infected people benefited from the improvement of their indoor air quality. A further result is the public awareness on indoor air quality that was raised by means of training, pamphlet distribution and also the visibility of the chimneys. In a broader sense, this project then succeeded in improving the health and environment of the largest part of 161 households in Kathrada Square.

Negative: -

The Ventilated Improved Pit (VIP) Latrines Programme:

Positive: The project succeeded in improving the sanitation facilities of workers of Mangaung's Bainsvlei and Bloemspruit Small Holding areas, in creating sanitation awareness and in improving the general living standards of the workers whilst promoting healthy environmental conditions. The installation of 249 VIP's means that all workers having access to these toilets now have access to better sanitation or to sanitation as such, where this might not have been the case before. Not only did the Mangaung Local Council receive letters of appreciation from people who now have access to a VIP but also numerous enquiries have been made by small holdings owners requesting additional VIP's which serve to indicate that this is a feasible and appreciated project (Mangaung Local Municipality Ventilated Improved Pit Latrines Project Report, 2003). Additional needs that were identified by the public as part of the awareness that the VIP project raised, include refuse removal, the upgrading of roads and the addressing of problems related to electricity, sewerage systems, water and streetlights. Accordingly the VIP

project also succeeded in identifying other health and environmental related problems and needs that the Mangaung Municipality may attend to in improving the overall environment of Mangaung's citizens.

Negative: -

Business Survey Programme:

Positive: This health and environmental data base that is updated daily, enables the Mangaung Environmental Health Department to have control over the activities of the main businesses of Mangaung in so far as these activities may influence or effect the health and environment of Mangaung's citizens. It allows for the local municipality to have control not only over the registration and legal compliance of the businesses but also to ensure that pollution or other unacceptable occurrences related to health or environment are traced back to industries/businesses that are situated in the specific area. Environmental Health Officers now have access to a structured information system that enables them to have better control and to see to the health and environmental issues of the city in an efficient way.

Negative: -



Mr J van der Merwe who initiated the business survey programme of Mangaung City Council

- **Key Replication Aspects**

Pertaining to the reported municipality in order to allow for comparative reading etc.:

- **Staff**

The Chimneys for Chests Project: The Environmental Health Officer of Mangaung Municipality, Mr J. van der Merwe was primarily in charge of this project but was supported by a project team consisting of 5 members. The project did, however, also require the active involvement of the public and community members who participated in the survey, the relevant Municipal Councillor and Ward Members and the local chimney manufacturer.

The Ventilated Improved Pit (VIP) Latrines Project: Mr J. van der Merwe (Environmental Health Officer of Mangaung Municipality) worked closely with five municipal colleagues, including Mr F. Viljoen (Manager: Rural Development) in realizing the VIP project. Other stakeholders and project participants included the land owners and their family members, Environmental Health Officers, Ward Committee volunteers as well as CEMFORCE EASY LOO, the privatized VIP structure manufacturer.

- **Budget**

The Chimneys for Chests Project: An amount of US\$ 25-00 per chimney was required. The total project cost approximately US\$ 2 467-00.

The Ventilated Improved Pit (VIP) Latrines Programme: As the toilets are provided and indirectly sponsored as part of the VIP project of Mangaung's Rural Development and the cost of installation is up to the owners of small holdings to benefit from the programme, the project had no direct costs for the Mangaung Municipality. The costs per VIP are +/- US\$ 246-00 per structure.

Business Survey Programme: The programme is an initiative within the Mangaung Municipality as part of a process of improving services that encountered no external expenses.

- **Financing**

The Chimneys for Chests Project: This project was partially sponsored by the Free State Provincial Government but all other required funds (US\$ 25-00 per chimney) were financed by the Mangaung Local Council.

The Ventilated Improved Pit (VIP) Latrines Programme: This project was indirectly sponsored by Rural Development who is subsidized by the national Department of Water Affairs and Forestry in line with this Department's own Subsidy Policy (Mangaung Local Municipality VIP Toilet Implementation Progress Report, 2004).

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A Behavioural Intervention To Reduce The Impact Of Indoor Air Pollution On Child Respiratory Health: Identifying Target Behaviours

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*b CHANGE project, Academy for Educational Development, 1825 Connecticut Avenue, NW, Washington DC 20009-5721, USA

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- **Date and Place written**

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Maputo

- **Full name of the Municipality and Country**

Maputo Local Municipality incorporates Mavoco, Hulene, Bedene and Ndlhavela villages in the Maputo Province of Mozambique.

- **Municipal Profile**

Population:	1 073 938
Land Area:	312 km ²
Total Municipal Budget:	unknown
Environmental Budget:	US\$ 50 000

- **Issue Addressed**

Local environmental programmes as initiated and eno.iched by the Maputo Municipality as a result of Greener Governance training (2002 – 2004) conducted by the Centre for Environmental Management (CEM) in Potchefstroom, South Africa. The training, which was funded by the Kono.ad Adenauer Stiftung (KAS) in Germany, invited and sponsored the training of Mozambican representatives from the Maputo Municipality, the Mozambican Ministry for the Co-ordination of Environmental Affairs as well as the Maputo Pedagogical University.

KEY WORDS: *Coastal zone protection, environmental education projects, waste management, cemeteries, co-operative governance.*

- **Key Management Concept**

Decision-making with regard to waste management and service provision can often be difficult, especially in light of a general lack of communication and co-operation and a limited environmental budget. This paper, however, demonstrates that improved environmental awareness leads to empowerment and fosters comradeship and partnerships, also between different spheres of



Location: Maputo Local Municipality



Maputo Coastal Line

government (co-operative governance), in order to tackle environmental challenges jointly. Environmental challenges can, therefore, be overcome even with limited capacity through education and awareness raising, communication and co-operation.

- **Programme Name**

The following programmes, projects and initiatives were implemented by the Maputo Municipality:

- Implementing waste management projects at Mavoco and Hulene villages;
- The following environmental education projects are also planned:
- To introduce an environmental subject at secondary schools in Mozambique;
- To introduce an environmental subject at the Pedagogical University in Maputo;
- To establish an Environmental Expertise Centre in Maputo (a High Level Environmental Institute).
- Erosion protection;
- Preparing a cemetery for Bedene and Ndlhavela village (future projects);
- Requalifying the town zones of Maputo (a future project).

- **Programme Goals**

To implement sustainable environmental management projects in the Maputo Municipality's area of jurisdiction.

- **Abstract**

Environmental management initiatives and projects by Maputo Municipality were greatly enriched by the Greener Governance workshops conducted in Potchefstroom, South Africa (2002 – 2004). The municipality was greatly advantaged by the fact that the Mozambican Ministry for the Coordination of Environmental Affairs and the Maputo Pedagogical University were also represented at the training. A partnership was, therefore, established between the



The reality of illegal waste dumping

above mentioned three instances, which resulted in co-operation with regard to Greener Governance and Greener Governance related projects in Maputo Municipality's area of jurisdiction. Projects initiated at the Maputo Municipality were the following: coastal zone protection, environmental education projects, waste recycling projects, the responsible establishment of cemeteries and environmental education projects at school and university level. A High Level Environmental Institute is also planned.

- **Importance of the Issue**

Developing countries experience *legio* challenges in terms of infrastructure, capacity and awareness. However, the example of Maputo Municipality demonstrates that improved environmental awareness can lead to empowerment of people and fosters comradeship and partnerships also between different spheres of government (Co-operative Governance), in order to tackle environmental challenges jointly. Environmental challenges can, therefore, be overcome - even with limited capacity through education and awareness raising, communication and co-operation.

- **Case**

In spite of a 20 year long civil war which caused Mozambique to be considered as one of the poorest countries in the world (as over 60% of the people are living below the poverty line), Mozambique is facing the challenge to rebuild its society and economy and environmental integrity. Maputo (previously called Lourenco Marques) is the capital city of Mozambique and is a key role player in the quest to uplift the country, its inhabitants and its environment. The Maputo Municipality has a 312 km² area of jurisdiction and a population of more than 1 million people.

As a result of the civil war backlog, many challenges face the Mozambique Government as well as the Maputo Municipality. The unemployment rate of Mozambique is extremely high, while the per capita income of Mozambique has been as low as only 90 U.S. dollars (US, 1996). Access to safe drinking water, sanitation, illiteracy, job creation, infrastructure, awareness and training are



Air pollution is one of the environmental challenges in the City of Maputo

but a few problems, not to mention poverty and health care. In spite of the above mentioned backlog, the country has enormous potential with regard to resources, tourism, business and agriculture:

- Natural Resources and the Environment: Mozambique has more development potential than many African countries. Water resources are relatively plentiful and the country is traversed by a number of perennial rivers, including the Zambezi, Limpopo, Save, Pubgue, Lurio and Rovuma. In 1988, internal renewable water resources per capita was 5,350 cubic metres per year.
- One of the country's greatest resources is its abundance of cheap energy, coal reserves, hydroelectric capacity and abundant natural gas reserves. However, energy provision has been poor as the bulk of these resources remain untapped, resulting in rapid environmental degradation.
- The coastline stretches over 2 500 km and the country possesses an abundance of marine resources that are not fully exploited.
- The agricultural potential is high, despite frequent droughts. Historically, Mozambique has been a major producer of cash crops.
- Civil strife and recurrent drought in the hinterlands have resulted in increased migration to urban and coastal areas with adverse environmental consequences, desertification and pollution of surface and coastal waters.
- The port of Maputo is the largest port in Mozambique and is ideally situated because it is the closest port to the industrial heartland of South Africa. Exports from this region include steel products, ferro alloys, coal, chrome ore, etc.

- Portuguese is the official language. Many local African languages such as Tsonga, Sena Nyanja, Makonde and Macua are also spoken.
- The rainy season in this part of Africa occurs between November and April. The end of September/beginning of October is a transition period between dry and rainy seasons and occasional rain may occur.

HIV/AIDS and other challenges:

Women and children are affected by HIV/AIDS in the southern region of Mozambique at more than twice the rate of any other region in the country. If this growth continues, there will be over 210 000 orphans in the southern region in 2010 as a result of the disease, compared with 33 034 orphans in 2000.

Natural disaster challenges:

Natural disasters and severe drought and floods occur in the central and southern provinces periodically, as well as devastating cyclones. Mozambique suffered a major setback in early 2000 as a result of floods and two cyclones that affected the southern provinces of Gaza, Maputo, Inhambane and Sofala. The human impact was extensive, most particularly at the level of rural households. Some 700 people were killed and 500 000 people were displaced, relocating to temporary resettlement camps, many of whom were left destitute by the loss of their homes and productive assets. There was a drop of some 50% of cereal production in Gaza Province and 10 to 15 percent in Inhambane and Maputo Provinces. Widespread flooding occurred again in early 2001, this time affecting nearly 400 000 people in the central provinces and resulting in the evacuation of up to 80 000 people who had been left homeless after the Save river had burst its banks.

- **Case Description (& Lessons Learned)**

- **Introducing an environmental subject at secondary schools in Mozambique and the Pedagogical University in Maputo.**

One of the delegates from Maputo who participated in the Greener Governance training was Dr. Monjane, from the Pedagogical University, who realised the importance of environmental education. After participating in the Greener Governance training, he decided that environmental education is vital - not only for schools but also for higher level training.



The city of Maputo realises the importance of environmental education at school and university level

- **Developing an environmental subject for schools**

In order to create awareness raising opportunities, Dr. Monjane planned on developing an environmental subject for secondary schools in Mozambique. It was decided that an environmental skills would be best integrated into the natural sciences curriculum.

- **Developing environmental education possibilities for universities**

In order to ensure awareness raising and to create environmental opportunities, it was initially planned to develop an environmental subject that can either form part of a specific course such as physics and chemistry, or which can be taken as an additional subject. However, the possibility also exists of establishing a new natural sciences faculty.

- **Establishing an Environmental Expertise Centre in Maputo (a High Level Environmental Institute).**

As a result of the training received from the Greener Governance Workshop in Potchefstroom, South Africa, Dr. Monjane from the Pedagogical University in Maputo was also persuaded on the

importance of environmental expertise as it empowers people to make use of knowledge in decision-making.

Dr. Monjane, therefore, also plans to initiate a Centre of Environmental Expertise in Maputo, which is linked to the Maputo Pedagogical University. It is, therefore, also envisaged that Dr. Monjane will work closely with Prof. Nel from the Centre for Environmental Management in Potchefstroom, as it is also a centre of environmental expertise that is linked to the North-West University, Potchefstroom Campus.

- **Erosion protection (coastal and inland zone).**

The Greener Governance training in Potchefstroom, South Africa, was a key inspiration to delegates of the Maputo Municipality in terms of coastal and inland zone protection, as it was identified as a priority issue to be addressed and to serve as a symbol that Maputo Municipality is “getting its house in order”. Inspired by the Greener Governance workshops, Dutch funding and expertise was obtained and the problem was addressed. The protected coastal and inland zone now serves as a simple and straightforward example of a Greener Governance success story which again illustrates the power of knowledge.

- **Great Maputo Project (supported by Denmark and the Mozambique government).**

The Great Maputo Project, which was initiated in 2003 to address waste management, forestry, industrial and water issues in Matola and Maputo, is also referred to as an Integrated Environmental Plan, and serves as a discussion forum for all environmental matters within the Municipality of Maputo.

The Great Maputo Project, which was funded by Denmark and the Mozambique Government, obtains support and expertise from Denmark and the Mozambique Ministry for the Coordination of

Environmental Affairs. However, as advocated by Ms. Benedito (from the Ministry for the Coordination of Environmental Affairs), the Greener Governance Training received in Potchefstroom is constantly utilised and communicated to the rest of the Ministry for the Coordination of Environmental Affairs and the Maputo Municipality and has greatly influenced the Great Maputo Project, as is demonstrated below:

- **Waste Management (also forming part of the Great Maputo Project)**

The development of national waste regulations motivated Maputo Municipality to prioritise waste planning and management. However, there are a number of challenges, to name but a few: training and awareness raising of the public and waste site employees on waste and sanitation practices, the general lack of waste sites able to handle industrial and hazardous waste and the re-organising of the Maputo waste site.

- **Re-organising the Current Maputo Waste Site**

Inspired by the Greener Governance training in Potchefstroom, this project has helped organise the Maputo waste dump, not only for aesthetic reasons, but also to help facilitate job creation and ensure the control of waste streams which might result in employee hazard-exposure and environmental pollution.

Lights were installed at the Maputo waste site to promote safety at the waste site and a wall was also built around the waste site to keep it enclosed and controlled. Waste sorting and recycling initiatives were also implemented at the Maputo waste site and also at Mavoco and Hulene villages.

Unfortunately, with regard to recycling, the following challenges are experienced throughout Mozambique (according to Ms. Benedito from the Ministry for the Coordination of Environmental Affairs): due to the lack of industrial diversity caused by the recent civil war, it will still take time before glass and paper companies become active again, making current waste recycling initiatives difficult as there is no immediate demand for such materials.

- **Identifying a New Sanitary Waste Site for Maputo**
Due to the current Maputo waste site nearing the end of its lifespan, it has become a priority for the Maputo Municipality to identify a new general waste site that also complies with the new Mozambique waste regulations and to rehabilitate the current Maputo waste site, which is situated within the city. This project is being funded by *inter alia* the following parties: The African Bank, the Mozambique Government and the World Bank.

Lessons Learned

No Hazardous Waste Sites – The Importance of Planning

The Maputo Municipality's area of jurisdiction is currently experiencing a bottle-neck with regard to a shortage of sufficient waste sites to address hazardous waste. Due to a lack of planning, only general waste sites occur, which now are also used to dump hazardous and industrial waste, which enhances the potential of environmental pollution and human exposure to hazardous materials.

No Immediate Replacement for the current Maputo Waste Site

Because of a lack of planning and monitoring, there is no immediate alternative waste site in which to dump

municipal waste when the current Maputo Waste Site is filled up.

Sufficient planning could have prepared Maputo for this situation, and could also have resulted in improved decision-making with regard to the correct placement and impact studies of alternative waste sites.

- o **Preparing of cemeteries for Bedene and Ndlhavela villages (a future project)**

Due to a lack of planning, Maputo is currently experiencing a shortage of cemeteries. Currently, the Maputo Municipality is looking for funding to construct new cemeteries. However, due to the demand in Maputo, the cemeteries at Matola village also have to be utilised by Maputo residents.

The Greener Governance Training received in Potchefstroom, South Africa is currently utilised by delegates of the Maputo Municipality and the Ministry for the Coordination of Environmental Affairs, in order to assist in planning the new cemetery sites.

Lessons Learned

The Importance of Planning

Because of a lack of planning and monitoring, there is no immediate alternative cemetery for the current Maputo Cemetery, which happens to be full. Sufficient planning could have prepared Maputo for this situation and could have assisted in the correct placing and construction of alternative cemeteries to replace the existing cemetery.

The Lack of Communication: The True Cost

Due to the fact that the Maputo cemetery had to be speedily replaced, the Maputo Municipality hastily started with the construction of a new cemetery. However, the Maputo Municipality never consulted new developments in environmental legislation and never communicated with the Ministry for the Co-ordination of Environmental Affairs. This unfortunately resulted in the termination of the new cemetery's construction, as it was being built on a site with a low water table – ultimately resulting in the shortage of cemeteries and the wasting of valuable municipal funds.

The Importance of Co-operative Governance

Due to the co-operation between the Ministry for the Co-operation of Environmental Affairs and the Maputo Local Municipality, much progress has been made with regard to environmental and Greener Governance issues. The unique advantage of Greener Governance training on the Ministry level is that 33 municipalities across Mozambique can be reached.

- **Requalifying the town zones of Maputo (a future project)**

The Maputo Municipality also plans to requalify the town zones of Maputo, and to provide an organised market place and also to upgrade current sanitation services.

- **Results**

- **Waste Management**

Positive Results

Due to the Greener Governance training that was received, the Maputo Municipality is not only more prepared to handle

waste issues, but there is a general sense of cooperation between the Maputo Municipality and the Ministry for the Coordination for Environmental Affairs in the persons of the Greener Governance Delegates.

Apart from governmental partnerships, waste management projects have been implemented at Mavoco and Hulene villages and in Maputo. Although many challenges have been experienced, these projects will also be beneficial to the general environmental awareness of the public, while facilitating job creation and poverty alleviation.

Negative Results

Due to the extreme poverty experienced in the Maputo municipal area, the safety situation at waste sites is problematic because of the presence of scavengers. This situation should be addressed as it inhibits progress with regard to waste projects.

Due to the fact that hazardous waste is disposed together with general waste, the risk of exposure to hazardous material by human receptors and the environment is currently inappropriate.

Challenges

Although the new proposed waste site for the Maputo Municipality's area of jurisdiction will be designed only for general municipal waste, there is currently no alternative site to dump industrial and hazardous waste. Industrial waste is, therefore, currently inappropriately dumped at Mavoco waste dump, which is situated in Matola.

