UFI Sustainable Development 2013 Awards

Category: Best Innovative Environmental Initiative

Entry: Scan Display Solutions

Project: CCR Expo (South African Climate Change Response Expo) at COP17

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Scope

The South African Climate Change Response Expo (hereafter referred to as the CCR Expo) ran parallel to the 17th Conference of the Parties (COP17) in Durban, South Africa, both in terms of time and space. The event was intended to raise awareness among and educate the public about global warming, to showcase South African innovation in the field of carbon mitigation and sequestration, and to showcase South Africa as a whole to the international delegates. Naturally, as a COP17 side event, we had to do as much as possible to make this a green event.

In our approach, we defined greening as making choices that were environmentally, socially and economically sustainable (the triple bottom line approach). This is because of the co-dependent "eco-system" between these three interacting elements.

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Scope

Size: 20 000m²
Dates: 28 November – 09 December 2011

We had to provide all infrastructure for this event, including:

- Exhibition halls for 130 exhibitors;
- Conference and networking facilities (700 pax in total);
- A fully functional media centre (with radio and television interview rooms);
- Entertainment facilities (stage & AV);
- Catering and ablutions for the event staff and over a thousand visitors per day.

(*See layout design on the next page*)

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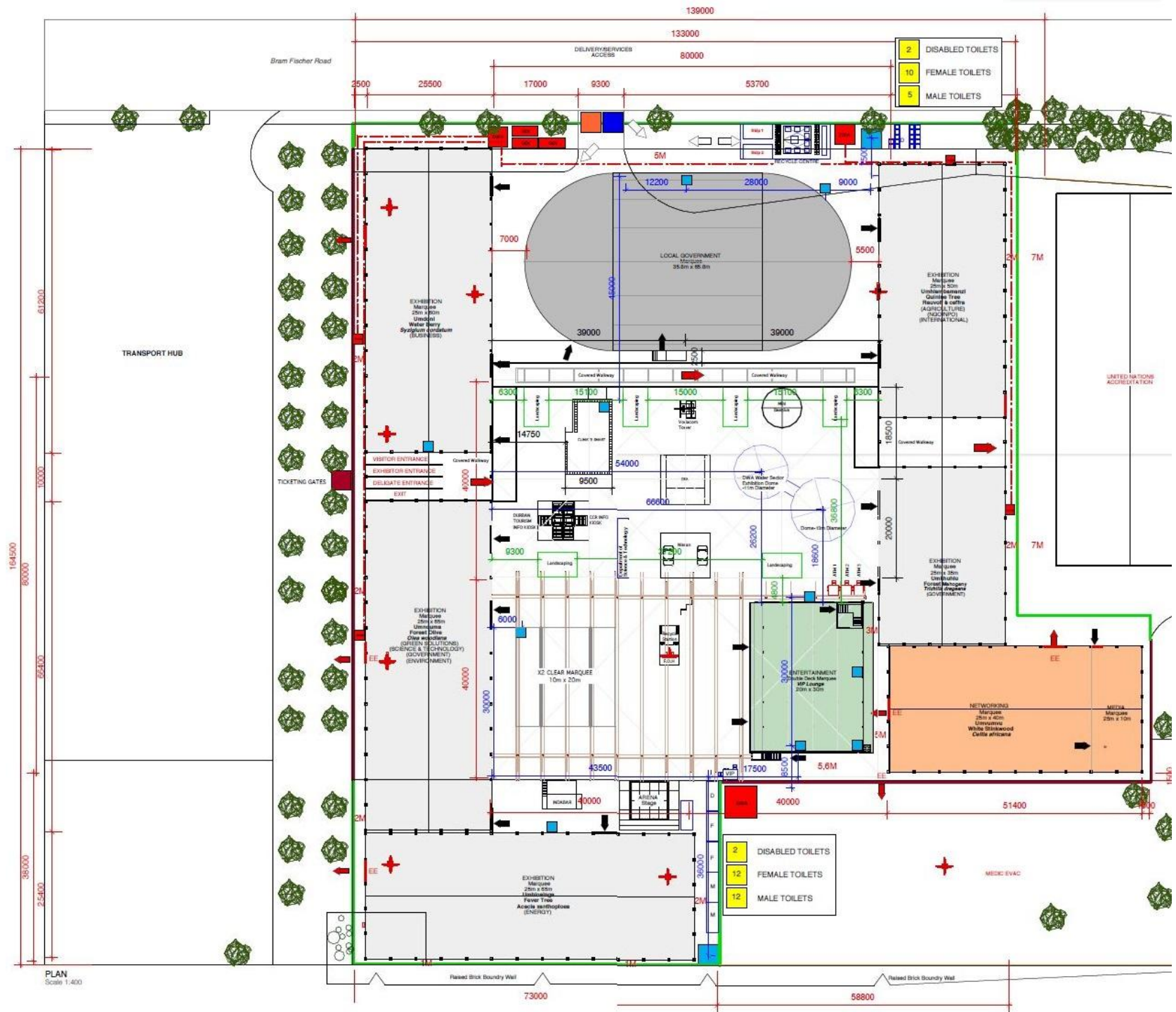
Bram Fischer Road
DELIVERY/SERVICES ACCESS
TRANSPORT HUB
TICKETING GATES
VISITOR ENTRANCE
EXHIBITOR ENTRANCE
DELEGATE ENTRANCE
EXIT
2 DISABLED TOILETS
10 FEMALE TOILETS
5 MALE TOILETS
2 DISABLED TOILETS
12 FEMALE TOILETS
12 MALE TOILETS
LOCAL GOVERNMENT
EXHIBITION
X2 CLEAR MARQUEE
10m x 20m
ENTERTAINMENT
NETWORKING
MEDIA
ARENA
Stage
MEDIC EVAC
UNITED NATIONS ACCREDITATION
Raised Brick Boundry Wall
Raised Brick Boundry Wall
PLAN
Scale 1:400

