SUMMARY REVIEW OF THE
ETHEKWINI MUNICIPALITY’S
2010 FIFA WORLD CUP EVENT GREENING PROGRAMME

Changing the future of Eventing and Leaving a Climate Protection Legacy in Durban
Greening Durban 2010 Awards: Nicci Diederichs (Programme Manager), Dr Debra Roberts (Programme Leader) and Meggan Lewis (EPCPD, Climate Protection Branch) with their many awards for innovation and excellence in greening Durban’s World Cup.

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Acronym Definitions

CCBS  Climate, Community and Biodiversity Standards
CDM  Clean Development Mechanism (under the Kyoto Protocol)
CER  Carbon Emissions Reduction (carbon credit)
CMP (UNFCCC)  UNFCCC Kyoto Protocol Meeting of the Parties
COP (UNFCCC)  UNFCCC Conference of the Parties
DANIDA  Danish International Development Agency
DSW  Durban Solid Waste (eThekwini Cleanning and Sanitation Services)
DWAF  Department of Water Affairs and Forestry
EIA  Environmental Impact Assessment
EMP  Environmental Management Plan
EMS  Environmental Management System
EPCPD  Environmental Planning and Climate Protection Department (eThekwini Municipality)
ETA  eThekwini Transport Authority (eThekwini Municipality)
FIFA  Federation Internationale de Football Association
GWSSD  Greening the World Summit on Sustainable Development
ISO  International Organisation for Standardisation
KZN DAFARD  KwaZulu-Natal Department of Agriculture, Environmental Affairs and Rural Development
NGO  Non-government organisation
PDO  Project Development Document (CDM registration process)
PIN  Project Identification Note (CDM registration process)
PVA  Public Viewing Area
SPU  Strategic Projects Unit (eThekwini Municipality)
UNFCCC  United Nations Framework Convention on Climate Change
WCT  Wildlands Conservation Trust
WESSA  Wildlife and Environment Society of Southern Africa

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1. Background

Durban was selected as one of nine cities in South Africa to host the 2010 FIFA World Cup. In accepting this role, the eThekwini Municipality signed a FIFA Host City Agreement in 2006 that included a broadly worded commitment to environmental protection:

"CLAUSE 6.7: ENVIRONMENTAL PROTECTION
The Host City undertakes to carry out its obligations and activities under this Agreement in a manner which embraces the concept of sustainable development that complies with applicable environmental legislation and serves to promote the protection of the environment. In particular, the concept of sustainable development shall include concerns for post-competition use of Stadia and other facilities and infrastructure."

The eThekwini Municipality started its preparations for hosting the 2010 FIFA World Cup in 2006, and from the start it was recognised that an event greening programme was required to both meet the requirements of the above Environmental Protection Clause in the FIFA Host City Agreement, and also to ensure that Durban developed its profile as a global eventing city by addressing environmental sustainability during the planning and delivery of this mega event.

In response to this need, the eThekwini Municipality established the Greening Durban 2010 Programme. This programme was directed and implemented by the Environmental Planning and Climate Protection Department of the eThekwini Municipality, with assistance from a contracted Programme Manager from a local consultancy.

This is the first event greening programme of a significant scale that the eThekwini Municipality has developed and run, and the experience has yielded important lessons. The highly successful hosting of the World Cup in Durban has positioned the city well to bid to host other major sports events and conferences in the future. In light of the increasing global demand for minimising potential negative climate, social and ecological impacts of major events, the eThekwini Municipality will now proceed to build on the Greening Durban 2010 Programme experiences by developing comprehensive “event greening” skills, capacity and policy frameworks as part of its continued role as an internationally prominent Event Hosting City, and to address the growing demand for green events. In the first instance, this knowledge and experience will be used in the hosting of the United Nations Framework Convention on Climate Change in 2011 (COP17-CMP7).
2. Overview Of The Greening Durban 2010 Programme

The Greening Durban 2010 Programme was modelled on international best practice in event greening approaches and was aligned with 2010 World Cup event greening programmes that were run in other South African Host Cities, and by the national Department of Environment Affairs. The Greening Durban 2010 Programme included five Core Focus Areas and three Cross-cutting Focus Areas namely:

**Core Focus Areas**
1. Energy Efficiency and Renewable Energy
2. Conservation of Water Resources
3. Sustainable Management of Waste
4. Environmentally Efficient Transportation Systems
5. Biodiversity Conservation

**Cross-cutting Focus Areas**
1. Climate Protection
2. Communication
3. Monitoring and Evaluation

A set of targets and an implementation strategy was developed for each of the above eight Focus Areas. In terms of these strategies and targets, a total of 21 priority projects were implemented through the programme at a total cost of R25.4 million.