The Importance of Cooperation, Communication and Training

Although the project of identifying a new sanitary waste site is being outsourced to consultancies, the insight gained from the Greener Governance Workshops in Potchefstroom has greatly assisted the coordination and partnership between the Ministry for the Coordination of Environmental Affairs and the Maputo Municipality in order to enhance streamlined decision-making and also to have an enhanced insight on the advantages of responsible development and management, correct design, co-operative governance, out-sourcing services to enhance capacity, obtaining funding and combining sustainability and job creation.

Poverty

Recycling initiatives are challenged by extreme poverty due to the fact that very few objects are disposed of as most objects such as tins and cardboard boxes are all utilised by the community, for instance to build houses. Therefore, people often tend to use the materials themselves rather than render them to be recycled.

o **Erosion Protection**

Positive Results

These visible projects which were inspired by the Greener Governance training received in Potchefstroom, South Africa, benefited everyone in the Maputo Municipal area and have enhanced the sense of place in Maputo because of added aesthetic value and are examples of the “win-win” potential of Greener Governance as the environment matters to all.

Negative Results

In light of extreme poverty, such projects do not necessarily provide long-term employment.

- **The following 4 projects are future projects, and are still being developed:**

1) To Establish an Environmental Expertise Centre in Maputo (A High Level Institute of Environment)

Results

A partnership has already been established with the Centre for Environmental Management of the North-West University in Potchefstroom. It is envisaged that Dr. Monjane will work closely with the Director of the Centre for Environmental Management in Potchefstroom, Prof. Johan Nel, in order to ensure the successful outcome of the Environmental Expertise Centre in Maputo.

2) To Introduce Environmental Education at Secondary Schools and the Pedagogical University in Mozambique

Results

Although an environmental subject has already been successfully implemented at the Pedagogical University in Maputo, secondary school subjects are still in the development phase.

Challenges

The language barrier

Although the Maputo Centre of Expertise will have a major role to play in Mozambique, it will be challenged as a role player in the SADC countries surrounding Mozambique as English is the main language of communication, as opposed to Portuguese. However, such challenges can be bridged.

Funding

The development of the Maputo Centre of Expertise will require many resources, including expertise and partnerships, but will also need to obtain funding.

Developing environmental subjects for secondary schools in Mozambique and the Pedagogical University in Maputo will also require many resources and expertise. It is, therefore, important to obtain funding and establish partnerships.

3) Preparing cemeteries for Bedene and Ndlhavela villages (two future projects)

As stipulated above, Maputo Municipality is currently experiencing a shortage of cemeteries due to a lack of planning. The Greener Governance training received in Potchefstroom, South Africa, is currently utilised by delegates of the Maputo Municipality and the Ministry for the Co-ordination of Environmental Affairs in order to obtain funding and to assist in planning the new cemetery sites.

4) Requalifying the town zones of Maputo (a future project)

In order to enhance service provision, and improve the municipal control of its area of jurisdiction (especially in the City of Maputo), the importance of planning, land use, and development zones were realised and it was decided that the development zones of the City of Maputo be updated (requalified). However, the project has not yet been initiated.

- **Key Replication Aspects**

Staff

In order to increase capacity with regard to Greener Governance issues at the local level, it will remain a priority to train municipal personnel and enhance co-operation and communication.

Funding

Although progress is made with regard to Greener Governance projects, mostly all projects are dependent on external funding – whether from the Mozambique Government or private. Because of the current financial challenges in Mozambique, it is imperative that extensive funding strategies be devised additional to other resources, expertise and partnerships that are required for all prioritised projects in order to ensure their success.

As the above mentioned education projects are not officially part of municipal services, it is imperative that external funding be obtained for these projects.

Budget

Although external funding is obtained for environmentally related projects/initiatives, it should be increasingly supported by an allocated Municipal Greener Governance budget in order to ensure sustainability of the projects and facilitate a sense of achievement and ownership.

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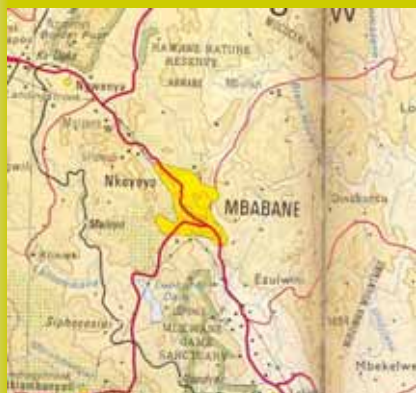
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- Mr Eben le Roux and Mr Joost Lommen

- **Date and place written**

- July 2004, Potchefstroom

Mbabane



Location: The City of Mbabane, Swaziland

- **Full name of the Municipality and Country**

The City of Mbabane is the capital city of the Kingdom of Swaziland.

- **Municipal Profile**

- Population: 65 000
- Land Area: 8 035 ha
- Municipal Budget: US\$ 5 239 703
- Environmental Budget: US\$ 10 479 (0,2% from municipal budget, excluding funds)

- **Issue Addressed**

Environmental programmes as initiated and enriched by the Mbabane Local Municipality as a result of Greener Governance training (2002 – 2004) conducted by the Centre for Environmental Management (CEM) in Potchefstroom, South Africa. The training, which was funded by the Konrad Adenauer Stiftung (KAS) in Germany, invited and sponsored the training of a representative from the City of Mbabane Local Municipality. This paper demonstrates how Greener Governance can make a difference at the local level as it invests in people and motivates communication.

KEY WORDS: *“Environmental Management System”, “Initial Environmental Review”, “Environmental Management System Guidelines”, “Environmental Policy”, “Waste Buy-back Centre”, “Recycling”, “Illegal Dumping”, “Environmental Competition for Local Schools”, “Clean Neighbourhood Competition (Preventing Illegal Dumping)”.*

- **Key Management Concept**

Environmental challenges can be faced at the local level, even with limited capacity, by the education and awareness raising of officials who are often able to transfer inspiration into viable local projects/initiatives. One of the Greener Governance aims is to increase municipal capacity and to strengthen community involvement by means of training.

- **Programme Name**

The Mbabane Local Municipality has initiated a process towards the development of its own Environmental Management System (EMS). The process involved implementing the following projects:

- Carrying out a study aimed at strengthening the existing Environmental Management & Pollution Control (EMPC) section;
- Publishing guidelines for an EMS;
- Drafting an Initial Environmental Review (IER) as well as coming up with a draft City Council of Mbabane Environmental Policy (CCMEP);
- Developing Operational Instructions to minimize environmental impacts for some of the operational municipal sections like the workshops.

- **Programme Goals**

To implement sustainable environmental management projects in the City of Mbabane Municipality's area of jurisdiction.

- **Abstract**

Environmental management initiatives and projects by the City Council of Mbabane were greatly enriched by the Greener Governance workshops conducted in Potchefstroom, South Africa (2002 – 2004). Most of the above mentioned projects that were initiated formed part of a process in order to develop an Environmental Management System (EMS) for the City Council of Mbabane. However, the EMS is not yet operational. Other Greener Governance projects that were initiated by the municipality are the waste buy-back centres (in order to promote recycling and enhance job creation), limiting illegal dumping and arranging environmental awareness competitions for schools.

- **Importance of the Issue**

Developing countries more than often experience challenges with regard to infrastructure, capacity and awareness. However, the example of Mbabane Local Municipality demonstrates how environmental awareness can enhance municipal capacity while empowering people. Partnerships have also been established between the community, organisations and the municipality in order to tackle environmental challenges jointly. Environmental challenges can, therefore, be overcome - even with limited capacity through education and awareness raising, communication and co-operation.

- **Case**

The City of Mbabane is the capital city of Swaziland, which is a landlocked kingdom with a total surface area of 17 364, situated in Southern Africa. The City of Mbabane, which enjoys a temperate climate, is located in Swaziland's highveld and currently has a population of 65 000. Its landscape quality is dramatic and impressive with its mountains, rocky hilltops, scattered boulders, grasslands and steep wooded valleys (Ndlela, 2003).

The City of Mbabane is home to almost all government ministries and departments, as well as most of the diplomatic representatives' offices and head offices for private companies. The two national newspapers are printed in Mbabane, which also houses the headquarters for television and radio broadcasters. Mbabane was developed as a colonial administrative and commercial centre, hence the well-developed core with infrastructure and facilities (Ndlela, 2003).

There are two industrial areas within the city that are linked to all major centres around Southern Africa via an excellent transport route. The city's economy is based mainly on commercial and service related business activity that also serves the government ministries. The city also has excellent service infrastructure, including a cell phone network which covers all major centres in the country. Spatially, the city is divided into 15 wards (City Council of Mbabane, 2003).

The City Council of Mbabane has a Safety, Health and Environment Department that was established in 1995. The Department consists of five sections: Public Health and Social Welfare, Food Safety, Environmental Protection Unit, Laboratory and Sanitation. The department staff consists of six Health Inspectors, a Health Assistant, a Laboratory Technologist, a Laboratory Technician, a Public Health Nurse, a Nursing Assistant and auxiliary staff (City Council of Mbabane, 2003).

The City Council of Mbabane works towards maintaining sufficient general public health standards and ensuring environmental protection in its area of jurisdiction. In order to ensure the successful implementation of its responsibilities, it has also formed a partnership with the municipalities of Nelspruit and Johannesburg, as well as two United States of America municipalities.

- **Case Description**

- *Developing an Environmental Management System (EMS) for the City of Mbabane:*

Influenced by the Greener Governance training in Potchefstroom, South Africa (2002 - 2004), the City Council of Mbabane initiated a process towards the development of its own Environmental Management System (EMS). Various projects were initiated to form part of the EMS development process. These projects will be briefly described and discussed in the paper below. The EMS project envisaged the following objectives, which would also be indicators of success for the project:

- To develop environmental policy;
- To conduct environmental awareness in all sections at the council;
- To conduct a city-wide audit to identify and gather a database on council operational impacts on the environment;
- To remediate the already contaminated sites;
- To agree with concerned sections on the minimisation of impacts and mitigation measures;
- To develop a draft EMS for the individual sections in the municipality.

- *The challenge to retain Greener Governance knowledge:*

One of the major challenges of the Greener Governance training conducted in Potchefstroom, South Africa is for municipalities to retain and be able to utilise Greener Governance information to their advantage. However, it often happens that the delegates that are trained in Greener Governance have to leave their environmentally related posts, taking valuable Greener Governance information with them. This situation is clearly demonstrated in the City of Mbabane, as the former Head of the Environmental Management section at the City Council of Mbabane, Mr Ndlela, has taken up a post as lecturer at the University of Swaziland.

Mr Ndlela was not only trained during the Greener Governance Workshops at Potchefstroom, South Africa but he was also the Head of the Environmental Management section in the City of Mbabane. There was, therefore, a large gap in the City Council of Mbabane in terms of environmental knowledge and expertise, as Mr Ndlela also played a key role in initiating various Greener Governance projects.

However, in the City Council of Mbabane, the above mentioned challenges have also resulted in opportunities. Not only is there a new Head of the Environmental Management section, but the opportunity now also exists, as is demonstrated by the Maputo and Potchefstroom scenario's, to motivate co-operation between the municipality and the University of Swaziland with regard to environmental challenges.

o ***Conducting a draft Initial Environmental Review (IER):***

Initiating an Initial Environmental Review (IER) was seen as imperative for the City Council of Mbabane, in order to ensure the successful implementation of its EMS. According to SANS ISO (1996), an IER can help establish the current position of an organisation with regard to the environment. An IER was, therefore, conducted in order to review the environmental performance of the municipality in terms of the following:

- Existing environmental management and operational practices and procedures;
- Management system elements;
- Existing policies and other guidance arrangements dealing with procurement and contracting arrangements;
- Current environmental performance; and
- Current legal compliance.

Methodology

The review process places emphasis on all the environmental aspects of the municipality and also on determining the significance of these aspects by evaluating the significance of the environmental impacts resulting from the environmental aspects. During the initial environmental review (that also identified interested and affected parties' perspectives), existing environmental practices and *ad hoc* environmental initiatives were identified and site visits and inspections or compliance audits were done.

The techniques used during the IER were the following: to undertake inspections and measurements and to conduct interviews and record reviews.

Mr Ndlela (who participated in the Greener Governance training in Potchefstroom, South Africa) acted as the team leader in the IER, while the staff of the Environmental Management and Pollution Control (EMPC) section served as members of the IER team.

Challenges:

The Lack of Expertise at Local Level

At the time of IER, Mr Ndlela had not yet participated in all the Greener Governance Workshop series and had, therefore, not yet received sufficient training in aspect and impact identification. All areas of the IER could, therefore, not be fully conducted.

- o **Conducting a study aimed at strengthening the existing Environmental Management and Pollution Control (EMPC) section**

The purpose of the Environmental Management and Pollution Control (EMPC) section of the municipality is to promote sound environmental management across all sectors in the municipality in order to ensure that citizens of the city live in a healthy and safe environment. Another function of this section of the municipality is also to ensure industrial commitment to environmental protection by auditing against legal requirements (Ndlela, 2003).

However, one of the issues identified during the above mentioned IER was the poor environmental performance in the city, coupled with limited knowledge of the aspects and impacts of activities, products and services on the environment. It was also realised that there is a lack of an enabling framework for the city in order for it to meet its current needs while maintaining its resources for the benefit of future generations.

In order to improve the above mentioned environmental functions of the municipality and the EMPC, a municipal study was conducted, aimed at strengthening the EMPC section. The importance of clarifying the duty and function of a specific section or department, while prioritising sectional structure and alignment, was seen as being as important as training and awareness raising.

The study included carrying out a "SWOT" analysis (strengths, weaknesses, opportunities, and threats), and using the Torrence Problem Solving Model (a problem-solving technique that encourages creativity in brainstorming and gathering information). Job functions of officials in the EMPC were also translated into effective areas with related indicators and objectives (which were aligned with the mission and objectives of the City Council of Mbabane environmental policy).

- **Publishing guidelines to the City of Mbabane Environmental Management System:** In order to assist municipal officials with regard to the functioning of an EMS, Mr Ndlela decided to develop and publish guidelines for the City of Mbabane EMS. These guidelines assist in supporting the EMS development process in *inter alia* the following ways: to ensure that knowledge regarding the functioning of an EMS be made available to all interested and affected parties and to communicate information and responsibilities inside as well as outside the municipality.
- **Drafting a City Council of Mbabane Environmental Policy (CCMEP):** Inspired by the Greener Governance training in Potchefstroom, South Africa, Mr Ndlela initiated the process towards developing an environmental policy for Mbabane. The process culminated in a draft City Council of Mbabane Environmental Policy (CCMEP), which is a statement of intent that indicates high-level commitment on the part of the City Council of Mbabane to certain environmental principles and ethics that are in line with its public safety key strategic plans.

According to Ndlela (2003), there are at least four reasons why it was important to develop an environmental policy and an EMS for the City Council of Mbabane:

- The municipality could not insist for improved environmental performance (Greener Governance) while it paid little attention to environmental matters;
- Municipal operations impacting negatively on the environment had to be addressed;
- It was realised that there is room for improvement in the current environmental structure;
- The municipality also realised that it has an important role to play as local authority with regard to good environmental practice in leading by example.

Methodology:

A working document was drafted and distributed within the Mbabane Municipality in order to open a discussion on the importance of institutionalising environmental management and Greener Governance in the municipality – referred to by Mr Ndlela as a “bottom-up participatory approach”.

In order to improve environmental performance, the following factors were also taken in consideration for the development of the environmental policy (Ndlela, 2003):

- Adopting a correct organisational structure;
- The training and awareness raising of people;
- Formal environmental and social goals and policies;
- A formal environmental budget;
- Routinely producing annual environmental reports.

Apart from the above mentioned factors that influenced the environmental policy in Mbabane, sources of information that were also used in the development of the draft CCMEP came from the following: results of the draft IER, examples of environmental policy statements of other municipalities, the municipality's strategic plan, national environmental legislation and policies as well as the City of Mbabane EMS guidelines.

Lessons Learned

The Importance of Political Will

Effective environmental management is not possible without sufficient political will. Political backing will also assist in motivating the adoption of an environmental policy in order to help mandate Greener Governance.

Developing Operational Instructions

After the IER, Mr Ndlela helped the City Council of Mbabane to develop specific operational instructions to address (manage) major identified aspects of the municipality that may cause detrimental environmental impacts. Operational instructions were developed mostly for the municipal workshops in order to address *inter alia* the lack of environmental awareness and waste generation.

The Importance of Communicating Environmental Information

An important lesson learned in Mbabane is to communicate Greener Governance information as much as possible in order to ensure its sustainability. An important step in the right direction would be to ensure that the Head of the Environmental Department has an informed deputy that can take over responsibility when needed.

It is also important to note that Greener Governance should be seen as a joint municipal effort and will not succeed if solely driven by one person or by a minority group.

Challenges

Getting the Environmental Policy Adopted and Supported

Unfortunately the policy is still in a draft phase, awaiting amalgamation with the strategic plan of the city and has not been fully adopted by the municipality.

Unfortunately, as supported by Ndlela (2003), the municipality will not be in a position to fulfil its plan of public safety with regard to sound environmental management without the environmental policy, ultimately leading to continuing impacts on the environment due to the failure of operational impacts being addressed. It is, therefore, obvious that Greener Governance objectives (including developing an EMS) will only gain momentum and become mandatory once the environmental policy is implemented or adopted and politically supported by the municipality.

Adopting the Environmental Policy

The environmental policy of the City of Mbabane has still not been implemented after 2 years. However, since a new Head of the Safety, Health and Environment Department has been appointed, challenges such as capacity and political will can hopefully be overcome, leading to more dedication with regard to operational instructions, ultimately also addressing the operational impacts of the following municipal sections: transport, works, property maintenance, parks, environmental management, laboratory, food safety, public health nursing, sanitation, finance, administration, human resources, the city secretary, planning and community development and other sections of the municipality.

The Challenge to Retain Greener Governance Knowledge

One of the major challenges of the Greener Governance training conducted in Potchefstroom, South Africa is for municipalities to retain and be able to utilise Greener Governance information to their advantage. However, it often happens that the delegates that are trained in Greener Governance leave their environmentally related posts, taking valuable Greener Governance information with them. This situation is clearly demonstrated in the City of Mbabane, as the former Head of the Environmental Management section at the City Council of Mbabane, Mr Ndlela, has taken up a post as lecturer at the University of Swaziland.

Mr Ndlela was not only trained during the Greener Governance Workshops at Potchefstroom, South Africa, but he was also the Head of the

Environmental Management section at the City of Mbabane. There was, therefore, a large gap to be filled in the City Council of Mbabane in terms of environmental knowledge and expertise, as Mr Ndlela also played a key role in initiating various Greener Governance projects.

However, in the City Council of Mbabane, the above mentioned challenges have also resulted in opportunities. Not only is there a new Head of the Environmental Management section, but the opportunity now also exists, as is demonstrated by the Maputo and Potchefstroom scenario's, to motivate cooperation between the municipality and the University of Swaziland with regard to environmental challenges.

o **Buy-Back Centres**

One of the major challenges of the City Council of Mbabane is to address the issues of illegal dumping in its area of jurisdiction. Initially, the municipality initiated a campaign against illegal littering and dumping by putting up notice boards in areas where illegal littering and dumping are experienced. However, there was little cooperation from the community, not only due to the fact that transportation to the waste site is a problem, but also because the lack of awareness was coupled with a culture of illegal dumping.