Scope

Our biggest challenge greening the CCR Expo was that it was held in a tarred car park with no existing infrastructure (see red block below). This meant we had to create temporary solutions for all aspects of the event: from exhibition halls to the supply of power, water and ablutions – while also making this an iconic and beautification event.

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Approach

In our greening, we prioritised the 're-duce, re-use and re-cycle' philosophy which rates these strategies starting with the most important one. Broadly speaking, we used the following approaches:

- Use local suppliers - to reduce the indirect carbon footprint of the event & engender social & economic benefits to the region.
- Where there was a choice, we opted for eco-friendly alternatives.
- Avoid waste by designing all elements for re-usability – most re-use was directed to charities who could benefit from them, building a longer-term legacy into the CCR Expo. What could not be re-used was recycled.
- Minimise water and energy usage, where possible.
- Communication was key: we needed to make this 12 day event have a lasting impact that would encourage visitors and participants to re-think how they use resources, do business and live their lives.

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Approach

Each of the following slides explains each of the following green strategies implemented at this event, and what the green benefits they yielded.

1. Design
- Banana Leaf Canopy
- Floor graffiti
- Covered walkway
- Sound dampened meeting rooms

2. Eco-procurement
- Catering
- Cleaning services
- Plants
- Toilets

3. Manage waste, water & energy
4. Social Legacy
5. Communication

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Design

Banana Leaf Canopy

Description & innovation:

This iconic leafy canopy was one of the first things visitors saw as they entered the CCR Expo. It created welcome shade from the strong African sun over the outdoor food market and entertainment arena. It was innovative in terms of its use of almost exclusively naturally-occurring materials for the structure:

- Gum Tree (*Eucalyptus Saligna*) poles from a paper forest – these poles had grown too large to be pulped;
- Natural fibre manila rope; and
- Wild Banana leaves (*Strelitzia Nicolai*), which grow prolifically in this region.

The only manufactured materials used for the canopy were large steel bolts to hold the structure together, and some nails and cable ties which were used to secure the banana leaves to the rope.

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Design

Banana Leaf Canopy

Benefits:

- The manufacture of the structure required only a nominal amount of energy for cutting, moving and assembly.
- The majority of materials used were unwanted, or 'waste': the gum trees would have been left to rot if not used for this structure (as they had grown too large to pulp and make into paper), while Wild Banana plants are prolific in and around Durban, and their leaves are not normally used for anything.
- The wood and rope was re-used after the event to make jungle gyms, and the banana leaves were composted. This means there was zero waste produced from the structure.
- The jungle gym materials were given to two children's charities – LIV Village Children's Home and the Bluff Environmental Society. The latter shared their donation with two schools and their own Eco Park.
- The structure was iconic and raised awareness around sourcing alternative, sustainable materials.

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Design

Floor graffiti

Description & innovation:

Eco-friendly paint was used to stencil patterns onto the bare, tarred surface of the car park. This was done to beautify the area.