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The Eight Greening Durban 2010 Programme Core and Cross-cutting Focus Areas and Associated Targets
It was recognised early on that in order to “green” the World Cup in Durban, action would be required across a large number of municipal service sectors involved in developing infrastructure for and managing the event. Consequently, the Greening Durban 2010 Programme developed a set of “Green Principles” which it disseminated to all relevant municipal sectors, with the intention of promoting “environmental sustainability best practice” in all 2010 activities, even though these might not fall directly within the control or ambit of the Greening Durban 2010 Programme.

These Green Principles were:

- Minimise ecological, social and economic impacts and costs;
- Maximise ecological, social and economic benefits;
- Minimise wastage of resources;
- Scale and type of installations and systems must be appropriate to the South African and Durban context;
- Must be financially sustainable;
- Must leave a positive legacy;
- Establish iconic installations that showcase working examples of green (environmentally friendly) technologies;
- Promote environmentally sustainable behaviour and awareness.

One of the key roles of the Greening Durban 2010 Programme was therefore to assist all municipal sectors involved in planning for, developing the infrastructure for, and managing the event, to interpret these principles and their applicability, and to translate them into action.
3. Programme Budget and Funding

In total, 21 priority projects were implemented through the programme, and a total of R25.4 million invested. Programme funding was provided by the eThekweni Municipality (R15.9 million – 63%) and the Danish International Development Agency (DANIDA) (R9.5 million – 37%). Through the ECPDP’s relationship with the NGO, Wildlands Conservation Trust, the programme also leveraged support-in-kind from the Comrades Marathon Association and KZN Scouts, which contributed significantly to expanding the achievements of the Greening Durban 2010 Programme’s community reforestation project at the Buffelsdrift Landfill Site.

Although the value of all projects and initiatives undertaken under the direct management and control of the Greening Durban 2010 Programme was R25.4 million, much more than this was invested in real terms in the greening of event venues and infrastructure, as a result of the application and implementation of the “Green Principles” by other 2010 Programme workstreams.

3.1 Ethekweni Municipality

The eThekweni Municipality had originally committed R12.5 million in Capital Funds to Greening Durban 2010, with R5 million allocated in the 2008/09 financial year and R7.5 million in the 2009/10 financial year.

The Greening Durban 2010 Programme identified the need for Operating funds to cover a significant number of its projects and after representations made to the Municipal Treasurer, this resulted in R3.4 million in Operating Funds being allocated to the Programme.

3.2 DANIDA

The Danish International Development Agency (DANIDA) is an organisation situated within the Ministry of Foreign Affairs of Denmark. It was set up to provide humanitarian help and assistance in developing countries. DANIDA has a range of environmentally-related programmes, such as the Urban Environmental Management Programme (UEMP), from which funding was sought to support the Greening Durban 2010 Programme initiatives.

R9.5 million was provided by DANIDA through two separate application processes, one for the Buffelsdrift Landfill Site Community Reforestation Project (R2.5 million) and one for a range of interventions to further the greening of event venues (R7 million).

3.3 Other Sponsors

While it was the original intention to seek sponsorship / funding from the private sector and business for the Greening Durban 2010 Programme activities, this was not pursued as the FIFA restrictions around the alignment of the FIFA brand with businesses that are not official sponsors or partners of FIFA were prohibitive. However, certain of the Greening Durban 2010 projects provided opportunities for in-kind contributions.

For example, at the Buffelsdrift Landfill Site Community Reforestation Project, the Comrades Marathon Association, Bonitas Medical Fund and KZN Scouts were able to contribute in kind to the programme by undertaking tree-planting drives at various times, eventually contributing 41,500 trees (40%) to a total of 104,000 trees planted in the first phase of the project, which was completed in June 2010.