A new recycling system was, therefore, initiated to help persuade the community with financial incentives, while also promoting recycling. Also forming part of the National Solid Waste Management Strategy supported by the Swaziland Environmental Authority and the Danish Government, two waste buy-back centres were developed.

After the above mentioned waste buy-back centres were built by the municipality with funding from the Danish government, a private company centre developed into a profitable business unit, while delivering a service to the community by paying community members a specific rate per kilogram for scrap metal.

Initially, awareness-raising pamphlets were designed and distributed by the municipality in order to encourage residents to utilise the community's buy-back centres. However, once the centres became functional, word spread very quickly in the community, resulting in large-scale support of the recycling initiatives.



Municipal Buy Back Centres: initial awareness raising strategies

The community's response to the waste buy-back incentive was overwhelming, due to the fact that community members, who were once jobless, were now able to generate an income while cleaning up the municipal area of jurisdiction. Waste is minimised due to the fact that recycling is done at the source.

It is envisaged that the following waste related projects will also be initiated: building a hazardous waste site, establishing waste drop-off centres in the city, as well as building waste transfer stations.

Challenge

Although scrap metal is predominantly recycled, paper, tins and plastic are also recycled. However, the scrap metal, as well as the other materials, are sold mostly to companies in South Africa. This means that other materials cannot always be recycled, due to the lack of such companies existing in Swaziland and the fact that exporting materials makes it less profitable.

Lessons Learned

Address the Root Causes, not the Symptoms: One of the reasons for the success of the waste buy-back centres is that financial incentives were implemented to help motivate the community, while also generating an income for waste buy-back companies.

Illegal dumping (the symptom) as a problem cannot be controlled easily. However, by addressing the cause of the symptom (the lack of environmental awareness and training combined with a lack of will), the symptom (illegal dumping) can be addressed. In order to address the root causes of illegal dumping further, such as the lack of transport and municipal capacity problems, it is envisaged that the following waste related projects will also be initiated: establishing waste drop-off centres in the city as well as building waste transfer stations.

- o **Environmental Competition for Local Schools**

In order to raise environmental awareness, the municipality also arranged an environmental competition for schools. However, this paper does not elaborate on the project, as the task team was not able to obtain more information.



Waste sorting at municipal waste site



- **Clean Neighbourhood Competition**

In order to raise environmental awareness and a culture of cleanliness in the community, the municipality also arranged a clean neighbourhood competition.

- **Results**

Negative Results

The lack of progress with regard to environmental management in the City of Mbabane can be attributed to a combination of factors, including a lack of capacity and a lack of ownership and commitment with regard to the above mentioned environmental initiatives, which were mostly driven by one motivated person. Unfortunately, it seems that there was not enough political buy-in, ultimately resulting in friction and a lack of progress.

Positive Results

Although not yet fully functional, the success of the EMS is that it aims to address the root causes of challenges (aspects) and not only address the symptoms (impacts). Both the community and the municipality have benefited by the enhanced communication and environmental awareness, as well as the increased job creation and resulting cleaner environment.

Considering the successes of the above mentioned initiatives, it can be safely said that the Greener Governance training which was received in Potchefstroom, South Africa played a major role in assisting the City Council of Mbabane to address its environmentally related challenges in unique and rewarding ways. The following reward serves as proof of the important contribution that Greener Governance can have in a municipality:

- ***Nelson Mandela International Award***

The City of Mbabane won a prestigious award at the Nelson Mandela Merit International Award for “Practices to Improve The Living Environment” during the 10th Colloquium of Mayors, Chief Executives and Technocrats held in Durban, South Africa. During this event, Mbabane was honoured as one African city that has led the way. Judges of this prestigious award were highly impressed by the way in which the City of Mbabane has changed in the last few years in its management style and service delivery.



Municipal members at a waste sorting station

- **Key Replication Aspects**

- **Staff:** Currently, there are four people working at the Mbabane Safety, Health and Environmental Department. The Department makes use of consultants (service providers) for managing the landfill sites and scrap buy-back centres. In order to improve the current capacity of the municipality, it would be helpful to also establish a partnership of cooperation between the University of Swaziland and the municipality with regard to environmental challenges, as is demonstrated in the Maputo and Potchefstroom case studies.
- **Budget:** In the light of current successes of Greener Governance projects and initiatives, and also to implement the municipal EMS effectively, it would be beneficial for the City Council of Mbabane to build on the current successes of the Safety, Health and Environment Department and enhance the current environmental budget.
- **Financing:** The environmental section should commit itself to establish partnerships with donors and funding agencies in order to obtain increased funding for specific projects and to boost its municipal environmental budget.

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July 2004, Potchefstroom

Mbombela



Location: Mbombela Local Municipality

- **Full name of the Municipality and Country**

Mbombela Local Municipality: Nelspruit, incorporating White River, Rocky's Drift, Hazyview, KaBokweni, kaNyamazane and Matsulu in the Mpumalanga Province, South Africa.

- **Municipal Profile**

○ Population:	2 800 000
○ Mbombela Land Area:	3 451km ²
○ Municipal Budget:	US\$ 72 741 305
○ Environmental Budget:	US\$ 72 036

- **Issue Addressed**

Local Environmental Programmes as initiated in Mbombela Municipality as a result of the Greener Governance training (2002-2004).

KEY WORDS: *Environmental Management System, Environmental Policy, Waste Sorting Station, Community Bakery Project, Community Vegetable Gardening Project, Formalising of Vendor's Stalls.*

- **Key Management Concepts**

Important environmental challenges can be faced at the local level, even with limited capacity, by the education and awareness raising of officials, who are often able to transfer inspiration into viable projects/initiatives on the local level, involving the community. It is often important to avoid re-inventing the wheel and rather to continue building sustainability concepts into existing practices.

Personnel have to be shared with other municipal departments such as the human resources department, limiting capacity and possibly leading to enhanced fragmentation and confusion.

- **Programme Name**

The following projects were initiated by the Mbombela Local Municipality after participation in the Greener Governance Workshop training in Potchefstroom, South Africa (2002-2004):

A Bakery Project was initiated, personnel were trained in environmental management, an Environmental Policy was drafted, the Matsulu Vegetable Gardening Project was enriched and formalised and waste sorting was also initiated. Vendors' stalls were also formalised. It is also envisaged to compile and implement an Integrated Management System (SHE System).

- **Programme Goals**

To implement sustainable environmental management projects at Nelspruit Local Municipality's area of jurisdiction, in order to address socio-economic and ecologic problems and ensure the constitutional right of an environment that is not harmful for health and well-being.

- **Abstract**

Generally, environmental management initiatives in Mbombela Local Municipality were enriched and improved by the Greener Governance message. Sustainability concepts and principles were, therefore, used to enrich and inspire existing and new projects. Challenges that Mbombela Local Municipality face within its area of jurisdiction include the following: a lack of environmental education and awareness, fragmentation and the lack of a dedicated environmental department as resources and personnel are shared with other departments. Projects that were initiated and improved after the Greener Governance Workshops in Potchefstroom, South Africa were the following: The KaBokweni Bakery Project, the Matsulu Vegetable Gardening Project, Waste Sorting, the Formalising of Vendor's Stalls,

the drafting of an Environmental Policy and the compiling and implementing of an Integrated Management System (SHE System).

- **Importance of the Issue**

Local municipalities in South Africa have legal obligations in terms of the South African Constitution (Act 108 of 1996, Section 24) to deliver sufficient services and ensure an environment that is not harmful to people in its area of jurisdiction, while promoting sustainable development objectives and poverty alleviation. The challenge is, therefore, to meet development objectives responsibly, while also addressing socio-economic and ecologic problems.

The Mbombela Local Municipality demonstrates that improved environmental awareness can lead to empowerment of people and fosters comradeship and partnerships between different spheres of government also (Co-operative Governance), in order to tackle environmental challenges jointly. Environmental challenges can, therefore, be overcome - even with limited capacity - through education and awareness raising, communication and co-operation.

- **Case**

The Mbombela Local Municipality is situated in the north-eastern part of South Africa, in an area also known as the "Lowveld". The landscape, which forms part of the eastern part of the "Drakensberg" escarpment, is dotted with granite hills and fertile valleys. To the east, Mbombela Local Municipality is bordered by the "Kruger National Park", which is the single largest nature conservation area in the country. The city of Nelspruit is the capital of Mpumalanga Province and the seat of the provincial government and is also the main service centre of the region. The area south of Nelspruit is the second largest citrus producing area in South Africa and is responsible for one third of the country's export of oranges (Mbombela Local Municipality, 2004).

The western area incorporates the timber industry and Africa's biggest pulp and paper mill is a landmark on the Maputo corridor, a major transport axis that stretches from Gauteng Province to the



A municipal liability: seepage from the municipal waste site to surrounding agricultural areas

harbour city of Maputo in Mozambique. Popular tourist areas, known for their interesting turn of the century gold mining history, are situated north-west of Mbombela Local Municipality. The north includes the town of Hazyview and one of the biggest banana and subtropical fruit production areas in the country. The south-eastern parts are home to rural settlements renowned for their unique culture and craftsmanship. The Mbombela Local Municipality's population (approximately 560 000) is a fascinating mix of different cultures and traditions - the main languages being siSwati, Afrikaans, English and sign language. Numerous game lodges, hotels, conference centres, guesthouses and game reserves are included in the area. The fertile valleys are used primarily for agriculture and growing of vegetables, tobacco, nuts, sugarcane, oranges and other subtropical fruits (Mbombela Local Municipality, 2004).

In order to understand the existing and future role of Mbombela Local Municipality within this environment the following development indicators are highlighted:

- The Mbombela Local Municipality has a GGP valued at approximately US\$ 1.2 billion which makes up 12% of the total GGP of US\$ 8.5 billion for Mpumalanga and 60% of the total GGP of US\$ 1.7 billion of the Ehlanzeni District (Mbombela Local Municipality, 2004).
- The Mbombela economy is vested in manufacturing, trade and catering, finance, real estate and government;
- The total economic growth is 2.8% per annum, which is more than the provincial and national growth.

However, in order to provide in the needs of its population with regard to employment, it is important for Mbombela Local Municipality to sustain and enhance its economic performance. This phenomenon is demonstrated by the high growth in population that exceeds the GGP growth: a population growth rate of approximately 4% is currently experienced.

Poverty in Mbombela Local Municipality occurs within certain geographical and racial boundaries. According to Mbombela Local Municipality (2004), the poverty indicators reveal the following:

- Very low income levels are experienced, varying between US\$ 1 599 and US\$ 2 376 per annum representing the eastern part of Mbombela Local Municipality;
- High unemployment levels are experienced in some areas and vary from 32% to 41%;
- 38% of the mainly black population is illiterate; and
- Mpumalanga Province continues to have one of the highest occurrences of HIV/AIDS in the country. Ehlanzeni District has an estimated 31% HIV/AIDS incidences.

It is, therefore, imperative that local economic development actions and initiatives of the public sector, the private sector and communities join hands in order to address the above mentioned challenges to achieve sustainable development.

- **Case Description**

Prior to the Greener Governance Workshops in Potchefstroom, environmental awareness was minimal. However, the Greener Governance concept has had significant political buy-in and has gained support in the Mbombela Local Municipality. The successful adoption of the Greener Governance message can be attributed to the fact that Mbombela Local Municipality participants were motivated and committed to implement the concept in Mbombela. A Municipal Council decision supported the Greener Governance concept. Further introductory environmental training was received from the Centre for Environmental Management in Potchefstroom, South Africa. The training assisted in creating awareness among participating officials of the extent of local municipalities' responsibility as sphere of government closest to the people and their environment. The following projects were enriched/initiated by the Greener Governance Workshops:



A vegetable garden at the Matsula school



The Matsulu vegetable gardening project – a community job and income generation project



The Matsulu vegetable gardening project

The KaBokweni Bakery Project: This project was been initiated by a group of women in the KaBokweni village in order to help support the local school. The bakery, which is situated opposite the school, exchanges the baked bread for vegetables grown by the school in the school peace garden. The vegetables are then sold to the community in order to pay for the bread that is baked.

After participation in the Greener Governance Workshops, the Mbombela Local Municipality decided to help formalise the informal set up of the bakery. A Pty company was formed and all employees became associates of the company. Swedish funding was obtained to help train employees at the bakery and to assist the bakery to meet demands. The idea of obtaining sponsorship was obtained from the Greener Governance Workshops.

The Matsulu Vegetable Gardening Project: The Matsulu community initiated this project in order to help address socio-economic challenges such as health and well-being, caused *inter alia* by the lack of employment and food shortages. The objective of the vegetable gardening project was to cultivate food and generate an income for the community.

The project consists of 30 small businesses – each with an average of 3 own employees, adding to a total of 90 people participating in the Matsulu vegetable gardening project. The local community is the main stakeholder and initiator of the project, especially the jobless and poor people.

- **Funding:** Local nurseries and industries supported the project, either by funding or supporting the project financially, or by donating vegetable and fruit plants.
- **Use of Consultants:** Consultants were not used. However, once the project expands beyond its current status, consultant help

would be obtained to help design, formalise and improve current farming methodologies through sufficient facilitation with the community.

Although jobs have been created, the community is still vulnerable to natural disasters such as flooding and drought. Another problem could be the potential for fraud, as a middle man sells the vegetables and the money generated by the selling of the vegetables is used to buy food, with which the vegetable farmers are paid.

After participation in the Greener Governance Workshops, the Mbombela Local Municipality decided to provide assistance to the community with regard to the gardening project as a contribution to its Greener Governance repertoire. The municipality, therefore, increasingly helps with the formalisation of the project and in assisting in arranging for funding and sponsorships (for example, industries and nurseries have sponsored seeds and plants to be cultivated).

Waste Sorting: This recycling initiative which started in 2002, currently employs 10 people. The objective of this project was to formalise and control waste sorting on the municipal waste site and to eliminate scavenging and its associated socio-economic problems. Access to the waste site is, therefore, controlled and the 10 people sorting the waste are registered as formal employees of the municipality, receiving monthly salaries and have received formal training in basic safety.

Waste is sorted on the municipal waste site as it is dumped. Paper, glass, tin and scrap metal are sorted and weighed. The waste is then collected by waste-collection companies that pay a certain amount per kilogram for different types of waste.



Paper sorted at the waste sorting station



Waste sorting: hazardous chemicals may pose serious health and safety threats

Challenges: Occupational exposure to illegally-dumped hazardous chemicals as well as containers of hazardous chemicals.

Generating an Environmental Policy: As a result of the Greener Governance training, the importance of an environmental policy as a mandated framework through which effective environmental management can take place was realised. The Mbombela Local Municipality's Environmental Policy was developed in 2002, specifically also to provide a framework through which each directorate could be legally compliant with relevant environmental legislation.

Compiling and Implementing an Integrated Management System (SHE System): An important inspiration of the Greener Governance training was that the Mbombela Local Municipality should implement an Environmental Management System (EMS) in order to ensure improved communication, co-operation and prioritisation with regard to environmental management and Greener Governance. In the long term, however, it is envisaged that the EMS be upgraded into an integrated management system that would integrate environment, safety, health, risk and quality management issues, therefore combining ISO 18001, ISO 14001 and ISO 9001.



A municipal waste transfer station

A draft environmental policy for the municipality has been drawn up, as described above, which makes provision for a management system based on ISO 14001. However, although the policy is already effective, the management system is not yet ready to be implemented as a result of a shortage of capacity and training.

- ***Modus operandi:*** A consultant will be appointed in the initial stages of the EMS in order to provide training and develop operational procedures (2004 – 2005). However, it is envisaged that the municipality should take control of the EMS after implementation by the consultant (2006). The EMS would then

gradually be phased into an integrated management system in order to address (regulate, manage and monitor) the range of responsibilities to be addressed by the Mbombela Local Municipality more sufficiently - specifically as environmental issues are addressed through the Safety, Health and Environment Department.

- o ***Lessons Learned***

The importance of public participation: The lack of sufficient public participation which has often been labelled “the Apartheid Syndrome”, is very visible in the refusal of the community to utilise a taxi rank built by the previous government in South Africa. The contrast between this approach and the “Formalising of the Vendors’ Stalls” project (see the description above) is very visible, as well as the Tzaneen example where a taxi rank and vendors’ stalls were successfully formalised using an open, participatory approach.

The importance of legal compliance: The importance of legal compliance in terms of waste site feasibility and management was clearly demonstrated by the fact that the current Mbombela Local Municipality waste site, which dates back to the early 1980’s, did not undergo a thorough site assessment as it was constructed in the days prior to impact assessments. It is possibly causing leachate seepage into the Gladdespruit, irrigation canal and groundwater, with a possible threat of *inter alia* E.coli and heavy metal contamination to fruit tree farms in the surrounding vicinity, and to people who use the Gladdespruit Dam for drinking water. Although the importance of sufficient site assessment and legal compliance is realised, the importance of rehabilitation of the current waste site must also be realised.

Strengthening relationships with “untouchable” traditional authorities: The municipality also has a unique situation in that there is existing conflict between the traditional and political authorities in the area, where chieftains regularly give permission

to people to develop areas of land without municipal consultation, whereafter occupants of the new settlements usually apply for and expect municipal services to be provided.

It is, therefore, imperative that the Mbombela Local Municipality embark on a road to reconcile relationships with traditional authorities in the area in order to establish co-operation with regard to development and environmental challenges, as well as service provision.

- **Results**

Positive: In having contributed to the formalisation of community projects, the Mbombela Local Municipality has not only improved environmental awareness and education in its area of jurisdiction, but has also contributed to job creation initiatives and economic empowerment, while promoting sustainable practices. Due to the fact that there is a general improvement in environmental consciousness, municipal services have improved and diversified (for example, including recycling and the buying back of waste), as less waste is produced and pollution is being minimised, having a positive impact on health.

Negative: Although more formal jobs have been created, this may lead to nepotism (advantaging specific people) and also socialism, with a resultant lack in motivation. Due to the fact that jobs were formalised, many people such as waste site scavengers are now jobless and without livelihoods.

Municipal services have diversified to include Greener Governance initiatives - however, this could also have a negative effect on municipal capacity because of diverted attention.

- **Key Replication Aspects**

- **Training:** In general, education and awareness challenges within Mbombela Local Municipality have to be addressed, as well as the lack of dedication and co-operation with regard to



Vendors can now enjoy a formalised setting to sell their products, providing pride and accessibility

environmental issues. Environmental training and study opportunities are available for internal training. Thirty staff members from all municipal departments are trained in environmental awareness, improving prioritisation and co-operation with regard to Greener Governance issues. Unfortunately, however, only senior people are involved in Greener Governance or environmental management related training and decision-making. Individuals on lower levels are not involved and have mostly not been exposed to the Greener Governance paradigm.

It is, therefore, imperative that training be provided for all levels of the municipality, in order to facilitate understanding and cooperation. Implementing the EMS at the Mbombela Local Municipality will, however, assist in providing training and awareness.