Benefits:

- This was an eco-friendly solution to make the area look better. The paint simply cleaned off the surface after the event.
- A white colour was chosen because it would aid the reflection of heat off the dark tar surface, and help to reduce the temperature in this area.

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UN COP17 / CMP7
DELEGATES

Design

Covered walkway

Description & innovation:

A covered walkway was required for the UN delegates to pass through the expo space. We used materials that would be readily re-used after the event:

- Unpainted wooden beams (structure)
- Transparent corrugated sheet roofing (roof)
- Plants and wood chips were scattered on the roof (shade)
- Guttering fed rainwater into ten rainwater tanks

Benefits:

All materials and the rainwater tanks have been re-used after the event in permanent installations.

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vodacom
vodacom
vodacom
vodacom

Design

Sound-dampened meeting rooms

Description & innovation:

We needed to build private meeting and conference rooms for the event. We sourced MagnaStruct board, which has sound dampening qualities, and used it in a modular double wall and ceiling structure to effectively muffle sound.

Benefits:

- MagnaStruct board is made from readily available minerals, and produced through a low-energy process. It is fully recyclable.
- The doors were left unpainted for easy re-use.
- LED lighting was built into the modules.
- The sound dampened rooms have been re-used at numerous events since COP17. There is no equivalent product to it in South Africa, green or otherwise.

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Eco-procurement

Suppliers

Description & innovation:

65% of the events budget went to 60 local suppliers, who were often small businesses, while the remaining 35% went to 10 national suppliers. National suppliers were only chosen when there was no satisfactory local equivalent – for example, for the glass fronted marquees (chosen to minimise the lighting needs within the marquees).

Where possible, eco-friendly options were chosen.

Benefits:

R15 million was injected into the local economy.

The eco-friendly benefits are documented for different items on the following pages.

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Eco-procurement

Catering

Description & innovation:

Food suppliers were chosen who could provide food that was sourced and prepared in a more sustainable manner – in other words, food that was (as much as possible) locally produced, organic and free range, seasonal, and / or Fair Trade. A strong emphasis was also placed on providing fresh, healthy, raw and vegetarian options. Boutique brewery beers and organic wines were also served.

Benefits:

- The food served had a minimal transport-related carbon footprint, and was derived from sustainable farming methods.
- Minimal packaging was used when serving the food – for example, a small piece of paper was used to wrap pies or rolls.

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Eco-procurement

Cleaning services

Description & innovation:

Ikhayelihle was contracted to provide the cleaning services for the CCR Expo. The company is 100% women- and BEE- (Black Economic Empowerment) owned. Of their 77 staff, 3 were permanent – the remaining were hired for this event, and were unskilled. For many, this was the first time they had employment.

Benefits:

- All of the Ikhayelihle staff received training for this event, not only for hygiene and the services they would need to provide, but also basic greening training.
- Since the event seven staff have received permanent employment elsewhere, while a number are relief staff for Ikhayelihle.

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Eco-procurement

Indigenous plants

Description & innovation:

4716 plants (a mix of shrubs, grasses and trees) were procured to beautify the CCR Expo. They were all indigenous to the region and represented the six main biomes of this area. The plants were displayed in their biome groupings, with information about them – including what natural benefits they have for people.

Six types of indigenous trees were also procured, and displayed by the six exhibition halls which were named after them.

Benefits:

- The educational aspect of the displays was intended to engender respect for our natural resources.
- After the CCR Expo all of the plants were donated to the local municipality's COP17 carbon offsetting project, and planted into a new community park in an impoverished suburb, named the Maphephetheni Children's Park.
- This same project also helped to secure employment for one caretaker position at the park.

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RIVER

GRASSLAND

WOODLAND

WETLAND

DUNE

FOREST

MINI BEEHIVE

2 DISABLED TOILETS

10 FEMALE TOILETS

10 MALE TOILETS

PLAN
Scale 1:400


vodacom
vodacom

Eco-procurement

Toilets

Description & innovation:

It was a challenge to find eco-friendly temporary toilets that would handle the volumes of people expected at the CCR Expo. Fortunately we found permanent toilets in the form of old shipping containers that had been retro-fitted, and which we could link to a sewerage line running underneath the car park.

Benefits:

- The re-use of shipping containers prevented them from becoming waste and avoided the need to build a new structure.
- Unlike most temporary toilets, these units connected to the sewerage and so did not need heavy-duty chemicals and daily waste removal to stay clean.
- After the event, the five units (1 disabled; 2 female, 2 male – 26 loos in total) were donated to informal settlements where they were permanently installed for the residents.

