

2010 FIFA World Cup™ construction supports recycling

The re-use of concrete in the construction of the stadia in Johannesburg, Durban and Cape Town supports the recycling of construction material which contributes to the minimisation of the carbon footprint of the stadia and the diversion of construction waste from landfill.

• Building materials

Steel is an example of a reusable and recyclable building material. Excess steel or old steel from disused structures can be reused as is or recycled, by way of being melted down, and moulded into new shapes and designs. It can even be used in the production of different alloys.

All metals and metal-alloys have high reuse and recycling values. They are used, sold for scrap, melted down and used again in a different form. Metals, like steel, are very rarely discarded at landfills and even then, entrepreneurs are likely to find them and sell them as scrap.

Concrete can be recycled as well but its re-use value is lower than that of steel. Much of the original concrete's structural strength is lost in the recycling process. However, the resultant concrete aggregates can be used in infrastructure, in the laying of roads and pipes, and even for decorative purposes. The use of recycled concrete is on the rise and the City of London used recycled concrete in its preparation for the London 2012 summer Olympic Games.



Construction of Nelson Mandela Bay stadium - Port Elizabeth

Steel and concrete are more likely to be discarded when they are found in combination in reinforced concrete. Companies are less willing to recycle their reinforced concrete because of the additional process of removing the steel from the concrete, before it can be recycled. One way of combating this would be to give proportionally larger incentives for the recycling of reinforced concrete.

Building materials such as steel and concrete use up considerable energy and release considerable amounts of carbon dioxide when produced as virgin materials. Therefore, the intention is not to encourage the use of materials like steel and concrete in building venues, but to encourage the reuse and recycling of those materials that are already in existence. By doing this, the sustainability of materials that would otherwise go to waste is increased.

• Consumables

Consumables, by definition, are recurrently purchased goods that are intended to be used up fairly quickly and then replaced. In the context of an event, consumables include eating utensils, cups, glasses, plates, serviettes and tissues.

During outdoor events like music concerts, conventional glasses, cups and utensils are not viable and safer disposable versions are preferred. But conventional crockery and cutlery are a greener, reusable alternative. Hard plastic crockery and cutlery is less expensive than their ceramic and steel counterparts whilst having the reuse potential that paper and thin plastic versions do not.