- **Staff:** Although a Safety, Health and Environment Department exists, personnel are unfortunately shared with other municipal departments. A dedicated, co-ordinating environmental section or department established within Mbombela Local Municipality will address the issue of sharing personnel and it will increase capacity with regard to Greener Governance issues.
- **Budget:** The Mbombela Local Municipality has prepared a limited education budget for 2005. Unfortunately, the municipal budget for environmental issues is relatively small. Due to the fact that there is no dedicated environmental department, the environmental budget is inconsistent as municipal funding is directed through a Skills Development Plan, after which it is made available to priority areas. Therefore, no official environmental budget is allocated, which could result in *inter alia* the following: the lack of appropriate planning, the lack of addressing priority environmental issues and the lack of addressing disaster management. It is, therefore, imperative that a co-ordinating department be

responsible for prioritising Greener Governance or environmental management in the municipality.

- **Financing:** Funding for current environmental training has been obtained from the Norwegian government. Due to the fact that the municipality only has a limited environmental budget, obtaining sponsorship is seen as an important replication factor for Greener Governance related projects and initiatives.

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- July 2004, Potchefstroom

Potchefstroom



Location: Potchefstroom Local Council

- **Full name of the Municipality and Country**

Potchefstroom Local Council, North-West Province, South Africa

- **Municipal Profile**

- Population: +/- 125 000
- Land Area: +/- 3 040 ha
- Municipal Budget: US\$ 8 927 749-00
- Environmental Budget: US\$ 281 868-00

- **Issue Addressed**

Local Environmental Programmes as initiated in the Potchefstroom Local Council area as a Result of Greener Governance Training (2002-2004).

KEY WORDS: *Green Building, Implementation of SAEDES Guidelines, Environmental By-Laws, CCP (Cities for Climate Change Project).*

- **Key Management Concept**

It takes effort to improve, change and re-invent in a sustainable way when a local authority already has incorporated and adopted an environmental-friendly approach in its governance. The Potchefstroom Local Municipality serves as evidence that a local authority's potential to improve its way of governance never subsides. This local authority, in its Greener Governance endeavours over the past couple of years, showed that sustainable development is an ongoing process that requires continual improvement.

Most of the building structures in South Africa are not well insulated and utilize excessive energy. Equipment in these buildings is worn-out and leakages contribute to pollution that has an obvious negative impact on the environment (Potchefstroom Policy: SAEDES Guideline Standards for all new buildings in Potchefstroom). Generally managements are not too concerned about environmental impact, but it may be addressed by incorporating minimum building requirements and by utilising a building permit or



Potchefstroom Tourist Bureau

authorisation system, based on standard building requirements. In order for local authorities to contribute to the strengthening and extension of the national and provincial legislatures' endeavours to put an environmental regulatory framework in place, local by-laws should be enacted. The enacting of by-laws requires *inter alia* the identification of key issues to be addressed and the involvement and inputs of all affected stakeholders (Report on the Generating of Environmental By-Laws for the Potchefstroom City Council, 2003). The Greening of Governance includes the setting of an example by local authorities themselves. The Potchefstroom Local Municipality decided as far back as 1995 to focus on the greenhouse gases (GHG's) emitted by the Council, as well as the energy used by the local authority. In setting an example that started at 'home', the Potchefstroom Local Municipality laid a good foundation in advance for the implementation and promotion of the local Greener Governance principles that were launched in 2002.



Plan: Green Building of Potchefstroom Local Authority

- **Programme Name**

Together with several other projects aimed at greening their governance at the local level, the Potchefstroom Local Council implemented three Greener Governance-related projects:

- Implementation of SAEDES Guideline Standards for all New Buildings Project;
- Development of Environmental Bylaws Project; and
- The CCP (Cities for Climate Protection) Project.

- **Programme Goals**

Implementation of SAEDES Guideline Standards for all New Buildings Project: Part of the greening of governance, is the greening of Potchefstroom's buildings. This project accordingly aims to promote the building of environmental friendly buildings that are purposefully designed to reduce both the direct and indirect environmental consequences associated with their construction, occupation, operation, maintenance and eventual decommissioning (Policy: SAEDES Guideline Standards for all new buildings in Potchefstroom). The goal of this programme is to provide environmental benefits now and in the future by reducing the need for resources and energy. The project *inter alia* aims to implement a local policy that promotes resource conservation, that considers environmental impacts and waste minimisation, that reduces operation and maintenance costs and that addresses issues such as historical preservation. The main objective is to reduce the energy demand and consumption of all fuel sources within the existing and new commercial buildings in Potchefstroom. This is to render

the environment clean of all emissions and pollutants due to the results of equipment utilised.

Development of Environmental Bylaws Project: Since local government is the sphere of governance closest to the people and environmental issues, this project aimed to generate appropriate by-laws for the Potchefstroom City Council to ensure that the local authority can administer the affairs of this community regarding the environment effectively (Report on the Generating of Environmental By-Laws for the Potchefstroom City Council, 2003). The Potchefstroom Local Municipal Council aims to comply with its constitutional and national legislative obligation to promote a safe and healthy environment.

Overarching CCP (Cities for Climate Protection) Project: Since Potchefstroom is not shielded from environmental degradation or the potential impacts of climate change, this project consists of several sub-projects that aim to reduce GHG emissions ultimately in the city of Potchefstroom. This reduction will improve the general health of all citizens and will contribute to responsible environmental management. The goal is to control the City Council's emissions, rather than doing nothing at all with regard to GHG emissions, as it is very difficult to control or influence the community's emissions and energy usage.

- **Abstract**

Implementation of SAEDES Guideline Standards for all New Buildings Project: Based on the principles that environmental management must put people and their needs at the forefront, must serve people's interests fairly and that development must be socially, environmentally and economically sustainable, Potchefstroom adopted a policy for the implementation of SAEDES Guideline Standards for all new buildings in the city. This project boils down to the fact that all new buildings in Potchefstroom should be planned, developed and built in such a way as to comply with the minimum standards for a 'Green Building' as laid down by the South Africa Energy and Demand Efficiency Standards. The Potchefstroom Local Municipality endeavoured this project mainly because green building practices offer an opportunity to create environmentally sound and resource-efficient buildings by using an integrated approach to design. The entire-life-cycle of the building is considered, as well as the economic and environmental impact and performance. In line with the requirements of SAEDES, the development and building of all new buildings in Potchefstroom will have to include a consideration of the effects of the buildings' design, selection of equipment



Green Building: Building

and systems within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, must also be considered (Potchefstroom Policy: SAEDES Guideline Standards for all new buildings in Potchefstroom). In addition, the project entails that by erecting or modifying any new and existing buildings respectively, Potchefstroom developers will have to ensure that such buildings are adequately comprehensible, flexible, attractive to work, easy to understand, easily adaptable to any climate and very practical. The first 'Green Building' in Potchefstroom, the environmentally sensitive Council Chamber, was inaugurated in January 2003.



**North-West University,
Potchefstroom Campus**

Development of Environmental Bylaws Project: In 2003, the City Council of Potchefstroom requested the CEM to generate draft by-laws that will ensure the administration of environmental affairs within the jurisdiction of the local authority. The primary aim was to generate by-laws to ensure that the council can administer the affairs of its community regarding the environment effectively. This project was a collaborative endeavour of the local authority, the CEM and the North-West University's Faculty of Law. For a period of approximately eight months, three spheres of teams were appointed for the identification, writing and review procedures that would have to be followed. On 27 November 2003, a technical report was delivered as well as the final draft by-laws on Scheduled and Offensive Trade; Air Quality; Biodiversity; Waste Management; Filling stations and Water Management respectively.

Overarching CCP (Cities for Climate Protection) Project: The City of Potchefstroom, South Africa joined the Cities for Climate Protection (CCP) Programme of the International Council for Local Environmental Initiatives (ICLEI) in 2001. This programme is a performance-oriented campaign that offers local governments a framework for developing a strategic agenda to reduce their GHG and air pollution emissions, with the added benefit of improving living conditions of local communities. The CCP Programme provides local governments with a framework, helping them to identify their GHG emissions, set reduction targets and develop and implement action plans to reach their targets. The CCP measures adopted by the City of Potchefstroom include the design and construction of energy efficient buildings in the city, a tree planting project to sequester CO₂, the upgrading of streetlights with High Pressure Sodium (HPS) and Mercury Vapour (MV) light emitters, the recovery of methane from the sewage purification works and the retrofitting of the airport runway and taxiway. In 2003, the adoption and implementation of this programme (details of which



are discussed below) resulted in a reduction of its CO₂ footprint by 39.8% (Greenhouse Gas Inventory and Report on Greenhouse Gas Savings made by the City of Potchefstroom, South Africa, 2002).

- **Importance of the Issue**

As a result of factors that are detrimental to the environment, such as global warming, rising sea levels, elevated temperature and alteration in oceanic salinity, local governments globally cannot afford to stand oblivious towards international reversing endeavours. In 1997, the Third Conference of the Parties to the United Nations Framework Convention on Climate Change was held in Kyoto, Japan. At this event, 160 countries reached an agreement, whereby the world's developed countries collectively pledged to reduce their GHG to an average of at least 5.2% below 1990 levels, in the commitment period 2008-2012. South Africa acceded to the Kyoto Protocol in the beginning of 2002. The City of Potchefstroom joined the Cities for Climate Protection (CCP) and from this project stemmed, *inter alia*, the Implementation of SAEDES Guideline Standards for all New Buildings Project. The City of Potchefstroom adheres to its Local Agenda 21 obligations by implementing and enacting local by-laws to regulate, control and manage environmental problems effectively. Nationally and internationally, environmental law can only be of practical use when co-operatively incorporated and applied at the national, provincial and local spheres of government.

Recently, some local governments made valiant attempts to move in the direction of fulfilling their legal responsibilities not only by enforcing environmental legislation but also by adhering to applicable legislation. Furthermore, there is the tendency by local governments to update and review current by-laws and issue new by-laws to meet modern environmental challenges. (Strengthening Co-Operative Governance by Improving Environmental By-Laws - A Potchefstroom Case Study.)

- **Case**

The City of Potchefstroom has been the host city of the six Greener Governance workshops and is situated along the N12 tourism route, between the Gauteng Province and Kimberley in the Northern Cape Province and covers an area of 25 076.55 km². The city is well situated on the main route to Cape Town, Namibia and Botswana. Potchefstroom is 145km (1 ¼ hours) from Johannesburg International Airport and is on the main railway line to the provinces of the Northern and Western Cape. The city has a local airfield which used to be an air force base and which is now managed by the

Potchefstroom City Council. It can accommodate the landing of larger aircraft.

Potchefstroom is a medium sized city, which is located in a peaceful, safe environment. It is 1 343 metres above sea level. Potchefstroom has ample and well-developed residential areas and delivers sustainable services to its residents at affordable tariffs. The City's differentiated economic base sustains a positive economic growth, whilst the existing well-developed infrastructure and abundance of water and electricity supply, offer opportunities for growing dividends to interested investors.

Potchefstroom is an important industrial growth point of the North West Province. This is evident from, for example, the post-industrial houses and steel, food and chemical industries, which concentrate on delivering locally, nationally and internationally. Prominent contributors to the economy of the study area are the industrial and agricultural sector, tertiary institutions and government offices. Main agricultural activities comprise largely of sorghum, maize, sunflower, groundnuts and mixed livestock, poultry and game farming (Potchefstroom City Council Integrated Development Plan, 2002 – 2005 27). Potchefstroom is the home of the Potchefstroom campus of the newly established North-West University. The Centre for Environmental Management (CEM) operates as a centre of excellence within the infrastructure of the university. Potchefstroom offers a very high level of secondary and tertiary education as it houses 74 schools and several tertiary institutions.

In a socio-economic sense, the most critical issues of Potchefstroom include the high level of urbanization and the growing number of unemployed people (which require additional employment opportunities); the high number of people with no schooling; the 40% of households living below the minimum standards of living and the high prevalence rate of HIV infection (Potchefstroom City Council Integrated Development Plan, 2002 –2005 27).

As far as the environment and the Greening of its Governance are concerned, Potchefstroom differentiates itself from many of the medium-sized cities in South Africa and the SADC region. The Potchefstroom Local Council in 2002, for example, appointed the CEM to complete an Integrated Environmental Programme (IEP) for the city, which is a requirement for all local municipalities in terms of the Integrated Development Planning Process (IDP). The purpose of this IEP is to ensure that environmental aspects are integrated effectively with the development planning outcomes of the IDP

Process. The IEP addresses environmental issues as identified in the IDP and these were transformed into twelve strategies, for example, the formulation of an Integrated Water Management Strategy (IWMS); a strategy for the handling of hazardous substances and an integrated conservation strategy. In addition, the city joined the Cities for Climate Protection (CCP) Programme of the International Council for Local Environmental Initiatives (ICLEI) in 2001. This programme is a performance-oriented campaign that offers local governments a framework for developing a strategic agenda to *inter alia* reduce their air pollution emissions, with the added benefit of improving living conditions of local residents. Mr M. Roopa, Director: Health and Environment of the Potchefstroom Local Council is currently also taking the lead in the establishment of a Greener Governance forum within the ICLEI structure.

The environmental issues of concern, according to the Potchefstroom City Council Integrated Development Plan, 2002 –2005, include the effective management of municipal by-laws and the council's legal mandate, co-governance arrangements, the council's environmental performance monitoring capacity, legal compliance to environmental legislation, energy efficiency, greener procurement and materials, greener fleet management, waste management, pro-active environmental education, the conservation of *inter alia* cultural heritage and biodiversity and the improvement of water related services.

- **Case Description (& Lessons Learned)**

Implementation of SAEDES Guideline Standards for all New Buildings

Project: Sustainable development as key focus in aiming at the Greening of Governance at the local level, comprises much more than only protecting the obvious natural resources. The SAEDES Standards for all new buildings introduced a building envelope, equipment, systems for heating and ventilating, air conditioning, service water heating, energy distribution, lighting, renewable energy sources and comparative and evaluative prescriptive elements, etc. The Standard provides, among others, minimum new building and equipment design requirements, methods for energy surveys, guidance for operation and maintenance and education and training protocol.

When the above information and details surrounding the South African Department of Minerals and Energy's concern about the impacts of energy on both indoor and outdoor environment were laid before the Potchefstroom Local Municipal Council, it was decided that all new commercial,

governmental and educational buildings in Potchefstroom should comply with the SAEDES Standard (households excluded), that the owners of existing buildings be encouraged to comply with the Standard, that all new and existing house owners be encouraged to comply with the SAEDES standards and that a copy of the complete SAEDES Standard Guideline document be made available for comment by the public.

One of the aims of the listed projects as contained in the Greenhouse Gas Inventory and Savings Report for Potchefstroom, South Africa, 2002, is the launch of an energy efficient building project. Resulting from *inter alia* the Greener Governance training on indoor air quality by Lam Kok, this project for Greening the Buildings of Potchefstroom became a reality with local commercial building owners, private residents of Potchefstroom and the Local Municipality on board. The main objectives of the project are to reduce energy demand and consumption of all fuel sources within the existing and new commercial buildings in Potchefstroom and to render the environment clean of all emissions and pollutants due to the results of equipment utilised. The Local Municipality anticipates that this project will finally result in the reduction of ozone depletion and global warming, reduction in pollution from power stations, reduction in pollution from worn-out equipment and old commercial buildings and the use of energy in a sustainable manner.

Development of Environmental By-laws Project: The generation of new environmental by-laws for the Potchefstroom City Council was identified as a key project in support of the Integrated Development Plan (IDP) process during a legal compliance audit in 2002. In April 2003 the Potchefstroom City Council, the Centre for Environmental Management and the Faculty of Law of the North-West University, Potchefstroom Campus, embarked on a joint venture of writing new environmental by-laws for the City of Potchefstroom. The final draft by-laws were delivered to the City Council on 27 November 2003.

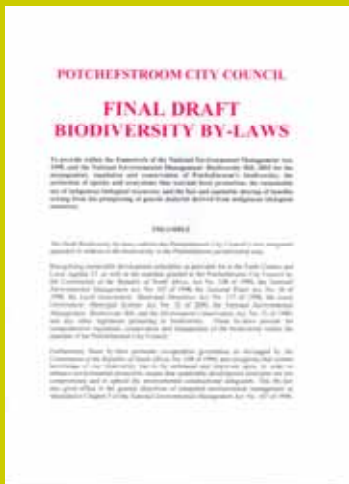
The governance function at the local level involves three aspects. These are the development of environmentally related legislation at the local level, an executive mandate to implement legislative arrangements and a law enforcement function. Their legal compliance audit of 2002 clearly showed that the Potchefstroom Local Council needed to improve their governance function so as to improve its ability to meet its constitutional and other legal duties. This need then culminated in a by-law generating project for the Potchefstroom City Council. The project was a joint venture between the CEM, the Faculty of Law and the local authority. In order to ensure the



Environmental By-law Project

successful identification of all the relevant issues addressed in the by-laws and the successful delivery of the by-laws, three spheres of teams were identified. These teams were the Steering Committee (responsible for overall regulation of the project) the Task Team (responsible for the general and practical co-ordination of the project), and a Working Group (responsible for the identification of relevant issues that were included in the by-laws and review) for each identified by-law.

An important step in the project was the determination of the scope of the by-laws. Five topics were identified and by-laws were drafted for Scheduled and Offensive Trades, Air Quality, Biodiversity, Waste Management and Water Management respectively.



Environmental By-law project

The project consisted of two distinct phases. The planning phase required the identification of a task team, research and meetings between the Centre for Environmental Management, the Faculty of Law and the Potchefstroom City Council. The research consisted of an evaluation of existing environmental legislation to determine the legal mandate of the project, recent developments and best practices in South Africa as well as the current situation in Potchefstroom (Report on the Generating of Environmental By-laws for the Potchefstroom City Council, 2003). In the implementation phase, an important workshop was held to identify the scope of the project, working groups responsible for identifying the issues and the delivery date of the final draft by-laws. Furthermore, the steering committee and task team held a feedback meeting where the identified issues were prioritised. The project duration was approximately eight months.

The lessons learned from this project include the fact that the success thereof strongly depends on the establishment of a skilled partnership. The writing of environmental by-laws may, accordingly, not be as simple in a city without skilled university personnel and an environmental centre of excellence such as the CEM. It should also be said that a local government risks losing ownership when not participating actively in the process of drafting by-laws. In order for councillors and municipal officials to understand and contribute fully to the by-law drafting process, environmental management concepts should be explained from the outset of such a project. Another important lesson is that effort should go into marketing and publicising the by-law drafting process so as to involve the community through public participation processes. Only one self-invited person attended a public workshop that was held in Potchefstroom, not to return again.



ICLEI: CCP Programme

Overarching CCP Project: Energy demands in the rapidly growing cities of the developing world are set to soar (Greenhouse Gas Inventory and Report on Greenhouse Savings, 2002 7). Potchefstroom may be regarded as a growing city exposed to this danger. Increases in national, provincial and local energy needs will have devastating environmental impacts as illustrated by the ecological footprint of generating one kWh of electricity in South Africa (Eskom, 2000). One of the more elegant strategies to reduce Greenhouse Gas (GHG) emissions generated by cities is to improve energy efficiencies of facilities and activities that are either controlled, or influenced by local authorities (Sullivan, 1991).