For the project which involved upgrading of the “Umcgweni Green Precinct”, a waste clean-up weekend was held in May 2010 at which sponsorship of prizes, safety equipment and waste removal services by various companies totalled over R93,000.

1 The original list of projects identified to meet the Programme targets and objectives, before prioritisation, was costed at around R75 million.
4. Summary of Key Achievements

4.1 Climate Protection

Climate Neutral Target – Durban as a National Best Practice Example

The carbon footprint for hosting the 2010 FIFA World Cup events in Durban was estimated at 307,208 tonnes CO₂. The Greening Durban 2010 Programme set the target of hosting a “climate neutral” World Cup, where this entire carbon footprint would be neutralised through various carbon sequestration and offset projects. Durban was the only 2010 world cup host city that set this target.

Carbon Sequestration through Community Reforestation

A Community Reforestation Project was established in the 787 hectare municipal-owned buffer zone around the new regional landfill site at Buffelsdriek, north of Durban, with the aim of replanting a forest that would sequester carbon as the trees grew. A total of 650 hectares within this buffer zone can be reforested. The first phase of the project was implemented between November 2008 and June 2010, which resulted in the following outcomes:

- 104,000 locally grown indigenous trees were planted on 82 hectares of land to re-create forest habitat. This represented 166% of the original target of 62,500 trees to be planted before the kick-off of the 2010 World Cup.

- The above is estimated to be able to sequester around 20,000 tonnes of CO₂ over a 20 year period. 65% of the carbon footprint of the 2010 World Cup in Durban.

- 270 local community “Treprenuers” were established in the neighbouring communities of Buffelsdriek and Osindisweni, to grow the trees for the project and trade these for food, school fees and other basic goods. A further 348 Treprenuers in nearby Ndwedwe and KwaMashu (established through other projects) traded trees to the project in order to ensure that the tree planting targets could be met. Phase I of the project saw R248,413 worth of school fees and basic goods go to these Treprenuers in exchange for the seedlings used in the reforestation project.

- 13 full time jobs were created for local community members during this first phase of work, including a 9-member tree planting team and 4 community facilitators to run the Treprenuer programme. The second phase of the project will see this team reconfigured to a permanent 6-member tree planting team, and 4 full time community facilitators.

- 3 permanent part time jobs were created for an additional community facilitator and a firewatch team.

- 220 temporary jobs were created, resulting in R218,000 being earned by local community members.

- Securing funds for a second phase of the project that will run between July 2010 and June 2011, in which a further 100,000 trees will be planted on 100 hectares of land in the Buffelsdriek Landfill Site buffer zone. These funds were sourced jointly from DANIDA and the eThekwini Municipality.

This approach to carbon sequestration was unique amongst South African 2010 World Cup host city Greening Programmes. Many of the other host cities also planted trees, but these formed part of urban greening programmes rather than reforestation initiatives. Both approaches have merit, but Durban’s community reforestation approach assisted the municipality to achieve greater gains in biodiversity conservation, catchment protection and direct rural social-economic upliftment which would not have been achieved in urban tree planting programmes. The project has demonstrated that reforestation is a useful climate mitigation approach that also results in important climate adaptation benefits such as river catchment protection.
Local community members grow trees for the Buffelsdraai Landfill Site Community Reforestation Project at their homes.
Local community members are employed to tend the project nursery and plant the trees at the Buffelsdraai Landfill Site Community Reforestation Project.
Using the Climate Neutral Target to Kick-start Major Renewable Energy Projects

More than 80 potential carbon emissions reduction projects associated with eThekwini Municipality service infrastructure were investigated. A shortlist of five renewable energy projects comprising hydropower, biogas to energy, cogeneration and solar water heating was developed. Business Plans were developed for these projects, and Project Identification Notes (PINs) were submitted to and accepted by the Designated National Authority (DNA) for Clean Development Mechanism (CDM), under the Kyoto Protocol. This effectively completed the first step in the process of registering these as CDM projects, and rendering them eligible to bank or trade carbon credits. The remaining work required to complete this registration of these projects has been funded and is taking place in the year following the 2010 FIFA World Cup.