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Manage waste, water & energy

Waste

Description & innovation:

- We endeavoured to reduce the production of waste by requesting all our suppliers and exhibitors use packaging strategically, and opt for re-usable products where possible – which could be donated after the event to a worthwhile cause if they were no longer needed.
- Of the waste that could not be avoided, we encouraged that they be recyclable, and so there was a strong emphasis on using recyclable materials.
- A worm farm was also on display at the CCR Expo, but this was more for educational purposes as they would not be able to dispose of large organic waste volumes quickly enough.
- Minimal food waste was generated over the 12 days because of careful monitoring of consumption. However, a total of 2638 kg of uneaten food was donated to the Food Bank, who then redirected it to four charities for consumption.

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Manage waste, water & energy

Waste

Benefits:

- Waste separation of recyclables to non-recyclables achieved was 44.6% during the event.
- The re-use materials were unfortunately not all weighed, but some figures were collected such as:
  - 255kg of unwanted exhibitor brochures dealing with climate change were donated to underprivileged schools who have very few educational resources.
  - 200kg of brochures were used by a community project to make crafts and jewellery
  - 130kg of stand materials like boards were collected by Luda Heart Studios to create artwork

  (The low recycling volumes should be understood in light of the successful diversion of many items from the waste stream. Re-use was always prioritised over recycling.)
- All non-recyclables were disposed of it at Bisasar Road Landfill, an audited site that also has a successful waste-to-energy scheme in place, supplying electricity to the eThekwini (Durban municipality) grid.


re-
We're cutting down on waste...

Manage waste, water & energy

Water

Description & innovation:

We banned the sale of bottled water and promoted the consumption of filtered tap water made freely available from water coolers around the CCR Expo.

The water tanks were set up for rainwater harvesting, to water the plants at the show.

Benefits:

- 17.24 kilolitres of tap water was drunk during the 12 days – which presumably prevented roughly 34 480 plastic bottles of water being consumed.
- No piped in water was used on the plants.

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protect & preserve

Manage waste, water & energy

Energy

Description & innovation:

Ethekweni, the Durban municipality, procured renewable energy for the event, but we still did our best to minimise the amount of energy used at the event. For example, we:

- Used glass fronted marquees to reduce the need for lighting.
- Used energy efficient lighting – Ignite Energy Saving's T5 bulbs which reduce energy use by 45%.
- Provided solar water heaters for the onsite kitchen (which were sufficient for washing dishes and general cleaning of the area).
- Photovoltaic cells were used for the client's outdoor pavilion.
- We had back-up generators onsite which were supplied with biodiesel made locally from used cooking oil (collected from restaurants) – however we did not need to use the generators as we had no problems with our power supply.

Benefits:

- Even though we were using green energy, we minimised its use so there would be more of it for other uses.

Social legacy

Donations

Description & innovation:

We did our best to donate various elements of the CCR Expo to charities and organisations who could benefit from them.

Donated items mentioned previously:

- The banana leaf structure was dismantled and the parts donated to two charities to create children's playground equipment.
- The indigenous plants, as mentioned, were donated to the COP17 carbon offset project and were used to create a children's playground in a very poor suburb.
- The container toilets, as mentioned, were donated to an informal settlement.

Donated items not yet mentioned:

- All the recycling bins used at the event were donated to ten disadvantaged schools who had embarked on recycling projects and would be able to use them for it.

DURBAN ceba COMMUNITY ECOSYSTEM BASED ADAPTATION
Africanising Adaptation
Official voluntary offset programme for COP17/CMP7

ETHEKWINI MUNICIPALITY

Social legacy

Donations

Description & innovation:

Donated items not yet mentioned cont.:

- The benches and tables from the food court were donated to Mother Of Peace, an orphanage.
- Two worm farms and an organic food garden which were on display were donated to the The Association For The Aged (TAFTA), who has a plot where they grow fruit and vegetables.
- Left over brochures and custom stand elements were donated to crafters and artists to use as raw materials in their creations.
- The CCR Expo had 7875 m² of rolled carpet, of which 85% was in good enough condition to donate to four charities after the event.

Benefits:

We were able to donate goods to 24 organisations that had expressed an interest and need in the items they subsequently received.