In light of the above, the City of Potchefstroom joined the Cities for Climate Protection (CCP) Programme in 2001. This programme is a performance-oriented campaign that offers local governments a framework for developing a strategic agenda to reduce their GHG and air pollution emissions, with the added benefit of improving the living conditions of local communities. The CCP Programme provides local governments with a milestone framework, helping them to identify their GHG emissions, set reduction targets and develop and implement action plans to reach their targets.

One of the corner stones of any city's CCP programme is improvement in energy efficiency rates (Greenhouse Gas Inventory and Report on Greenhouse Gas Savings made by the City of Potchefstroom, South Africa, 2002). Being part of the international CCP endeavour and later supported by the idea and principles of Greener Governance, the City Council of Potchefstroom decided to focus on the GHG's emitted by the City Council, as well as its energy used. The reason why only a particular component of the city structure was decided upon for the purpose of this project, is that it is easier to control or influence the City Council and its activities than the community's emissions and energy usage. The largest contributor to GHG emission from the City Council is electricity used by different facilities owned by the City Council and the second largest, emissions from the sewage purification works. As part of its endeavour to reduce GHG emission, the City Council of Potchefstroom set an emissions reduction target for the year 2012. The chosen reduction target decided on by the City Council was 10% and in order to meet this target, the city had to draft a Climate Change Action Plan. This is a proposal for how the city can take matters into own hands in order to reduce GHG emissions in Potchefstroom.

As part of this Action Plan, the Potchefstroom Local Council identified a number of projects that are aimed at reducing its contribution to GHG emissions. Some of the projects ensure improvements in energy efficiencies of various facilities while others ensure reductions in GHG levels by means of CO₂ sequestration, as well as reductions in emissions of CO₂ equivalents by means of methane recovery. The energy efficiency projects *inter alia* include improvements in energy efficiencies by means of energy efficient building projects (also to be reported on as part of this case study), continued upgrading of Potchefstroom's streetlights, a green fleet management project and a green procurement project.

Two projects have been identified to improve the energy efficiency of street lighting in the city. It is common knowledge that HPS light emitters are the most energy efficient light sources available for use in area lighting and they have a very good life span with good lumen maintenance (Greenhouse Gas Inventory and Report on Greenhouse Gas Savings made by the City of Potchefstroom, South Africa, 2002). The first street light project in Potchefstroom entailed replacement of outdated light emitter technologies with more energy efficient emitters in the city's main thoroughfares. The second project focused on making street lighting in residential areas more efficient. The latter was a pilot project to verify social acceptance of the new technologies.

In 2001 and 2002, the airport runway and taxiway were retrofitted with energy saving light emitters. The installation heralded the end of the airport being labelled as 'no lights available' and the completed and operational retrofitting resulted in energy saving of 58 251 kWh or US\$ 1192-00 with a saving of 48 614 kg of CO₂ in the first year (Greenhouse Gas Inventory and Report on Greenhouse Gas Savings made by the City of Potchefstroom, South Africa, 2002).

When the Potchefstroom Local Municipality had to build a new Municipal Council Building, the design specifications were audited against the South African Energy and Demand Efficiency Standard (SAEDES). The SAEDES is an energy efficiency guideline for new and existing commercial buildings that aims to reduce energy consumption and/or demand of buildings. Following the SAEDES audit, modifications to design specifications were made to ensure that the new building is a hundred percent in conformance with SAEDES requirements. These modifications achieved an annual saving of 14 000 kg of CO₂ per year. In future all new council buildings will conform to

the SAEDES requirements. (See the details contained in the Implementation of SAEDES Guideline Standards for all New Buildings Project).

- **Results**



Green Building Plan according to SAEDES Standards

Implementation of SAEDES Guideline Standards for all New Buildings Project:

- **Positive:** Building Green Buildings provides environmental benefits now and in the future by reducing the need for resources and energy. The overall SAEDES standardised design accordingly utilizes fewer of the limited resources available in the North West area and the city of Potchefstroom. There are also economic benefits involved in constructing a Green Building since the overall savings from conserving resources such as water and energy are quite significant. Another positive result is that with the international call for more environmentally preferable products, creating an environmentally friendly building is a highly marketed idea.
- **Negative:** The negative results may be that the initial costs attached in building according to the SAEDES Guideline Standards are quite high and not all planners and contractors may be familiar with the required integrated and environmental friendly approach. The initial capital layout is higher and developers still try to build at the lowest cost. The other problem is existing buildings and households.

Development of Environmental Bylaws Project:

- **Positive:** The new by-laws will improve the ability of the Potchefstroom City Council to meet its constitutional and other legal duties as co-regulator with a matrix dispensation of co-operative governance. The by-laws will also serve as an important tool in ensuring a safe and healthy environment that is not detrimental to the well being of the citizens of Potchefstroom and will ensure sustainable development of the Potchefstroom City. A system of environmental by-laws will enable the local authority to serve as an extended arm of the national legislature at the local government level.

The by-law drafting process might have been more transparent and comprehensive had there been more time allocated for the project. Due to a limited budget, only six months were set aside for the drafting of five different by-laws. As a result of this, sufficient public participation efforts fell behind. An additional negative result is the fact that the

successful rounding off of the project includes public awareness raising events. The Potchefstroom local community and business sector can only adapt their detrimental environmental actions and activities to comply with local law when the content and scope of the by-laws are known. Public awareness events have been delayed up to the time of writing this report.

- **Negative:** The implementation of some of these by-laws will take some time in previous disadvantaged communities, due to poverty.

CCP Project:

- **Positive:** The potential benefits for the City of Potchefstroom are threefold. Firstly, by reducing GHG emissions, everybody benefits by slowing the greenhouse effect. Secondly, improvements in energy efficiencies result in significant financial savings. The city can benefit financially from more prudent investments in energy efficient technologies and streamlining current operations, thus promoting greater fiscal responsibility and freeing up funds for economic development. The non-tangible benefits include increased awareness of politicians and administrators of environmental issues, establishment of new skills and capacities within the city as well as improvements in the city image.
- **Negative:** The process of selling of CO₂ savings to overseas countries.

• Key Replication Aspects

- **Staff**

Implementation of SAEDES Guideline Standards for all New Buildings Project: The major stakeholders in this programme are the commercial building owners, private residents affected and Local Municipality officials concerned with and actively involved in the implementation of the local policy on the SAEDES Guideline Standards for all New Buildings. The project was initiated and steered by the office of the Director: Health and Environment of the Potchefstroom Local Municipality.

Development of Environmental Bylaws Project: The project was a joint venture between the North-West University's Centre for Environmental Management (CEM), the Faculty of Law and the Potchefstroom City Council. The Steering Committee, Task Team and

Working groups consisted of skilled people that varied from councillors to senior students in the areas of law and environmental management.

- **Budget**

Implementation of SAEDES Guideline Standards for all New Buildings Project: There will be no financial implications to draft the guideline standards. There will be costs involved only when a new building is being built or when an existing building is being extended.

Development of Environmental By-laws Project: The Potchefstroom Local Council budgeted an amount of US\$ 5641-00 within their capital budget for this project.

CCP Project: The total project cost approximately US\$ 42 683-00.

- **Financing**

Implementation of SAEDES Guideline Standards for all New Buildings Project: There will be no financial implications to draft the guideline standards. There will be costs involved only when a new building is being built or when an existing building is being extended.

Development of Environmental Bylaws Project: Municipality cost was US\$ 5 641-00

CCP Project: Municipality costs: US\$ 42683-00.

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- **Date and Place written**

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Emfuleni



Location: Emfuleni
Local
Municipality

- **Full name of the Municipality and Country**

The Emfuleni Local Municipality (including both Vereeniging and Vanderbijlpark) falls within the Sedibeng District Council area, also known as the “Vaal Triangle” in South Africa. This area also incorporates the Lesedi and Midvaal municipalities.

- **Municipal Profile**

- Population: 1 400 000
- Land Area: 1 276 km²
- Municipal Budget: US\$ 188 167 120
- Environmental Budget: US\$ 10 828 100

- **Issue Addressed**

Local Environmental programmes as initiated in the Emfuleni Local Municipality as a result of Greener Governance training (2002-2004).

However, due to the Greener Governance training received by delegates from the Sedibeng District Council, cooperation between the district council and local municipalities in its area of jurisdiction were improved: Emfuleni, Lesedi and Midvaal Local Municipalities.

KEY WORDS: Cooperative Governance, Waste Recycling (waste buy-back centres), Environmental Awareness Campaign, Environmental Competitions.

- **Key Management Concept**

Major developmental challenges at the local level can often hamper local government service provision and decision-making capabilities – especially if a sense of isolatedness is experienced.



The familiar sight of
industries in Emfuleni.
(Heinrich-Böll-Stiftung, 2004)

This paper, however, demonstrates that improved environmental awareness can lead to empowerment of officials and municipalities and can foster comradeship and partnerships, also between different spheres of government (Cooperative Governance), in order to tackle environmental challenges jointly. Environmental challenges can, therefore, be overcome, even with limited capacity, through education and awareness raising, communication and cooperation.

- **Programme Name**

The following projects/initiatives that were inspired or enriched by the Greener Governance training in Potchefstroom, South Africa were implemented by the Emfuleni Local Municipality and Sedibeng District Council:

- Prioritising Environmental Management on District and Local Levels, while creating partnerships;
- Implementing Waste Recycling Buy-back Centres;
- Implementing an EMS on some of the procedures of Sebokeng Water Care Works;
- Environmental Awareness Campaign.

- **Programme Goals**

To implement sustainable environmental management projects in the Emfuleni Local Municipality's area of jurisdiction and thereby to enhance Greener Governance. However, in this case, the District Municipality was also exposed to Greener Governance training in Potchefstroom. It is, therefore, also envisaged by the District Council to spearhead sustainability in its areas of jurisdiction at the following local municipalities: Emfuleni, Lesedi and Midvaal.

- **Abstract**

Environmental management initiatives and projects by Emfuleni Local Municipality were greatly enriched by training received from the Greener Governance workshops conducted in Potchefstroom, South Africa (2002 – 2004). The municipality was greatly advantaged by the fact that the Sedibeng District Council was also represented at the training. The Sedibeng District Council recognised

its strategic importance in order to coordinate Greener Governance from a district level, and decided to establish partnerships with the municipalities in its area of jurisdiction – Emfuleni, Lesedi and Midvaal.

- **Importance of the Issue**

Municipalities at the local level often experience challenges with regard to infrastructure, capacity and environmental awareness. However, this paper demonstrates that improved environmental awareness can lead to empowerment of people and fosters comradeship and partnerships, also between different spheres of government (Cooperative Governance), in order to tackle environmental challenges jointly. Environmental challenges can, therefore, be overcome - even with limited capacity through education and awareness raising, communication and cooperation.

- **Case**

The Emfuleni Local Municipality, as well as the Midvaal and Lesedi Local Municipalities occur within the “Vaal Triangle”, which is situated within the Gauteng Province of South Africa, just to the south of the metropolitan areas of Johannesburg and Pretoria.

The Sedibeng District Council area of jurisdiction (which includes Emfuleni, Lesedi and Midvaal Municipalities) is generally characterised by poor air quality resulting from extensive heavy steel and chemical industrial activities, as well as from wood and coal fires in the historically disadvantaged township areas.

Another characteristic of the Sedibeng District Council area of jurisdiction, is the high levels of water pollution as measured in some of the water courses (especially in the Kliprivier and the Blesbokspruit). These catchments include runoff from industrial areas and previously disadvantaged townships and the western parts of the Vaal Rivier, which are subject to raw sewerage spillages from degraded infrastructure in Emfuleni. Ground water pollution emanating from the ISCOR evaporation ponds is also a very serious



An indication of illegal dumping challenges in the Emfuleni Local Municipality area



Illegal dumping like this is a serious concern of the Emfuleni Local Municipality

environmental concern in Emfuleni (Sedibeng District Municipality, 2004).

Unfortunately, a culture of illegal dumping had developed in poor communities within the Sedibeng District Council area of jurisdiction, possibly as a result of the lack of waste collection services rendered by the previous government, combined with a lack of training and environmental awareness. Illegal dumping is, therefore, still a challenge in the Sedibeng District Council area of jurisdiction.

Other significant challenges experienced by the Sedibeng District Council, which also influence the Emfuleni Municipality, include the following:

Electrification of Houses

Many households within the Sedibeng District Council area are still without electricity and have to use alternative sources for light and paraffin, coal and wood for cooking. In 2001, the Midvaal Local Municipality had the greatest percentage of unelectrified households (36.7%), followed by Lesedi Local Municipality (26.6%). Over 90% of the households in the highly urbanised Emfuleni Local Municipality were electrified (Sedibeng District Municipality, 2003).

Sanitation and Water Services

Sedibeng water service statistics are as follows: 47% of households have treated water inside their dwellings and 41% have access to piped water on site. A further 10% have access to a public tap, leaving 2% that must rely on natural sources of water.

Sedibeng extracts water from the Vaal River and Dam for purification and, therefore, river health needs to be monitored, particularly in the tributaries entering the Vaal River and Dam, to ensure that pollution of these valuable resources is kept to a minimum.

Sedibeng household sanitation is fairly good, with 83% of the population having flush toilets. In Midvaal and Lesedi, 33% and 26%

respectively are still using pit or bucket latrines (Sedibeng District Municipality, 2003).

Weekly refuse removal by local municipalities service approximately 55% of households in the district. The remaining 45% rely on illegal waste disposal solutions. Formal waste disposal is limited to the urban areas, while disposal in the rural areas needs to be undertaken by the landowner or community (Sedibeng District Municipality, 2003).

- **Case Description (& Lessons Learned)**

- **Waste Recycling Buy-back Centres**

In order to address the above mentioned issue of illegal dumping in its area of jurisdiction, the Sedibeng District Council was able to obtain provincial (the Gauteng Province) funding (US\$ 82 250) for three waste buy-back centres in the following municipal areas: Evaton, Sebokeng and Bophelong.

A private company was appointed at each buy-back centre, with the task of turning each centre into a profitable business unit, while delivering a service to the community by paying community members by weight for collecting and depositing tin, plastic, paper and bottles at the waste buy-back centres. Materials are then bought per volume and collected from the waste buy-back centres by specific companies.

- **Prioritising Environmental Management at District and Local Level**

As a result of the Greener Governance training received, the Sedibeng District Council realised the importance of its strategic position with regard to the rest of the local municipalities in its area of jurisdiction and has taken on an auditing and monitoring function. In order to enhance capacity and efficiency, it was also



Waste sorting in process at the Evaton waste buy-back centre in Emfuleni

decided to incorporate all district level environmental management functions into one department.

One of the goals of the Sedibeng District Council is also to facilitate the restructuring of the environmental departments of the local municipalities in its areas of jurisdiction.

The Emfuleni Local Municipality, which was also inspired by the Greener Governance training, decided to implement and integrate Local Agenda 21 environmental principles into its municipal operations and even appointed an environmental official.

- **Implementing an EMS on some of the procedures of Sebokeng Water Care Works**

It is envisaged that the Sedibeng District Council and the Emfuleni Local Municipality will implement an Environmental Management System (EMS) partially in order to ensure that operational procedures are adhered to and environmental and socio-economic liabilities are minimised, thereby preventing water, land and air pollution.

- **A Clean and Green Awareness Competition**

In order to enhance environmental awareness, the Emfuleni Local Municipality launched a Clean and Green Awareness Competition in November 2002. The competition served as a catalyst for involving municipal councillors, as the prize money could also be used in environmental projects within the municipal wards.

Lessons Learned

Addressing the Root Causes, and not the Symptoms

As is the case in the City of Mbabane (Swaziland), it was found that financial incentives played a major role in addressing illegal dumping in the area. The success of the waste buy-back centres is that

financial incentives were implemented to help motivate the community to address the root cause of illegal dumping (the lack of environmental awareness and training combined with a lack of will).

The Importance of Co-operative Governance

In order to save valuable resources and time, local municipalities are motivated to promote co-operation with neighbouring municipalities with regard to necessary environmental projects, such as with projects that are legal requirements (for instance the Integrated Waste Management Plan (IWMP) and Integrated Environmental Plan (IEP) in South Africa). Such cooperative initiatives will be even more effective if the municipalities have similar socio-economic and environmental challenges, such as the municipalities that all fall within the Sedibeng District Municipality: Emfuleni, Lesedi and Midvaal.

Addressing Fragmentation

Municipal departments, as well as officials, may not always be sure of their responsibilities as personnel are shared between municipal departments as well as municipal functions. In order to ensure that all municipalities and their environmental departments are certain of their environmental responsibilities and functions and to avoid the overlap and negligence of important functions, it is envisaged that the strategic advisory role of the Sedibeng District Council will become increasingly important.

One of the main Greener Governance challenges in the Sedibeng District Council area of jurisdiction is not only to establish efficient communication routes between the different local municipalities (Emfuleni, Midvaal and Lesedi), but also to enhance cooperation between the local municipalities and the Sedibeng District Council.

Unfortunately, at this stage, most of the Greener Governance related communication and, therefore, decision-making occurs between the Sedibeng District Council and the Emfuleni Local Municipality.

- **Results**



One of the Sedibeng District community empowerment projects: the beautification of sidewalks

The Establishment of Environmental Committees

Apart from appointing an environmental management official at the municipality, the Emfuleni Local Municipality also decided to establish environmental committees in the municipal wards. This challenge was addressed particularly by the willingness and commitment of municipal councillors, who established environmental committees in 38 of the 43 existing wards of the municipality.

A Clean and Green Awareness Competition

Positive Results

As a result of the above mentioned competition, which required municipal wards to clean their act, three councillors from Emfuleni Local Municipality won three prizes worth US\$ 14 744 in total. Funding for the project was obtained from the Gauteng Province.

Resulting from the above mentioned competition, a greening project was initiated in Evaton West in order to improve community awareness and education. Eight hundred and fifty-one (851) trees were planted in the year 2002-2003, while a vegetable garden for poverty stricken families was also initiated in order to help raise environmental awareness of school children and parents.

Negative Results

Although competitions are highly beneficial in terms of motivating communities and municipal officials to cooperate with regard to environmental challenges, competitions are costly and not necessarily sustainable, while funding is difficult to obtain.

Prioritising Environmental Management

A new department was established at district level in order to serve as a vehicle through which district level environmental and Greener



Waste sorting at a home for the aged under municipal management

Governance initiatives can be conducted and also to influence Greener Governance or environmental management at the local municipalities in its area of jurisdiction.

Positive Results

A positive result of initiating an environmental department at district level, is to address communication and fragmentation challenges between different municipalities and also between the municipalities and the Sedibeng District Council.

As approved by the Sedibeng District Council, the proposed Environmental Management Department will provide the following environmental posts in order to assist in coordinating environmental management in the Sedibeng District Municipality area of jurisdiction:

- An environmental manager to head the Environmental Department;
- Three assistant managers (focusing on waste management, environmental awareness, and environmental management);
- Three environmental officers (focusing on industrial, rural and urban impact management); and
- An administrative assistant (environmental management).