It is anticipated that not all five projects will be initiated simultaneously, consequently it is difficult to predict how long it will take for the projects to generate sufficient carbon emissions reductions (CERs) or carbon credits, to offset the major portion of Durban’s World Cup carbon footprint (93.5% of the carbon footprint, or some 287,200 tonnes CO2) would need to be offset banking the CERs from these projects in their first years of operation, with the balance of 6.5% of the carbon footprint being offset through the Buffelsdrift Landfill Site Community Reforestation Project.

More Inclusive Carbon Footprint Calculations

The total embodied carbon emissions associated with building the new Moses Mabhida Stadium were completely incorporated into Durban’s carbon footprint for the 2010 World Cup. This is an unusual carbon footprint calculation method, as ordinarily an event carbon footprint would apportion the embodied emissions of new infrastructure for a single event rather than account for the total embodied emissions footprint. However, the use of this approach was a strategic decision to ensure that Durban would have a “climate neutral” stadium to offer for future events, assisting Durban in building its strategic advantage in future sports event hosting bids. Durban was the only 2010 FIFA World Cup Host City to adopt this inclusive carbon footprinting approach.

The Moses Mabhida Stadium
in action during the 2010 FIFA World Cup
4.2 Energy Efficiency and Water Resource Conservation

Iconic new Stadium used to Demonstrate that Green is Efficient and Effective

A significant reduction in the energy and water requirements of the new Moses Mabhida Stadium was achieved through a greener building design, and more efficient systems and fittings:

- **Energy footprint**: reduced by 30% through the selection of energy efficient architectural design, technologies and fittings. These measures will save around R1 million in electricity costs per annum.

- **Water footprint**: reduced by 74% through the use of water capture and recycling systems, efficient irrigation systems and water efficient fittings. These will save approximately R700,000 per annum and secure the sustainability of “water-hungry” landscapes (including the pitch) that may otherwise be threatened by future regional water shortages.

Demonstrating Green in Social Infrastructure

Significant investment was made in reducing the energy and water requirements of three smaller stadia in former township areas which were upgraded as potential training venues for the World Cup. This has left an important legacy for these upgraded “sports hubs”, in areas where impoverished communities are in need of improved social infrastructure. The reduced energy and water requirements of the facilities will represent important operational cost savings, with potential reduced hire / user charges.

Entrenching Green in Infrastructure Operations for the Event and Long Term

Environmental Management Systems (EMSs) were developed and piloted during the World Cup at Moses Mabhida Stadium, King Zwelithini Stadium, Princess Magogo Stadium, Sugar Ray Xulu Stadium and Durban’s Beachfront Promenade and Fan Park. These guided the operation of these venues towards reduced resource requirements and negative outputs, and will ensure a more environmentally sustainable operation of these facilities in the future (these EMSs are ISO 14001 ready). The EMSs will be incorporated into the facility operator and event organiser contracts at these venues.

4.3 Sustainable Management of Waste

Using the Event to Show that Waste Recycling and Re-use at a Major Scale can be Effective

Moses Mabhida Stadium was built on the site of the former Kings Park Soccer Stadium. Masts, control gear, topsoil, pre-cast seating, 400 tonnes of steel and 40,000 bricks removed from the old Kings Park Stadium were recycled and utilised for the new stadium as well as other projects in the city, including refurbishment of school ablutions.

Waste Management Plans were developed for all 2010 World Cup event hosting venues in Durban, and incorporated into the EMSs developed for these venues. A “Strategic Sustainable Waste Management Plan” which addressed the Greening Durban 2010 principles and targets was developed and included into the municipality’s overarching waste management operational plan for Durban for the 2010 World Cup.

A 2-bin system was implemented at all Durban’s World Cup event venues, resulting in 24% of the waste collected being sent for recycling (4% above target).

More than 1.8 billion of advertising banners from Durban’s beachfront Fan Fest was re-used in a community project that helped to raise funds for conservation and climate protection initiatives.

A highly successful waste clean-up weekend was held along the uMngeni River Estuary, the Greening Durban 2010 environmental investment area, in which a large number of local businesses, residents and schools participated, and which saw 2500 bags of waste collected. This was a highly effective way of getting citizens practically involved in cleaning up their city for the World Cup.
NON-RECYCLABLE WET WASTE

CRISPS PACKETS  CIGARETTE BUTTS  FOOD WASTE

DISPOSE OF CIGARETTE BUTTS, CRISPS PACKETS, FOOD WASTE, SOILED PAPER & ANY OTHER NON-RECYCLABLE WASTE HERE!