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Social legacy

Investment in people

Description & innovation:

We also contributed to the event's social legacy in the following ways:

- Ikhayelihle was contracted to provide cleaning services at the event because by doing so they would employ and train 74 staff for this event.
- Educational tours were funded for eight government schools.
- Environmental students were recruited to be chaperones at the event, to gain work experience and interact with industry role players at this event.

Benefits:

- Employment was created for 74 people, and for many it was their first job. This put them in a better position to gain employment, going forwards (and seven already have).
- 26 environmental students were able to work at this event, and have an invaluable experience in their chosen field.
- 717 school children gained an educational experience that will hopefully live on with them.

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blooming bud
montessori

Awareness

Description & innovation:

A key aspect of this event was that it should be an educational experience, with the intention of motivating positive behavioural and attitudinal changes towards climate change and environmental issues, and beyond the event (the *Benefit*).

This was done in a few ways, including:

- All exhibitors had to sign a Responsible Exhibitor Charter, which outlined basic event greening principles that they were requested to abide by (for example, that bottled water was banned and could not be distributed from their stand).
- The Exhibitor Briefings included a presentation on event greening and what they could do on their own exhibit.
- Green Stand Awards were given to those exhibitors who had demonstrated a clear commitment to greening in the design and implementation of their stand at the event.
- A CCR Expo Greening stand provided information on all greening done at the event, so visitors could learn more about it.

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RESPONSIBLE EXHIBITOR CHARTER

The Climate Change and Response Expo (CCR Expo) is a South African showcase running alongside the UN COP17 conference. The CCR Expo is intended to raise awareness around climate change and, in response to this issue, promote ways to minimise our carbon footprint through making more sustainable choices.

We therefore require that all those involved in the CCR Expo commit to behaving in a way that is environmentally responsible. We encourage participants to be creative in their approach. As a minimum requirement we ask that all participants sign the pledge below and commit to following these simple yet effective measures to minimise their carbon footprint at this event.

Thank you for your support in acting now.
The CCR Expo Organising Team

By signing this responsible exhibition charter, I hereby confirm that I have been duly elected as a representative for our company and we will, as a minimum requirement, comply with the green interventions listed below for the Climate Change and Response Expo.

Water
We understand that Durban is situated in a water scarce region, and that we must use water wisely.
- We will therefore not supply bottled water on our stand, but will encourage visitors to make use of the water points with re-usable cups;
- We commit to not wasting water unnecessarily in the preparation of food or in our cleaning processes.

Waste
We understand that the majority of Durban's solid waste goes to landfill sites, and that we must reduce, reuse, and recycle to enhance the concept of a closed loop system. We therefore commit that:
- Where possible we will use generic branding on our stand, so that we may re-use it again at future events;
- We will not bring in excessive amounts of printed materials to hand out to visitors at our stand; we will rather limit the use of printed materials and promote the electronic spread of information through websites, emails, mobi sites, QR codes, taking photos on cell phones, and other innovative ideas;
- We will not use excessive packaging, and will strive to re-use packaging where possible (for example keeping packaging from build-up for re-use in break-down);
- We will use the recycling bins on site, and encourage visitors and staff at our stand to do the same.

Energy
We understand that the majority of South Africa's energy is generated from coal, a non-renewable resource, and that we must conserve energy wherever possible.
- We therefore commit to switching off the plug points, AV, lights and any other non-essential electrical appliances on our stand at the end of each day before leaving to help save electricity.

Eco-procurement
We understand that organic and locally produced food, drink, and arts and crafts generally have a smaller carbon and ecological footprint than imported products.
- We therefore commit to procuring sustainable goods and services whenever possible, such as products that are locally produced, and/or environmentally friendly.

Transport
We understand that vehicles emit greenhouse gases that contribute to global climate change, and that Durban has a local public transport system.
- We therefore commit to walking, riding a bike or using public transport whenever possible.

Carbon Offset
We understand that Durban strives to reduce its carbon footprint through various initiatives, but that we also have a responsibility for our own actions.
- We therefore commit to exploring the CEBA Durban Project as a local voluntary carbon contribution to help offset greenhouse gas emissions related to our visit in Durban.


The climate is changing, what about you?

Conclusion

In conclusion we really did our best to introduce greening to *every* aspect of this event. Some of our strategies were more innovative than others – for example, the Wild Banana Leaf canopy is far more innovative than recycling. But we felt we needed to include it all to show you how thorough we tried to be in thinking about, planning for and acting on all three aspects of greening: people, planet and prosperity.

Thank you!

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