Waste Buy-Back Centres

Positive Results

- Job Creation
As is the case in the City of Mbabane (Swaziland), the community's response to the waste buy-back incentive was overwhelming, due to the fact that community members who were once jobless, were now able to generate an income while cleaning up the municipal area of jurisdiction.

- **Funding**
Funding for the three waste buy-back centres in Sedibeng District Council was obtained from the Gauteng Province (the Gautrans Grant), in order to cover operational expenses, including the following: personnel, transport, sales, water and electricity.

- **Support from the Local Authorities**
The local municipalities in the Sedibeng area, such as Emfuleni, helped to support the waste buy-back centres by providing venues and also by controlling and monitoring funding received.

- **Enhanced Environmental Protection**
Due to the fact that the communities are aware of the monetary value of waste, it is minimised at source, leading to a cleaner environment. Waste is, therefore, also reduced at landfill sites.

- **Education and Awareness**
Not only do communities clean waste dumps whilst sorting and recycling waste, but awareness raising and education is also enhanced by environment committees that were established by the Emfuleni Municipality in order to assist in awareness and education at the local level.

Negative Results

- **Environmental Protection**
If there is no commitment towards the environment with regard to waste minimisation, the environment cannot be protected. Therefore, education and awareness raising of the community is needed.

- Health
Although only household (domestic) waste is recycled, medical waste is sometimes also found on waste dumps, posing serious threats to the health of people.

- Municipal Services
Cost implications of collecting unwanted waste from different waste buy-back centres, as well as the shortage of waste transportation trucks, can influence municipal services negatively.

- **Key Replication Aspects**

Staff

There are currently only two staff members rendering environmental health functions in the Emfuleni Local Municipality area. According to the Sedibeng District Municipality reports (Sedibeng District Municipality, 2003), staff distribution amongst the municipalities and the functions within a municipality must be investigated and corrected, as municipal staff is currently not equitably distributed. In order to increase capacity with regard to Greener Governance issues at the local level, it will remain a priority to train municipal personnel.

Funding

External funding is imperative due to the lack of municipal capacity and the Emfuleni Local Municipality currently relies on its municipal budget and governmental funds for assisting with Greener Governance projects. However, it is imperative that external funding also be sourced to ensure sustainability of projects and to facilitate a sense of achievement and ownership.

Budget

One of the current challenges experienced is the inequitable distribution of finances at local government level within the Sedibeng

District Council area of jurisdiction. For instance, the Midvaal local municipality's operating and capital budgets per capita are significantly higher than that of the other municipalities. It is, therefore, also important that the Sedibeng District Council's Environmental Department provide assistance in this regard.

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- July 2004, Potchefstroom

Tzaneen



Location: Greater Tzaneen Local Council

- **Full name of the Municipality and Country**

The Greater Tzaneen Local Council is situated in the eastern quadrant of the Limpopo Province in South Africa.

- **Municipal Profile**

- Population: 484 053 people
- Land Area: 3 240 km²
- Municipal Budget: US\$ 7 262 082
- Environmental Budget: Unknown

- **Issue Addressed**

Local Environmental Programmes as initiated and enriched by the Greater Tzaneen Local Council area as a result of Greener Governance training (2002-2004) conducted by the Centre for Environmental Management (CEM) in Potchefstroom, South Africa. This training, which was funded by the Konrad Adenauer Stiftung (KAS) in Germany, invited and sponsored the training of representatives from the Tzaneen Local Council.

KEY WORDS: Storm water management, Informal Sector Upliftment.

- **Key Management Concept**

This paper demonstrates that improved environmental awareness leads to empowerment of municipalities and communities and fosters comradeship and partnerships, not only between different spheres of government (Cooperative Governance), but also between local governments and communities in order to tackle environmental challenges jointly. Environmental challenges can, therefore, be overcome, even with limited capacity, through communication, cooperation, and an open participatory approach.



Informal sector upliftment: replacing the informal structures of the Nkowankowa vendors' stalls (Ngobeni & Machumele,2004)



The new structures of the vendors' stalls.(Ngobeni & Machumele,2004)



More new structures of the vendors' stalls.(Ngobeni & Machumele,2004)

- **Programme Name**

The Greater Tzaneen Local Council implemented the following general issues in more specific projects/initiatives:

- Storm Water Management;
- Informal Sector Upliftment: Nkowankowa Vender Stalls and Taxi Rank.

- **Programme Goals**

To implement sustainable environmental management projects in the Greater Tzaneen Local Council's area of jurisdiction.

- **Abstract**

Environmental management initiatives and projects by Tzaneen Municipality were greatly enriched by the Greener Governance workshops conducted in Potchefstroom, South Africa (2002 – 2004).

The two main projects that were initiated, were the following:

- The installation of screens to help minimise littering and pollution of the streams in the surrounding environment.
- Facilitating the successful movement of hawkers and a taxi rank to a newly designed site that is not only aesthetically and socio-economically more beneficial, but also enhances safety, service provision and municipal control.

The aim of this paper is to demonstrate the successful possibilities of Greener Governance projects when an open, participatory process is followed.

- **Importance of the Issue**

Local municipalities in South Africa have legal obligations in terms of the South African Constitution (Act 108 of 1996, Section 24) to deliver sufficient services and ensure an environment that is not harmful to people in its area of jurisdiction, while promoting sustainable development objectives and poverty alleviation. The



The new formalised taxi rank with vendors' stalls on the side (Ngobeni & Machumele, 2004)



Members of the taxi and vendors' association

challenge is, therefore, to meet development objectives responsibly, while also addressing socio-economic and ecologic problems.

The Greater Tzaneen Local Municipality demonstrates that environmental and socio-economic challenges can be successfully tackled and overcome if care is taken to include the community in decision-making, using an open, participatory approach.

- **Case**

The Tzaneen Local Municipality is situated in the eastern quadrant of the Limpopo Province within the Mopani District Municipality area of jurisdiction, together with Greater Giyani Local Municipality, the BA Phalaborwa Local Municipality and the Greater Letaba Local Municipality.

The following demography information profile has been compiled utilising available data and municipal calculation to serve as a rough guide:

- Tzaneen has a very young population, 51% being under the age of 20 years. Males are outnumbered by females in the ratio of 1:1,23. This could be attributed to *inter alia* male absenteeism due to employment outside the area and the fact the females normally outlive the male counterparts.
- In 1996, 39% of the labour force in the Tzaneen area were unemployed in 1996. All indications are that the percentage has steadily increased over the past years. Another cause for concern is that the occupation of 34,4% of the workforce falls in the "elementary" category, as opposed to 9,3% "skilled", 3,5% "technical" and 4,2% "clerical". This relates to the low household income, where 58% of households had a combined income of less than R 1.500 per month in 1996.
- The Census of 1996 also indicates that 75% of households reside in tribal/rural villages, although no mention is made of informal settlements. It is estimated that since 1996, approximately 6 000 families have resorted to settling on "unplanned sites". This can have negative impacts on the

contamination of groundwater (high groundwater table) and deforestation. It can have, depending on settlement, negative financial influences for the municipality. It costs the municipality a larger amount to provide electricity and running drinking water in rural areas that are further from the existing facilities and settlements that are located on a higher/further place.

In summary it can be stated that approximately 480 000 people (88 000 households) reside in Tzaneen municipal area, of whom:

- the majority live in rural villages;
- a large percentage are unemployed;
- almost 60% live in poverty;
- most are younger than 20 years;
- females outnumber males considerably;
- the majority of those employed have low-paying, unskilled work;
- the municipal area is further characterized by extensive and intensive farming activities (commercial timber, cash crops, tropical and citrus fruit productions);
- mountainous, inaccessible terrain in the west and south, and even topography (gentle slopes to the north and east);
- areas with exceptional natural beauty, with considerable untapped tourism potential.



Job creation: the new formalised site for the taxi and vendors' structures need to be cleaned

The northerly sub-corridor of the Maputo Corridor transverses the Tzaneen Municipal area, while one of the major links between Gauteng and the Kruger National Park also passes through the area.

Land ownership in the municipal area is characterized by:

- large areas of land in private ownership, ranging from smallholdings to extensive farms, used mainly for commercial farming activities;
- equally large areas in ownership of the State, under custodianship of six Traditional Authorities;
- land of negligible extent being municipal commonage.

As far as health services are concerned, there is a shortage of health facilities, trained personnel, equipment, vehicles and supplies. This is the situation while there is an increasing number of Tuberculoses and AIDS/HIV in the area. Health Services are bound to come under even more pressure than is experienced at present.

Water has emerged as probably the most pressing need, with causal factors for inadequate supply ranging from insufficient capacity of purification plants, to absence of recirculation networks.

ESKOM provides electricity in Tzaneen. The backlog is estimated at 22.000 house connections and the generally poor state of the distribution network poses a serious threat to efficient distribution (and, therefore, also revenue).

Provincial roads within the municipal area are generally in good condition. Access roads to villages and internal streets within villages are problematic. Storm water management is closely linked to the condition and state of roads and streets.

Considerable degradation of the environment has taken place in parts of the municipal area. This municipality is relatively poor, which provides the reason why municipal projects are generally more focused on health of the people than on the environment.

- **Case Description (& Lessons Learned)**

- **Storm Water Management**

- The Greater Tzaneen Local Council became aware of the constant littering and solid waste pollution of the streams surrounding the urban built environment by the storm water drains in Tzaneen. In order to address the constant pollution and liability of the municipality, it was decided to design and install screens/meshes in order to capture the solid waste and thereby minimise the ongoing pollution, especially in the rainy season.

Unfortunately, the screens were installed during the dry season which could not prepare the municipality for the following: a design error was not identified, due to the fact that the holes in the screens were too small, causing most of the solid material in the drains to block up. This caused the storm water drains to overflow, nearly flooding low-lying premises surrounding storm water drains.

As the above mentioned scenario proved to be a liability to the municipality, the screens were promptly removed in order to prevent flooding. The surrounding environment is, therefore, still being polluted by the storm water drains.

Lessons Learned:

The Importance of Planning and Design

With the advantage of hindsight, it is obvious that not everything was taken into consideration in the design and manufacturing process of the above mentioned storm water screens, which were designed by the engineering department of the municipality and a local industry. Another problem was that the screens were installed in the dry season.

Unfortunately, due to the cost implications of redesign and manufacture, as well as implementation, the municipality is currently reluctant to take any action. However, the problem could have been avoided if the screens were better designed or tested, or if alternatives were considered. One of the alternatives considered afterwards, was to design and build litter and waste catchments at all outlets into the environment.

However, the above mentioned methods are all “end-of-pipe” initiatives designed to address a symptom of a larger municipal challenge: waste minimisation and management.

o **Hawker and taxi rank formalising and shelter provision**

The Greater Tzaneen Local Council facilitated the successful movement of hawkers and a taxi rank to a more appropriate, newly designed site. Not only is the new facility aesthetically and socio-economically more acceptable, but it also enhances safety, service provision and municipal control.

Background:

The Greater Tzaneen Local Council became aware of the following negative impacts caused by the rapidly growing taxi and bus rank forming around the vendors' stalls:

- A reduction in the aesthetic quality of the town;
- traffic disturbances;
- environmental pollution;
- a lack of information regarding the quality of street foods (safety and hygiene standards).

Methodology

What was the situation like at first?

Apart from the fact that there were no sanitary services such as running water and toilets, there was no proper drainage of effluent, making waste water spillages a common sight. The shelters made from wood and cardboard were mostly in a terrible condition.

The Alternative:

During the initial analysis, it was observed that hawkers had been provided with a building by the previous government (the Gazankulu Government). Although the building was still found to be in a good condition, it was found that hawking was not compatible with the surrounding area (Bankuna Street), forcing the hawking activities to be moved to a more suitable location.

The market stall building site was identified as a better location due to the following reasons:

- The site was identified as large enough to accommodate all vendors hawking in Bankuna Street;
- The taxi rank was also identified as a major solution since hawkers indicated that most of their customers were commuters. It was, therefore, agreed that the taxi rank be operated from the market building site;
- The need for an after hours storage facility was also realised and met;
- The fact that running water and an existing ablution facility was available at the new site also proved to be highly convenient and fundamental in the decision-making process by the hawkers, commuters and taxi operators.

Modus Operandi:

The following actions were undertaken to implement this project:

- The Municipal Public Services Manager budgeted an amount of US\$ 9 853 for the financial year 2002-2003 for the implementation of the project;
- A consultant was appointed to design a structure able to accommodate the acceptable number of hawkers;
- The design by the architects was discussed with and accepted by the stakeholders;
- Quotations for the erection of the stalls were acquired from three service providers and the best candidate was appointed;
- The Vendors' Association was tasked with the duty of allocating the stalls as per set criteria;
- Each Coca-Cola or any steel kiosk was allocated an area of 2m² and the stands were marked on site by the Traffic Section of Public Services Manager of the municipality;
- Taxi loading/off loading bays were also marked on the site;
- Parking bays for taxi's were provided on site;

- Hawkers agreed to pay a lease fee of between US\$3 and US\$5 to the municipality for the maintenance of the newly developed site;
- All informal structures in Bankuna Street were then removed and the area was thoroughly cleaned;
- Businesses which were unsuitable to be conducted in the market stalls (for example, dressmaking, estate agents, and hair salons) were notified to obtain alternative accommodation. The stalls were then allocated for hawking purposes. Commodities sold to the public mainly consist of fruit and vegetables, prepared foodstuffs such as porridge and meat, textiles and cosmetics. Other services provided by the vendors, include public phones, shoe repairs and hair dressing.

Along with the public participation project came the “Street Food Quality” project, which ensures that the Health Section of the Public Services Manager is monitoring the quality of foodstuffs sold to the public continuously and conducting regular inspection of all hawkers’ stands from which foodstuffs are sold.

- **Results**

- Storm water Management**

- **Positive results**

- Although the project eventually had no benefit to the surrounding environment, it helped to establish communication and form a partnership between different municipal departments.

- **Negative results**

- Due to the design error, municipal finances were not used effectively. Unfortunately, the initial challenge has also not been addressed, namely pollution and the surrounding environment is still being polluted.

Hawker and taxi rank formalising and shelter provision

- o **Positive results**

Not only were proper shelters provided for hawkers in order to improve their quality of life, but the aesthetic quality of Tzaneen was also improved. Municipal services have also been improved, such as waste collection. It is also ensured by the municipality (Health Department) that the food sold to the public is of an acceptable hygiene standard.

Not only are hawkers now properly accommodated in a new, effective structure, but the taxi rank has also been moved and is operating properly in the new area.

The municipality was also able to provide water and sanitation services, due to the fact that well-maintained municipal toilets are in the vicinity. Vendors can now use water for cooking, food-preparation, washing, etc.

The Bankuna Street is also clean and all illegal structures have been removed.

The municipality, which played a facilitation role, was able to persuade the Taxi Association of the project benefits. When the Taxi Association decided to move to the new venue, all stakeholders participated.

Not only has the quality of life improved, but the vendors were also made more aware of the environment and health aspects seeing that health aspects are regularly monitored by the municipality, while ensuring that the vendors especially involved in preparing food are properly educated. The vendors were also able to benefit from economic training as the municipality has also initiated an economic performance monitoring programme in order to evaluate the economic well-being and functioning of the vendors.

Other possible advantages of the formalising project include the following:

- The opportunity exists to educate vendors on the principles of business and to motivate vendors to sell more diverse products.
- The Vendors' Association could also buy in bulk and sell the products to the vendors in the area.

Lessons Learned:

Support for municipal decisions:

In the vendors' formalisation project, it was realised that the following municipal supportive functions could be more extensively used:

- *Involving the Planning Department*
It is imperative that the Municipal Planning Department also be aware of all steps taken so that support can be given to the municipality.
- *Empowering the Municipal Traffic Department*
Sufficient powers should be transferred to the Municipal Traffic Department. In Nkowankowa (Tzaneen), the Municipal Traffic Department was not able to sign spot fines. It is, therefore, imperative to prepare for such circumstances sufficiently to be able to move illegal vendors' stalls. One way of empowering/mandating the traffic wardens could be by drafting new local regulations or municipal by-laws.

Importance of Involving the Local Community in Decision-Making:

The fact that an open participatory approach was followed by the municipality created a sense of ownership and cooperation between all stakeholders that also lead to satisfaction and a sense of pride amongst taxi drivers and hawkers, leading to a sense of ownership.

- **Negative Results**

Initially, when the vendors had just moved to the new venue, there were complaints that sales were down. However, once the new venue was adopted by the Taxi Association, income generation was back to normal.

- **Key Replication Aspects**

Staff

In order to increase capacity with regard to Greener Governance issues at the local level, it will remain a priority to train municipal personnel.

Funding

It is imperative that external funding also be sourced to ensure sustainability of projects and to facilitate a sense of achievement and ownership.

Budget

Fortunately, the new structure for vendors and taxi's was included in 2003/2004 municipal budget. In order to ensure the sustainability of future Greener Governance projects, it is imperative to conduct good planning for future projects so as to ensure that they be included in the municipal funding.

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Umhlathuze



Location: Umhlathuze Local Municipality



The natural harbour of Richards Bay (Umhlathuze Local Municipality. 2004)

- **Full name of the Municipality and Country**

Umhlathuze Local Municipality, Kwazulu-Natal Province, South Africa incorporates Richards Bay and Empangeni and is situated in the Kwazulu-Natal Province, South Africa.

- **Municipal Profile**

- Population: 340 000
- Land Area: 796 km²
- Municipal Budget: US\$ 138 390
- Environmental Budget: US\$ 8 409

- **Issue Addressed**

Local environmental programmes at Umhlathuze Local Municipality as initiated and enriched as a result of Greener Governance training Management (CEM) in Potchefstroom, South Africa. The Greener Governance training, which was funded by the Konrad Adenauer Stiftung (KAS) in Germany, invited and sponsored the training of municipal representatives from Umhlathuze Local Municipality.

KEY WORDS: *Environmental Policy, Environmental Management System (EMS), Strategic Catchment Assessment, Environmental Land Use, Management Planning, Preventing Crime through Environmental Design.*

- **Key Management Concept**

The Umhlathuze Local Municipality's area of jurisdiction mostly covers a world-renowned coastal zone that is rich in biodiversity. However, as is the *status quo*, developmental, socio-economic needs are exerting direct pressure on the sensitive ecological fabric of the area. Due to the ecological sensitivity of the area, governmental

responsibility must ensure proper environmental management in order to limit developmental impacts. Due to the heavy industrialisation of Richards Bay which occurs within the Umhlathuze Local Municipality's area of jurisdiction, water and air pollution issues, as well as the loss of biodiversity and habitat, are seen as environmental management priorities.

However, in light of the absence of a responsible, co-ordinating environmental department at Umhlathuze Local Municipality and, therefore, a lack of capacity and communication, these challenges seem dark and gloomy. Established political structures are difficult to change, yet this paper advocates that education and awareness raising, when coupled with dedication, can still lead to significant sustainability progress. However, as stipulated in this paper, proper precautionary and management measures conducted by the Planning Department are a priority in order to achieve sustainability where development comes into contact with a sensitive environment and where it is very important to limit the impacts of water and air pollution and loss of biodiversity.