DURBAN  SOUTH AFRICA  FIFA

RECYCLABLE DRY WASTE

CANS  PAPER  PLASTIC

RECYCLE ALL CANS, PAPER & PLASTIC HERE!

DURBAN  SOUTH AFRICA  FIFA

Signage Developed and Used for 2-Bin System for the 2010 World Cup in Durban

Recycling Bin Station on Durban’s Beachfront Promenade
4.4 Environmentally Efficient Transportation

Providing Support to the Transport Sector

The Greening Durban 2010 Programme actively lobbied the Transport Sector around the development of improved pedestrian and cycling networks and linkages within Durban, to serve the 2010 World Cup events but also to leave a permanent non-motorised transport legacy. The Greening Durban 2010 Programme provided support to the process of upgrading Durban’s Beachfront Promenade as the major pedestrian and cycling link between the beachfront hotel belt and the Moses Mabhida Stadium, where the Programme Manager used her experience in environmental legislative processes to address problems and issues that arose through the Environmental Impact Assessment (EIA) process for this project.

Changing People’s Behaviour Patterns towards using more Sustainable Transport Systems

The eThekwini Municipality successfully implemented Park and Ride, and Park and Walk systems for the World Cup events which reduced traffic congestion in the city and around event venues, reduced carbon emissions and promoted the use of public transportation in sectors of the population that ordinarily do not use it.

4.5 Biodiversity Conservation

Investment in Biodiversity in a Location where People can Appreciate it

The Greening Durban 2010 Programme adopted the uMgeni River Estuary Precinct as an environmental investment area. A Precinct Planning process was undertaken for the area to guide its future upgrade as a unique and highly important biodiversity conservation and recreation area in Durban. As part of the Greening Durban 2010 Programme, the process of upgrading the area was started with the implementation of the following:

- Financial support was given to a local community co-operative to clear alien plants from 15.5 hectares of densely infested open spaces within the uMgeni River Estuary Precinct, and undertake a follow up clearing exercise.

- In collaboration with the 2010 City Beautification Programme (eThekwini Strategic Projects Unit), an upgrade of Blue Lagoon Park in the uMgeni River Estuary Precinct was undertaken to improve social amenities and promote use of this area for nature-based recreation.

- The construction and fitting out of the uMgeni River Estuary Green Hub, including development and installation of branding and signage, and a new public toilet block. The Green Hub will become Durban’s central portal for the promotion of outdoor nature-based activities and green technologies and approaches that can be adopted by individuals, businesses and schools. The Green Hub building design incorporated a range of “green building approaches”, including: natural lighting and ventilation, solar photovoltaic power source, rainwater harvesting from the roof area, use of low carbon timber over steel or aluminum for structural support, windows and doors; no geysers or airconditioners; and low energy lighting (including LED).
The uMgeni River Estuary from the air

The Umvubu Services local co-operative, clearing alien plants at the uMgeni River Estuary
North facing wall of the Green Hub Office showing Rainwater Tank

Uncluttered internal space, with North wall made up of sliding doors for natural ventilation
Green Hub – interior when furnished in July 2010

Green Hub – example of window decals
4.6 Communications

Publications aimed at Changing Perceptions and Behaviour at a Broad Scale

Production and launch of Durban’s first Green Guideline Series comprising:

- **Energy Efficiency Guideline**
  - A comprehensive guide to energy efficient behaviours and technologies, and renewable energy systems applicable to households, schools and businesses. The guideline includes a basic energy audit which can be used to direct energy saving action and expenditure towards the greatest consumers of energy in a home, school or office.

- **Water Conservation Guideline**
  - A simple guide to managing water demand in a household, school or business. Information is provided on how much water different appliances use and how behaviour and technology changes can reduce the consumption of water.

- **Sustainable Waste Management Guideline**
  - A comprehensive guide to how to measure the waste types and volumes coming from a household, school or office, and simple interventions to reduce waste outputs and engage in waste recycling programmes.