Thea van der Wateren, a Greener Governance delegate and environmental planner, in front of the Umhlathuze Municipality buildings, together with part of the CEM task team

- **Programme Name**

The following programmes, projects and initiatives which were inspired or enriched by Greener Governance, were implemented by Umhlathuze Local Municipality:

- Drafting an Environmental Policy;
- Implementing an Environmental Management System (EMS);
- Initiating a Strategic Catchment Assessment (Integrating Environmental (Integrating Environmental Issues into Land Use Management Planning));
- Preventing Crime through Environmental Design.

- **Programme Goals**

To implement sustainable environmental management projects in the Umhlathuze Local Municipality's area of jurisdiction.

- **Abstract**

Environmental management initiatives and projects by Umhlathuze Local Municipality were greatly enriched by the Greener Governance workshops conducted in Potchefstroom, South Africa (2002 – 2004). Such initiatives and projects are assisting the municipality to overcome environmentally related challenges (such as fragmentation and the lack of an environmental department, with resultant limited budget and capacity), in order to improve its role as sphere of government closest to the environment and people. Greener Governance related projects initiated at Umhlathuze Local Municipality include drafting an Environmental Policy, implementing an Environmental Management System (EMS), initiating a Strategic Catchment Assessment (in order to integrate Environmental Issues into Land Use Management Planning), preventing Crime through Environmental Design and to fill information gaps in order to minimise the impact of planning and development on the environment, including conducting geotechnical assessments, geohydrological assessments, flood lines and flood risk assessments, as well as biodiversity assessments.

- **Importance of the Issue**

Local municipalities in South Africa have legal obligations in terms of the South African Constitution (Act 108 of 1996, Section 24) and other legislation as stated above to deliver sufficient services and ensure an environment that is not harmful to people in its area of jurisdiction, while promoting sustainable development objectives and poverty alleviation. Specifically in the case of Umhlathuze Local Municipality, the environment should also be protected. The challenge is, therefore, to meet development objectives responsibly, while also addressing socio-economic and ecological problems. The uniqueness of this case study, however, is that unlike most municipalities that conduct environmental management through their Health and Safety departments, Umhlathuze Local Municipality is currently conducting most of its environmental initiatives through its Planning Department.

- **Case**

The Umhlathuze Local Municipality area, which covers approximately 800km², incorporates Richards Bay and Empangeni and provides services to a population of approximately 340 000 people. The Umhlathuze Local Municipality is the hub of tourism and industry in Zululand, and offers investors and visitors first class facilities, services and infrastructure. The municipality consists of nine departments, including the Planning, Parks and Health Departments. The Integrated Development Planning consists of three branches, namely Development Planning, Land Use Planning and Environmental Planning, which are further divided into various divisions and sections.

The complexity of the municipal responsibility is demonstrated by the fact that the Umhlathuze Local Municipality is geared for huge industrial expansion while also being surrounded by a sensitive natural environment. The area is rich in tradition and culture and is renowned for its exquisite natural environment and diverse recreational facilities.

Community health is closely linked to a safe water supply, adequate sanitation, air quality, efficient waste management and education. In addition, there is adequate concern about HIV/AIDS and its spreading in the region. The incidence of tuberculosis associated with AIDS is a cause for concern with the workforce in this area. Currently the impact of AIDS on the population in this area is unquantified.

The Richards Bay area is economically important for KwaZulu-Natal. The largest component of formal employment in this region is found in the urban areas of Empangeni and Richards Bay. A large number of the residents of the Tribal Authority and former township areas are unemployed.

A rich mix of species also characterises the Umhlathuze Municipal area, resulting in its recognition as a conservation priority in terms of its biodiversity and the range of habitats that are represented in this area. The environment is very sensitive due to the high water table,

unique freshwater lake systems and an estuary. Approximately 176 Red Data Book species are also likely to occur in this area. It is, therefore, important to conserve this natural asset, while also allowing for the economic development of the area in order to provide employment opportunities.

The main sources of air pollution in this area are from industry, transport, low-income housing, and fires. Other sources may include agriculture and waste disposal. Air pollution causes asthma and upper respiratory tract infections.

In order to address incidents relating to pollution in respect of land, water, air and noise from both domestic homes and commercial businesses, it should be brought to the attention of the Richards Bay Clean Air Association of which the Umhlathuze Council is a member.

Realising the importance of the environment and the management thereof, the Umhlathuze Local Municipality undertook a Strategic Environmental Assessment as part of its Integrated Development Plan.

- **Case Description**

The Greener Governance training received in Potchefstroom, South Africa, has inspired and enriched the following projects or initiatives which were conducted at Umhlathuze Local Municipality.

Drafting an Environmental Policy: In order to create a mandatory platform from where Greener Governance and sustainability related initiatives could be launched, the Umhlathuze Local Municipality decided to draft an Environmental Policy for its area of jurisdiction.

Unfortunately, it was decided that the Environmental Policy would remain a “draft” policy until Umhlathuze Local Municipality structures are in place to facilitate the requirements of the policy.

Implementing an Environmental Management System (EMS): A major success story of the Greener Governance Training in Potchefstroom is the decision of the Umhlathuze Local Municipality to

implement an Environmental Management System, in order to manage and improve its performance regarding environmental management and service delivery responsibilities.

The above mentioned Environmental Policy forms the basis and important first step towards the EMS, which is still in its "Initial Planning Phase". The EMS will be implemented in three phases: an initial planning phase (which is almost complete), a communication phase and an implementation phase.

The initial planning phase, which will culminate in the final Draft Environmental Policy, included an initial environmental review as required by ISO 14001, in order to obtain necessary baseline environmental information of Umhlathuze Local Municipality and its area of jurisdiction.

The second phase of the EMS development, which is the communication and training phase, will be completed at the end of 2005. It will include communicating with and training employees and the development of operational procedures, which will be jointly developed between the Engineering and Planning Departments of the municipality.

The implementation phase will be initiated in 2006, during which the EMS will be tried and tested for a year by an external consultant, who will be responsible for creating understanding and awareness and motivating ownership of the EMS.

The way forward: After the successful implementation of the EMS, specific management plans will be developed and integrated with the EMS, which will be an effective administration, communication and operational system through which the various plans can be executed and responsibilities given.

Some of the plans which are envisaged are the following:

- An Air Quality Management Plan;
- An Integrated Waste Management Plan;

- o A Water Resources Development Plan;
- o A Biodiversity Management Plan.

Initiating a Strategic Catchment Assessment: The Umhlathuze Strategic Catchment Assessment is a catchments-based environmental impact assessment tool, which makes use of indicators in order to represent the state of individual catchments spatially within the Umhlathuze Local Municipality area of jurisdiction. This tool aims to integrate environmental issues into Land Use Planning, which is vital in order to ensure control and management of development in ecologically sensitive areas.

Although not specifically inspired by Greener Governance, this decision-making tool serves as a testimony to the importance of dedication and creativity to provide solutions at local level, specifically through planning in order to attain sustainability and Greener Governance objectives, as provided in this instance by the Greener Governance training at Potchefstroom, South Africa.

Preventing Crime through Environmental Design: Richards Bay was built on the “Garden City” concept in the 1970’s, resulting in large open spaces being left between houses. Unfortunately, most of the well-meant open spaces have deteriorated and have become inaccessible due to plant overgrowth and have become illegal dumping grounds for rubbish.

Mainly, the lack of a municipal budget sufficient for maintaining the open spaces, combined with a lack of ownership and safety reasons, has caused the deterioration of the open spaces, with a resultant growth in burglary and crime in and around the open spaces.

However, in order to get its house in order, and improve its Greener Governance repertoire, the municipality wants to improve the open spaces situation. The general maintenance of the open spaces will be improved while removing excessive overgrowth and installing streetlights in order to enhance safety. Houses will also be turned

around to face the open spaces, which will also have an intimidating effect on crime and burglaries from the open spaces.

The role of each open space will be queried, in order to assess and enhance its functionality. Except for removing alien vegetation, addressing housing issues and reducing crime, it is also envisaged that the “sense of place” and living conditions of each open space and also of the surrounding areas will be improved.

Alien Clearance in River Project: Alien plants on property may increase the intensity and frequency of wild fires, while also consuming vast amounts of water, resulting in a lowered water table. The lowered water table may cause streams and wetlands to dry out, ultimately resulting in the reduction of biological diversity. As a result of increased water run-off and the congestion of water sources, alien plants may also increase the risk of flooding.

- o **Lessons Learned**

Uncertainty: There seems to be major uncertainty on local level as to the modus operandi on how to practice environmental management, since little (mostly on ad hoc basis) or no formal advice (such as a guideline document) is given to local authorities from national and provincial spheres of government. It is not surprising, therefore, that environmental management or Greener Governance seems to be approached differently at each municipality, with varying results.

Unlike most municipalities that conduct environmental management through their Health and Safety departments, Umhlathuze Local Municipality is currently conducting most of its environmental initiatives through its Planning Department.

A Lack of Environmental Co-ordination: At the time of the visit, it was realised that there was a lack of co-ordination with regard to environmental matters, as environmental efforts are currently fragmented amongst the Parks Department, Engineering

Department, Waste Department and the Planning Department of the Umhlathuze Local Municipality.

Addressing Land Degradation and Biodiversity Loss: Due to the fact that the increasingly industrialised Richards Bay is situated in a sensitive coastal zone close to the Umhlathuze Estuary and wetlands, this pristine area is highly sensitive and susceptible to pollution, including air and water pollution. Due to the conflicting demands of socio-economic challenges and environmental demands, ecosystem quality is often compromised, resulting in the ultimate degradation of land. For example, low cost housing might not be given sanitation, leading to the nutrient enriching and eutrofication of once pristine water bodies, such as Lake Mzingazi.

However, having a municipal EMS will not be able to assist in land degradation caused by communities, but such problems should be addressed through a municipality's mandatory Integrated Development Process (IDP). Ms. Van der Wateren advocated that – in order to address such issues, it is imperative that all issues are addressed within a single environmental plan, such as a municipality's Integrated Environmental Plan (IEP).

Therefore, an Environmental Action Plan is envisaged, with the following main priorities/phases: Getting the municipality's house in order, filling information gaps in order to plan where to focus. The third phase of the management plan would be to develop management plans for specific environmental challenges.

Addressing Environmental Issues through Planning:

In addressing the conflict between the environment and development through the Umhlathuze Local Municipality's mandatory Integrated Development Process (IDP), a Strategic Environmental Assessment (SEA) was commissioned in order to ensure that environmental issues be integrated into the planning process. The objective of the SEA was to provide the Umhlathuze Local Municipality with the necessary strategic tools to facilitate

decision-making for sustainable development. Therefore, a State of the Environment Report (SoER), Strategic Environmental Management Plan and Core Set of Environmental Indicators Report were developed in order to assist in the assessment, management and monitoring of sustainable development.

The Umhlathuze Local Municipality, therefore, has a unique approach in terms of tackling environmental challenges where information that is obtained is utilised in decision-making and planning. According to Ms. Van der Wateren, effective environmental management and Greener Governance requires that information gaps be filled and environmental information sufficiently warehoused.

The Umhlathuze Local Municipality, therefore, has a unique opportunity to integrate environmental information into decision-making through its Planning Department. As stipulated above, the Planning Department is challenged with developing tools for addressing land degradation and biodiversity loss, which conflicts with development in the area. However, the Umhlathuze Local Municipality's perspective is that environmental information, projects and systems should influence a municipality's Spatial Development Framework (SDF), which forms the basis for Land Use Management. The Umhlathuze Local Municipality has, therefore, also initiated a Land Use Management System project, which incorporates all the environmental issues identified in the SEA.

The above mentioned Strategic Catchment Assessment tool will, therefore, serve as a conservation plan that allows for protective zoning of areas. In order for a municipality to have sufficient control of its area of jurisdiction, the Umhlathuze Local Municipality advocates that environmental management should be integrated into the Planning Scheme controls.

The Umhlathuze Local Municipality, therefore, also recognises the importance of environmental management policies, legislative

compliance, communication and reporting, environmental awareness raising and education, as well as having capacity and a sufficient budget for environmental management/Greener Governance.

- **Challenges**

Information gaps: Currently, the Umhlatuze Local Municipality lacks information and management of the following: biodiversity, air quality, geotechnical assessments, geo-hydrological assessments, flood lines and flood risk assessment and areas of degradation.

Capacity and Budget: Currently only one environmental planner is employed and due to capacity problems, consultants have to be extensively utilised. However, as consultancy work is expensive, it is quite a challenge to boost environmental performance/Greener Governance with a limited budget. Funding is, therefore, the only alternative, but is often difficult to obtain.

- **Results**

- **Drafting an Environmental Policy**

Positive Results

The Environmental Policy will form an important platform from which the EMS can be built, as it not only forms an integral part of an EMS, but will also be an influential mandatory document which will have political buy-in throughout the entire municipal area of jurisdiction.

Negative Results

Postponing the promulgation of the Environmental Policy will delay action. However, the policy “draft” will be workshopped with key stakeholders, in order to ensure implementation and enhance understanding and ownership.

- **Implementing an Environmental Management System (EMS)**

- Positive Results**

- Apart from the priorities given to effective management and legal compliance, awareness raising and training and the fact that a communication network is established, the ultimate advantage of having an effectively operating Environmental Management System is the fact that it is based on a principle of self-regulatory continual improvement, measured against the Environmental Policy and objectives and targets set. It is, therefore, envisaged that the overall environmental management, Greener Governance performance and service delivery of the Umhlathuze Local Municipality throughout its area of jurisdiction, will be continually improved.

- Negative Results**

- Although communication and co-operation within the Umhlathuze Local Municipality will be improved, the municipal capacity might not have improved, resulting in continued capacity problems.

- **Initiating a Strategic Catchment Assessment**

- Positive Results**

- Although not inspired by Greener Governance, this decision-making tool provides Umhlathuze Local Municipality with a means of controlling development within its area of jurisdiction. The advantage of such a tool is that land degradation and cumulative impacts of development (currently not taken onto consideration) can be taken into consideration, as it is continually updated with new information.

- Such a tool will also serve as a testimony to council, together with the State of Environment Report (SoER), of the key environmental challenges to be included in the Umhlathuze Local Municipality's Integrated Development Plan (IDP) revision.

Negative Results

Unfortunately, the Umhlathuze catchments-based environmental impact assessment tool not only needs infrastructure to develop the tool (such as computers and software), but also continually needs expertise to help identify and monitor indicators. Finances and monitoring capacity are, therefore, important factors in order to ensure the success of this useful decision-making tool.

- **Preventing Crime through Environmental Design**

Positive Results

In assisting the Umhlathuze Local Municipality to get its house in order, this project will not only be highly beneficial to all its residents by enhancing living conditions, but will also become an agent of change in support of the Greener Governance thinking.

Negative Results

Negative results will mostly be temporary, but will entail financial and aesthetic implications and the temporary disturbance of peace.

- **Alien Clearance in River Project**

Positive

This project will not only result in the job creation opportunities, but will also reduce the above mentioned detrimental effects.

Negative

Unfortunately, no permanent jobs will be created. The environment will be temporarily disturbed, for instance due to noise, etc.

- **Key Replication Aspects**

At this stage, environmental management and Greener Governance functions lack authority due to a lack of environmental commitment from the top structures, which results in the environmentally related responsibilities lacking importance. A key replication factor would, therefore, be to give environmental responsibility to a person in an

authoritative, co-ordinating position (someone like an IDP manager), who would be able to address the various heads of departments.

- **Staff:**

Due to the fact that there is no co-ordinating environmental department or responsibility, environmental functions are currently fragmented. In the entire municipal area of Umhlathuze Local Municipality, there are currently only six environmentally related posts which are scattered among the various municipal departments. In order to attain environmentally related goals and to overcome the problem of fragmentation, more environmentally related posts will have to be created.

- **Budget:**

Even though Umhlathuze is situated in a sensitive environment challenged by developmental issues, the municipal budget is minimal. An enlarged budget will be required in order to finalise and implement the EMS.

- **Financing:**

In order to support the various Greener Governance projects, sufficient funding has to be obtained continuously because of the lack of internal funding for environmental issues. It is *inter alia* envisaged that an Environmental Fund be established in Umhlathuze Local Municipality that is supported by the “polluter pays” principle.

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Windhoek



City of Windhoek, Namibia



Location: City of Windhoek

- **Full name of the municipality and Country**

City of Windhoek, Namibia

- **Municipal Profile**

- Population: +/- 240 000
- Land Area: +/- 20 000 ha
- Municipal Budget: +/- US\$ 0.25 billion

- **Issue Addressed**

Local Environmental Programmes as initiated in the City of Windhoek area as a result of Greener Governance Training (2002-2004).

KEY WORDS: *Environmental Structure Plan, Environmental Policy, Councillor Environmental Awareness and Training.*

- **Key Management Concept**

The environmental related problems that Windhoek City identified in proceeding with different projects, deal with weak legislation and policy needs pertaining to environmental issues, a lack of environmental awareness among councillors as local decision and policy makers and problems related to the unique environment and scarcity of water in Namibia respectively. These problems can generally be addressed by drafting new environmental legislation, by conducting public awareness programmes and by improving and modernising water saving and environmental management methods.

- **Program name**

The City of Windhoek, although extremely upfront with the incorporation of Greener Governance in its general and specific municipal activities and services, endeavoured two specific projects to be reported on in this report:

- Environmental Structure Plan and Policy Project;
- Councillor Environmental Awareness and Training Programme.



Skyline view of the city



A tourist landmark in the city

- **Programme goals**

The Environmental Structure Plan and Policy Project: This project aims to address the need for a comprehensive Environmental Structure Plan (hereafter ESP) that covers the entire Windhoek basin and is capable of indicating all sensitive and environmentally fragile areas that should be conserved, protected and considered when planning for any development project. The aim with the development of the ESP is to develop a management and decision support system that integrates spatial planning decision-making, environmental planning and environmental impact management into a coherent whole. The main purpose of the ESP is to provide essential information for land-use planning and environmental impact management, specifically for advising developers about the suitability of land in the City of Windhoek for different types of development which could take place on either vacant or built-up land parcels.

The Councillor Environmental Awareness and Training Programme: This is aimed at informing the City of Windhoek's local and regional councillors on the meaning and content of Local Agenda 21 and in so doing, making them accustomed to the logic and importance of the idea of 'sustainable development'. The aim of this project was primarily to get the key decision makers of the City of Windhoek, its councillors, to make 'sustainable' decisions when having to decide or plan on development in the area of the City of Windhoek.

- **Abstract**

The underlying factor for any effective decision-making processes is the availability of applicable and accurate data and management information. A lack of information results in *ad hoc* planning initiatives, the destruction of sensitive environments and poor monitoring and control of development activities. Hand in hand with the availability of data and management information, goes the need for legislation or policy instruments according to which a local council can manage this data effectively in a sustainable way. The city of Windhoek, in collaboration with the sub-contracted consultant AFRICON, accordingly developed an ESP as a management and decision support system, which integrates spatial planning decision-making, environmental planning and environmental impact management.

The City of Windhoek identified the need for local and regional council support pertaining to the taking of environmental-friendly decisions. Accordingly, a training and awareness project was launched in collaboration with the Konrad Adenauer Foundation (Namibia) and the Centre of

Environmental Management (CEM) in Potchefstroom, South Africa where more or less twenty local councillors received training on the content, scope and applicability of sustainable development and Local Agenda 21.



The City of Windhoek has been described as the 'cleanest' city in the southern

- **Importance of the Issue**

Many local authorities do not have appropriate information about environmental issues and problems in their jurisdictions. Access to adequate information on *inter alia* the state of their environment and sensitive environmental areas are essential for local authorities and their incorporation of the principles of, for example, Local Action 21. An ESP provides information on the environment that may be of specific importance for policy-making and city planning development. Equally important for the effective implementation of environmental management instruments and Local Action 21 principles, is environmental awareness raising among those who need to make governance decisions. It is important for local authority leadership to buy-in the Greener Governance environmental management framework of thinking.

- **Case**

Namibia gained independence from the South African colonial regime in 1990. Windhoek is the capital city of this country, situated on an inland plateau on average 1 720 metres above sea level, surrounded by the Eros Mountains in the north-east, the Auas Mountains in the south-east and the Khomas Hochland in the west (Windhoek City Health Profile and Health Work Plan, 2004). The City is the administrative, legislative and judicial seat of Government of Namibia and it is also the country's main business, cultural and educational centre. The City has a cosmopolitan atmosphere and has been described as the cleanest city in the Southern Africa region (Draft Windhoek Environmental Structure Plan and Policy, 2004).

The year 2000 municipal population estimate of the City of Windhoek was approximately 240 000 people, representing all of the country's population groups (Windhoek City Health Profile and Health Work Plan, 2004). The City's population is growing at a rate of 5.44% per annum, principally through migration from rural or other rural/urban areas of Namibia. Windhoek, as with all other developing third world cities, is experiencing a tremendous influx of people seeking employment and the promise of a better life. This influx is placing significant stress on the availability of affordable developable land, as well as life sustaining natural resources, such as water and energy. Similarly, adequate provision of sanitation and waste management also poses problems.

The average monthly household expenditure in the north and north-western area of Windhoek is US\$ 190-00 and US\$ 77-00 respectively. This compares with a city average of US\$ 371-00 and exceeding US\$ 3 299-00 in the east and south areas of the City. The highest rate of unemployment is found in the northern and north western areas of the City, 27.3% and 33.4% respectively. The level of affordability by the informal settler population is very low. Population density varies from 9.58 people per hectare in Klein Windhoek North to over 40 people per hectare in Katutura and 80 people per hectare in the informal areas. At some locations as many as 115 people per hectare are found (Windhoek City Health Profile and Health Work Plan, 2004).

The City of Windhoek is a designated municipality under Namibia's *Local Authority Act, 23 of 1992* and has a wide range of functions delegated to it. Fifteen councillors are elected every five years to represent residents on the Council and a Mayor is elected annually by the councillors to represent the City. There are nine departments, six of which are directly involved in providing services to residents and visitors. These departments include the Department of Community Services; the Department of Economic Development, Tourism and Recreation; the Department of Electricity, the Department of Finance; the Department of Transportation, Roads and Storm Water, the Department of Infrastructure, Water and Technical Services and the Department of Planning, Urbanisation and Environment.

In Windhoek, HIV/Aids, Pulmonary Tuberculosis, Acute Respiratory Infections, Pneumonia and Diarrhea are the five diseases of most concern. The City of Windhoek also identified a need to quantify air pollution from an occupational health, environmental and public exposure point of view (Windhoek City Health Profile and Health Work Plan, 2004). The ESP of the City includes a profile necessitating this quantification of air pollution levels. Proposals to establish a noise control policy, noise control and enforcement measures and the possible incorporation of noise control into the town-planning scheme are currently under discussion (Windhoek City Health Profile and Health Work Plan, 2004). However, the Noise Pollution Policy is in place and currently awaiting governmental promulgation as a Regulation. As far as energy use in Windhoek is concerned, the percentage of the population living in informal settlements has risen and electricity is not a service provided in these areas. It is accordingly probable that this percentage of the population increasingly use traditional fuels such as wood or charcoal for energy purposes. The percentage of sanitation coverage in



The Environmental Structure Plan and Policy

Windhoek is good compared with other urban areas in Namibia and as part of the City's movement towards sustainable development, communal sanitation services have already been provided for informal areas still to be developed. Although the City of Windhoek provides a very good service in the management of waste generated, there is room for improvement in the area of hazardous waste and regulatory frameworks and municipal control (Windhoek City Health Profile and Health Work Plan, 2004). Most housing in Windhoek is modern and detached. There are, however, 26% of the population living in informal areas and many households live in temporary structures made from corrugated iron or similar material that is below the standards enjoyed by the majority of Windhoek's residents (Windhoek City Health Profile and Health Work Plan, 2004). The City of Windhoek is, however, committed to facilitate and provide adequate and sustainable access opportunities to affordable land, housing and services for the low and ultra-low income residents of Windhoek. The Municipality has an on-going programme for the upgrading of informal settlement areas to improve the accessibility of residents to services, guided by the Development and Upgrading Strategy adopted in 2000.

There are many different developmental projects embarked upon by both public and private developers. The City of Windhoek is most often involved in projects aimed at uplifting the quality and standards of its inhabitants. These activities and projects might cause environmental problems, be they small or large. In all these cases, environmental impact assessments and projects have to be produced. This is, however, an expensive endeavour and accordingly became one of the problem areas to be addressed by a policy instrument such as an ESP.

The only permanent surface-water in and around Windhoek is contained in dams. Some of these water bodies are highly polluted with waste products dumped in the catchment areas of the source rivers. Riverbeds are dry for most of the year. The City of Windhoek buys bulk water from NAMWATER and distributes it to all residences and industries. Water is supplied to almost a hundred percent of the City's population. In the informal settlement areas, supply is usually from an accessible standpipe within 200 metres of each dwelling in accordance with the National Housing Policy. Water is accordingly a scarce commodity in Namibia and Windhoek's water is sourced and piped for many kilometres from the Von Bach Dam near Okahandja. There is always the danger that the future demand for water will exceed supply.

The current Namibian Environmental Structure and approach to the environment is entrenched in the Constitution which states that: *Current and future generations of Namibians have the right to an environment conducive to health, well-being and security as well as to equitable access to the nation's resources including genetic resources and all people and government institutions have a duty to protect and conserve Namibia's environment.* Furthermore, the Constitution of the Republic of Namibia commits itself to Sustainable Development. Article 95(1), Promotion of the welfare of the people, puts forward this intention as follows:

"The State shall actively promote and maintain the welfare of the people by adopting policies aimed at :

(1) Maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future..."

The Environmental clauses in the Constitution of the Republic of Namibia are the first steps in establishing a framework for environmental protection and management in Namibia, whilst the development of specific environmental policies is an ongoing process due to constant change. Namibia also has a Green Plan that addresses management and stewardship of Namibia in a sustainable manner. The policy statement was compiled by the Ministry of Environment and Tourism in consultation with other ministries. Through these policy statements, Acts and Bills have been drafted but not yet promulgated (such as the *Environmental Management and Assessment Bill* of 2003) and contain regulations and legislation with which to implement the Constitution. The regulations that stem from these drafts acts and bills are used to devise Local Authority Policy Statements and these in turn give rise to Local Authority regulations and ordinances such as the ESP.

It needs to be emphasised that as far as the environment and environmental-related projects and developments in the City of Windhoek is concerned, this City and its local government may be labelled as a Southern African leader. Some of the laudable projects and developments worth mentioning include the following:

The City of Windhoek, after the restructuring process in 1998, developed a Division for Sustainable Development within its Department of Planning and Urbanisation. The focus of this division is to provide a quality town planning service to the City's inhabitants through facilitating, guiding and

implementing the development needs of Windhoek. This is to ensure sustainable urban growth, the supply of affordable serviced land and a living environment of high quality for all of its inhabitants. The strategies that are already in place include a set of Informal Settlement Guidelines and a Development and Upgrading Strategy. Strategies planned for the future include Self-Help Group Development, On-Site Upgrading and New Land Development.

To spearhead local action initiative in line with Local Agenda 21 principles, the Windhoek Environmental Liaison Association (WELA) was established, partnering the City of Windhoek and its inhabitants in a quest for sustainable development. WELA aims for consensus building between the City of Windhoek and its inhabitants on how to harmonise urban development with environmental protection. As a result, it is creating a unified and satisfied community in a safe, clean and sustainable city while respecting its natural environment and diversity of its inhabitants. WELA is *inter alia* committed to provide a forum for the identification of environmental issues of concern, promote sustainable development objectives and principles and obtain and disseminate relevant information on environmental issues.

In January 2002, a competition tender was launched with the cooperation of the Namibian Institute of Architects to design the Habitat Research and Development Centre (HRDC) in Windhoek. In April 2002, the tender was awarded and the winning entry was the Pangolin Project of which the design concept revolves around the integration of architecture and landscape, the relation to the scale of the local housing context by designing small scale buildings suitable for the area and to design a completely environmentally appropriate building to achieve an integration of buildings and nature. The appearance derives from the use of indigenous materials and textures, as well as a Namibian aesthetic generated from the use of African forms and local construction techniques.

In managing a situation of water scarcity in Namibia, the City of Windhoek runs a major project on the artificial recharge of water. In order to prevent uncontrolled evaporation of valuable water, the City of Windhoek's Department of Urban Infrastructure runs a project in which above-ground water is stored in under-ground water storage resources called the aquifer. The main source of pure water in Windhoek is the Von Bach Dam. In order to ensure continuous availability of drinking water for Windhoek citizens, Von Bach water, the artificially recharged water as well as recaptured water are sustainably managed within a major water project of the City of Windhoek.

The uniqueness of its required water resource management as well as the location and specifications of its aquifer make this project one of its kind. The City of Windhoek may, in this regard, arguably learn from but two other countries in the world, namely the United States of America and Australia.

- **Case Description**

Environmental Structure Plan and Policy Project: As the City of Windhoek is known for the sensitive and fragile nature of its environment, the need has been identified as part of the movement towards the implementation of Local Agenda 21, to develop a comprehensive Environmental Structure Plan or ESP that covers the entire Windhoek basin. Such an ESP should be capable of indicating all sensitive and environmentally fragile areas that should be conserved and protected and considered with great care when planning for any developmental project. This need initiated the launch of a project for the development of the Windhoek Environmental Structure Plan and Policy (ESP).

Although the City of Windhoek has a very good infrastructure and the required resources for greening projects, the development of an ESP is an extensive task requiring certain specialised skills. Accordingly, the development of the municipal ESP was sub-contracted to a consultant, AFRICON. AFRICON proceeded in developing the ESP but not without the close co-operation and inputs from the local municipality departments that are involved.

The core of this project can be traced back to the fact that the underlying factor for any effective decision making process on local government level is the availability of applicable and accurate data and management information. A lack of information can easily result in ad hoc planning initiatives, the destruction of sensitive environments and poor municipal control and monitoring. The City of Windhoek's ESP is a management and decision support system, which integrates spatial planning decision-making, environmental planning and environmental impact management into a coherent and integrated whole.

The main purpose of the ESP is to provide essential information for land use planning and environmental impact management, most specifically, for advising developers about the suitability of land in the City of Windhoek for different types of developments which could take place. The information provided in the ESP is arranged in such a way as to be understandable to all practitioners and prospective land users. The ESP will function to provide the



Mr T O'Flaherty and Mr G Kozonguizi at AFRICON's Office in Windhoek

environmental component of the planning process, which is coupled with other strategic documents dealing with land use and environmental planning and management of the City of Windhoek. The ESP's strength lies in the fact that all intended projects will be guided by this Plan.

Councillor Environmental Awareness and Training Programme: It is common knowledge that not many new projects, principles or ideas can realise on local governmental level when the local council members, the councillors of a town or city do not buy into the proposal. Accordingly, the need for the City of Windhoek's councillors to be trained was identified after the Greener Governance Workshop of 2002 that addressed the content, scope and application of Local Agenda 21. Mr G. Kozonguizi and Councillor Mrs I. Schneider, as the City of Windhoek's Greener Governance representatives, realised that in order for them to incorporate the spirit of Local Agenda 21 in their local municipal tasks and projects and to ensure political and financial support for environmental-friendly decisions, their councillors (a number of approximately 20 people on local and regional level) at least had to be trained on the meaning and scope of 'sustainable development'.



**Konrad Adenauer Stiftung:
Office Namibia**

The Konrad Adenauer Foundation opened its office in Namibia after independence in 1990 (Namibia Konrad-Adenauer-Foundation Information Brochure, 8). Since 1995 the Konrad-Adenauer-Foundation (KAS) sponsors activities of the Association of Regional Councils (ARC) in Namibia in order to encourage the policy of decentralization in Namibia. The Foundation in addition conducts or sponsors conferences, seminars and workshops in various fields with the goal to promote and strengthen the democratic culture in Namibia.

The Councillor Training and Awareness Programme accordingly became a project that would benefit the City of Windhoek, whilst falling in the cadre and scope of where the KAS (Namibia) wanted to put their support and money. In 2003, Mr G. Kozonguizi and Ms Schneider approached Dr W. Maier, Resident Representative of KAS in Windhoek for a sponsorship to have the City of Windhoek's regional and local councillors trained on Local Agenda 21. As KAS claims to be a forum to address the issues of the region and as money had been set aside for a workshop for local and regional councillors, Dr Maier agreed to come on board in having the councillors trained in Greener Governance. The fact that KAS (South Africa) already put money into the initial series of Greener Governance training workshops also

assisted in making this project viable and worth the time and money in Namibia.

As the Centre for Environmental Management (CEM) in Potchefstroom, South Africa conducted the initial Local Agenda 21 training as part of the main stream Greener Governance Training Programme, no doubt existed as to whom the City of Windhoek would approach for the training of their local and regional councillors. Professor J. Nel, Managing Director of the CEM developed a training programme that addressed eight different hot-spot topics related to sustainable development and the implementation and realisation of Local Agenda 21. These topics included an Introduction to Sustainability at the Local Level, an Introduction to Environmental Issues, Functions of Local Authorities, Challenges faced by Local Authorities to Implement Environmental Management, Local Agenda 21, from Local Agenda to Action 21, the WSSD Targets and Local Action: Management Plans and Programmes.

One of the lessons learned as part of this project was, however, that training of councillors only serves to be of value when it takes place on an ongoing basis as the composition of the council often changes. It should accordingly be emphasised that the time that will be strategically most efficient, as well as the councillors that will most benefit from the training, should be carefully determined before a training project like this.

- **Results**

- *Environmental Structure Plan and Policy Project*

- *Positive:* The City of Windhoek's ESP will enable the Local Municipality to improve continually on their already existing effort to green their governance. The ESP will, *inter alia*, provide information for a complete survey of the sensitive areas, identification of nature and conservation worthy areas, as well as the possible occurrence of endangered species, a comprehensive basis of baseline environmental, socio-economic and cultural-historical information, development of an environmental sensitivity zonation and the establishment of an environmental framework within which development can take place. The ESP will ensure improved environmental quality as well as better environmental performance, especially during new developments. There would be a definite increase in both environmental and socio-economic sustainability because of the fact that environmental issues would now be addressed meaningfully and seriously and considered for proper mitigation with alternatives investigated when development proposals are being

prepared. The ESP, together with environmental policy development in the City of Windhoek, should provide sufficient information for local municipal and other decision-makers regarding a particular development so that proper environmental evaluation can be conducted which is appropriate to the scale of the proposed development and the risks to the environment which it may pose. When in operation and officially accepted by the Windhoek Municipal Council, the ESP, through overarching policy development objectives, will ensure an adequate and clean water supply to Windhoek, a clean city where people can live and work in a healthy environment, a scenic city that is attractive to residents and visitors, a responsible city that protects its natural environment to the benefit of conservation and tourism and a city that values its cultural and historical heritage and keeps it in trust for future generations.

- o **Negative:** -

Councillor Environmental Awareness and Training Programme

- o **Positive:** The success of the implementation of Local Agenda 21 and the movement towards sustainable development on local government level, strongly depends on the insight, understanding and cooperation of local government decision-makers. The decision-makers on local government level are councillors that represent the local community and that have been elected from different spheres and areas of the community. These councillors, having primarily a political agenda and general obligation towards the community, do not always have insight in the problematic issues that local government officials need to address as part of their work and in providing municipal services on a daily basis. Accordingly, in the case of Windhoek, the Councillor Environmental Awareness and Training Programme enabled the local government decision-makers to make informed and responsible decisions on all municipal aspects that may possibly affect the environment. As Windhoek is known for its sensitive environment and associated environmental problems, the city and its people now benefit from the fact that their local and regional councillors take environmentally responsible decisions based on the spirit of Local Agenda 21 and sustainable development in general. It should be emphasised that the training had a ripple effect since most planning, service providing, strategic and political decisions taken by council, now takes place in a much more environmental friendly framework.

The programme also resulted in the strengthening of the existing partnership between the Windhoek Local Council, KAS (Windhoek) and the CEM. At the time of the writing of this report, future training possibilities have been discussed. The remaining parts of Namibia may also in future benefit from this project as KAS (Namibia) now aims to invest in the dissemination of environmental related information and training through the whole of Namibia. This may take place in collaboration with the National Ministry of Regional and Local Governments and Housing.

- *Negative:-*

- **Key Replication Aspects**

- *Staff*

Environmental Structure Plan and Policy Project: The project has been a collaborative endeavour of the Windhoek City's Environmental Department (Mr G. Kozonguizi) and AFRICON. Whilst Windhoek City took initiative in identifying a need for the ESP, AFRICON's personnel under the management of Messrs T. O'Flaherty and T. van Viegen, saw to the specialised development of the content of the ESP.

Councillor Training and Awareness Programme: Mr G. Kozonguizi and Councillor Mrs I. Schneider, of the City of Windhoek, took initiative in approaching KAS (Namibia), specifically Dr W. Maier (KAS Resident Representative) for the training of their local and regional councillors. The training was done by the CEM's Managing Director, Professor J. Nel. The administrative organisation of the training programme was seen to by Mr G. Kozonguizi and a municipal colleague of his (Ms. M. Shikongo), dealing with Councillors Support Services. The financial administration was dealt with by KAS.

- *Budget*

Environmental Structure Plan and Policy Project:

This project that covered a period of twelve months, cost approximately US\$ 142 356-00.

Councillor Training and Awareness Programme:

The costs of this training programme were in the range of US\$ 4 909-00. This included the accommodation, return air ticket and honoraria of Prof J. Nel.

- *Financing*

- Environmental Structure Plan and Policy Project:*

- The City of Windhoek's municipal budget for 2003/2004 included the required funds for this project and no external or sponsored funds were used.

- Councillor Training and Awareness Programme:* This programme was fully sponsored by the Konrad Adenauer Stiftung and the City of Windhoek Local Council had no expenses.

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