- **Green Landscaping Guideline**
  - A guide to how to design and maintain both soft and hard landscapes in a more environmentally considerate way. The guide deals with various aspects of landscaping that can make a considerable impact on the amount of water and energy used, and pollution generated, in maintaining the landscape. It also provides guidance on landscaping which provides better habitat for local biodiversity and how to rehabilitate areas back to a natural state.

These publications were intended to utilise the platform of the 2010 World Cup to highlight environmental sustainability issues, shift perceptions and create practical informational tools to guide people towards more sustainable behaviour and technologies. The Green Guideline Series was designed to provide a significant amount of technical detail, but in a way which was accessible and understandable for homeowners, schools and businesses.

The Green Guideline Series has been in high demand, and the positive response has been well above what was expected. Importantly, the public launching of this series was key in ensuring media coverage and therefore assisting in accelerating the demand for this product.

The Greening Durban 2010 Programme also undertook the process of updating and expanding the municipality’s “Durban’s Nature Reserves” booklet that was produced in 2002. This was done to develop a publication which could be used at the Umgeni River Estuary Green Hub to offer information on nature-based activities throughout Durban and KwaZulu-Natal. The output of this process was a *Guide to Durban’s Nature Attractions and Outdoor Experiences*. 
The City of Cape Town had developed a schools “Soccer and the Environment” poster and booklet to promote the link between soccer and a healthy environment in Grade 7’s. This was shared with the eThekwini Municipality, who made minor editorial and graphical changes to the publication and distributed it throughout Durban and KwaZulu-Natal senior primary schools in collaboration with the Imagine Durban Programme and KZN Department of Agriculture, Environmental Affairs and Rural Development.

**Using the Event to Profile Durban as a “Green Event Destination”**

A Greening Durban 2010 web page was established on the official Durban FIFA website.

Extensive media communications were undertaken including around 100 press releases, radio and television interviews and magazine articles at a local and international level. These covered the Greening Durban 2010 Programme generally and certain projects. The individual projects which generated most media interest included the BuffaloHills Landfill Site Community Reforestation Project, Green Guideline Series, Greening of Moses Mabhida Stadium and uMingeni River Estuary Green Hub and Waste Clean-up event.

Important public recognition of the achievements of the Programme have been as follows:

- Impumelelo Innovations Trust Gold Award for “Greening of Moses Mabhida Stadium”.
- Mail and Guardian 2010 Greening the Future Award for the Greening Durban 2010 Programme in the category “Energy Efficiency and Carbon Management”.

The Greening Durban 2010 Programme has been recognised as the leading 2010 World Cup event greening programme in South Africa. This is both in terms of the wide ranging scope and achievements of the Programme, and its efficiency in terms of the outputs relative to expenditure.
Soccer & the Environment
Making Connections
Grade 7
Teacher's Guide
Greening Durban

Greening Durban 2010

The eThekwini Municipality is committed to hosting an environmentally sustainable 2010 FIFA World Cup in Durban, and ensuring a positive environmental legacy is left from hosting the event.

The R25.5 million Greening Durban 2010 Programme has been set up to achieve this. We are involving local people in our work to ensure that the benefits and learning experiences are spread as widely as possible.

Greening Durban
A number of greening projects are underway to help offset the environmental effects of staging the FIFA 2010 World Cup™ in Durban. more

Climate Neutral
In line with its Municipal Climate Protection Programme, the eThekwini Municipality intends to host a 100% climate neutral 2010 FIFA World Cup event in Durban. more

Water and Energy Efficiency
The conservation of water and energy are key global issues, and are particularly important to the Greening Durban 2010 Programme. more

Sustainable Management of Waste
Durban aims to ensure that waste generation is minimised at event venues. more

Sustainable Transportation Systems
The use of non-motorised transportation systems and mass public transport by spectators is an important component of minimising the carbon footprint of the event in Durban. more

EcoSystems
The Greening Durban 2010 Programme has selected the lower Mgeni Estuary area as the precinct where investment will be made into ecosystem service supply enhancement. more

Buffelsdraai
Buffelsdraai Landfill Site
Community Reforestation Project
more

Green Guidelines
The Green Guideline Series is an initiative of the Greening Durban 2010 Programme, which has been established to ensure that the 2010 FIFA World Cup™ event is hosted in an environmentally sustainable way in Durban more

Environmental Code for World Cup Fans
Fans visiting Durban can play an important role helping us achieve a “green” World Cup event. more

The Greening Durban 2010 Programme
Home Page on the Durban FIFA website
5. Summary of Key Lessons Learned

Despite the important and wide-ranging achievements of the Greening Durban 2010 Programme, the programme team felt that more could have been achieved with better integration of green principles and approaches across all municipal and private sector agencies involved in planning and managing the event. A programme review has identified a number of strengths and weaknesses associated with activities and processes, and it is these that offer important lessons which will help to shape increasingly effective event greening approaches for the future.

The following is a brief summary of the key lessons that have been learnt from implementing the Greening Durban 2010 Programme:

Event Greening needs to be Mainstreamed in the Event Co-ordination / Management Function

Event greening cannot be successful if it is treated as a sectoral programme. In order to comprehensively green an event, all sectors involved in establishing the infrastructure for the event, planning or managing the event, need to incorporate “green principles and approaches” into what they do. The Greening Durban 2010 Programme was only partially successful in achieving this. The reasons for this are a result of the programme being sectorally located and lead from the environmental department of the eThekwini Municipality and the fact that there were insufficient resources within this programme to invest in driving the integration of green principles across all sectors.

The most effective institutional location for an event greening programme would therefore be in the central event co-ordination / management office, where all sectors could be influenced in terms of how they conduct their activities towards a greener set of objectives. In some cases it may be appropriate to lodge specific capacity within key municipal departments that require ongoing technical support in respect of greening their event hosting activities. Importantly, wherever its institutional location, the event greening programme needs to be given sufficient priority as there is a tendency to see such initiatives as “add-on”, and not core to the delivery of a successful event.

Partnerships are Important

Partnerships can be formed that result in increased funding for event greening, additional technical skills or implementation capacity. The Greening Durban 2010 Programme benefited significantly from funding partnerships (e.g. with DANIDA), implementation partnerships (e.g. with the Wildlands Conservation Trust) and provision of technical support (e.g. from Department of Environment Affairs that funded a “green review” of the Moses Mabhida Stadium). The programme would have benefited from additional partnerships with recycling companies, the sponsors / affiliates of FIFA and other agencies that could have contributed either financially or in terms of the management systems needed to achieve the programme’s aims. Furthermore, the involvement of schools, community based organisations, non-governmental organisations and civil society could have assisted in broadening the range and scope of event greening achievements.

Harnessing the Enthusiasm and Interest of the Private Sector and the Public

The Greening Durban 2010 Programme’s waste clean up weekend at the uMngeni River Estuary demonstrated the incredible energy and interest that local business and local residents were prepared to pour into helping prepare their city for the big event. The private sector, schools and the general public should therefore have been given a greater opportunity to participate in / contribute to the Greening Durban 2010 Programme objectives, and this should be addressed as an important opportunity in future event greening programmes.

The Waste Clean up Event at the uMngeni River Estuary involved more than 400 volunteers who helped pick up 2500 bags of rubbish
The Greening Durban 2010 Programme did not have sufficient time or resources to engage the local hospitality sector around greening their activities and facilities for the World Cup and beyond. This is seen as an area which should be given priority in future event greening programmes, as it will assist in strengthening Durban’s profile as “a green event hosting city.”

**Innovation in Funding Event Greening is Required**

The eThekwini Municipality funded the majority of the Greening Durban 2010 Programme (63% of programme budget), with significant financial support in the form of grant funding from DANIDA (37% of programme budget). No systems were in place to facilitate event visitors donating or contributing to greening initiatives, and event organisers FIFA did not provide funds in support of greening initiatives in Durban or other Host Cities. There were significant lost funding opportunities as a result of this, partly because it was difficult for Durban (one of nine Host Cities) to invest the time and resources needed to get such financial support systems operational. This role would have been better played by the national Department of Environmental Affairs through their national World Cup Greening Programme.

On principle, the parties that contribute directly to negative environmental social impacts associated with the events they own or attend should contribute to mitigating them. This should, at a minimum, involve the Host City providing the opportunity for these parties to contribute voluntarily to mitigating such impacts. Alternatively the contribution could be achieved through the Host City charging specific “green” levies (e.g. on event hosting fees, gate entry fees, bus tickets etc.). This would not only ensure that the Host City is not left to cover these costs at the ratepayers expense, but also creates awareness in the people / agencies paying for their unintended negative impacts. Innovation is thus required in future event greening programmes to secure alternative or supplementary funding streams for event greening initiatives, which are aimed at securing public goods and health.

**Event Greening Targets should be set that Push Boundaries and Set New Benchmarks**

Owing to the fact that “greening” is an emerging field, there is still substantial room for an Event Hosting City to test new approaches and contribute not only to its own basket of innovative projects, but also to the global knowledge base around how sustainability challenges can be met. Event greening targets should therefore always be set such that they represent levels not of “what can be achieved based on current operating systems”, but rather on what could be achieved if current operating systems are optimised or improved. The increased funding and “business unusual” approach that tends to surround the preparations for hosting major events provides unsurpassed opportunities for cities to test new approaches or aim for higher targets and see what can be achieved. These experiences can leave a great legacy for the host city.

**Programme and Resourcing Timeframes need to be Sufficiently Long**

The Greening Durban 2010 Programme was initiated after many of the major infrastructure development projects for the 2010 World Cup were already designed and under construction. This limited the influence that the programme had on the greening of this infrastructure, or the sectors that were involved, as the core design features were already fixed.

Furthermore, the Greening Durban 2010 Programme was initiated in 2007, with project implementation beginning in 2008. This did not provide sufficient lead-in time to develop partnerships, integrate with all sectors or establish alternative funding streams to those that were readily available. Future event greening programmes thus need to be aligned with the mainstream event infrastructure and co-ordination programme timeframes, and with sufficient lead-in time to create an integrated platform for implementation.

**Budgeting**

The Greening Durban 2010 Programme did not budget beyond the World Cup event. This has proved to be problematic given that a number of the projects initiated through the programme have a long term focus. For example, the Buffelsdrift Landfill Site Community Reforestation project will need to be maintained for 20 years in order for the carbon sequestration benefits to be secured. The event should not be seen as the end-point in future event greening programmes, but rather as a milestone in the programme.

**Lost Opportunities in Communications**

Major events pose unprecedented opportunities for messaging around green issues, given the inherent media interest in the event. The Greening Durban 2010 Programme did not have the time or resources to run a comprehensive communications programme, and this is considered to be a lost opportunity.
Event greening communications should ideally be mainstreamed within the event communications programme rather than run as a specific or stand-alone initiative. This will assist in ensuring that effective green messaging and profiling of event greening initiatives is achieved across a wide range of audiences.

6. Conclusions

The Greening Durban 2010 Programme was arguably the largest and most comprehensive event greening programme implemented around the 2010 FIFA World Cup in South Africa. The achievements of the programme have positioned Durban both nationally and internationally to host “green events”.

Key strategic outcomes of the programme important in building this status have been:

- The development of a “carbon neutral” stadium (Moses Mabhida Stadium)
- Establishment of local renewable energy and socially beneficial carbon sequestration projects that will generate “carbon credits” that can be used in offsetting the carbon footprints of future events.
- The establishment of transportation systems within Durban that promote non-motorised traffic and public transport usage to access events venues.
- Major events venues within Durban governed by Environmental Management Systems (EMSs) that address resource use efficiency, pollution prevention, sustainable management of waste and protection of ecosystems and human health.
- The establishment of a system for dual waste streaming from events, which maximises waste volumes recycled.

This success can, however, be enhanced to ensure that Durban becomes a world leader in green event hosting through:

- Mainstreaming event greening in the municipality’s event co-ordination and communications structures, and ensuring integration of green principles and approaches across all sectors through appropriately informed events policies.
- Engaging the hospitality sector to ensure that Durban as a city and not just the municipality as the event co-ordinating agency, can offer green event hosting services.
- Certifying the EMSs for Durban’s main event venues.
- Engaging with Durban’s business sector and communities to harness their energy and interest in supporting greening endeavours.
- Establishing systems or mechanisms through which visitors to Durban’s events, event owners and other interested parties can contribute financially towards the greening of events.
- Continuing to set high event greening targets that secure the city a leading role world-wide in the evolution of event greening approaches.