Species on the green list:
Best choice



Species on the orange list:
Think twice



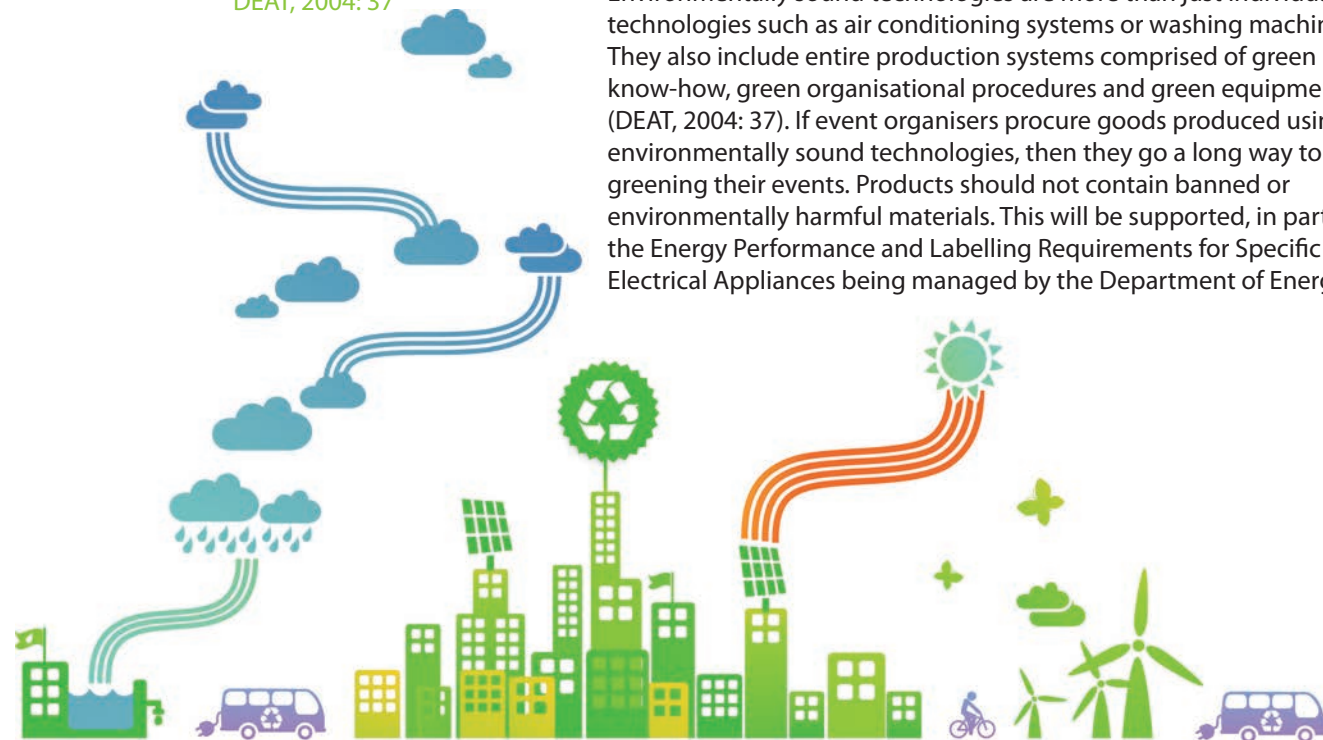
Species on the red list:
Don't buy

SASSI

Cleaner Production

Environmentally sound technologies protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual wastes in a more acceptable manner than the technologies for which they were substitutes.

DEAT, 2004: 37



4.10.2 To promote sustainable design and production

It is not sufficient enough for products used for an event to be used in a green way – those products also have to be produced in a green manner by manufacturers that follow green principles in all the stages of a product's lifespan. This applies to both the materials that are used as well as the manufacturing methods.

Materials used in the creation of a product, both raw and secondary, need to be obtained in a sustainable and environmentally responsible manner, such as paper or timber from sustainable managed forests. Products procured for an event need to have been manufactured in an environmentally responsible manner. The need for environmentally sound technologies is also elaborated upon in the National Cleaner Production Strategy (DEAT, 2004: 37).

• Green technologies

Environmentally sound technologies are more than just individual technologies such as air conditioning systems or washing machines. They also include entire production systems comprised of green know-how, green organisational procedures and green equipment (DEAT, 2004: 37). If event organisers procure goods produced using environmentally sound technologies, then they go a long way to greening their events. Products should not contain banned or environmentally harmful materials. This will be supported, in part, by the Energy Performance and Labelling Requirements for Specific Electrical Appliances being managed by the Department of Energy.

• Certification

Products need the relevant certification to prove that they were produced using environmentally sound technologies and that they themselves are environmentally sound. More importantly, green products need to be labelled as environmentally sound so that event organisers know which products pass as green and which do not. An example is the FSC logo, which is used for timber and paper to indicate that its production complies with the strict criteria of the Forest Stewardship Council. One barrier to certification is the expense as establishing the authenticity and credibility of a product is a time-consuming and expensive process.

• Distribution

Product packaging should be kept to a minimum. Product packaging should be made of reusable and/or recyclable materials. The greenest packaging is packaging that the manufacturer takes back for its own reuse or recycling. If event organisers were given a small discount on products as payment for returning the packaging, then event waste resulting from packaging would be greatly reduced.

• Use

Where possible, event organisers should only select products that have a long lifespan, are easily and cost-effectively repairable and environmentally sound. Venue infrastructure such as air conditioners and water coolers need to be energy efficient. Consumables such as cups and serviettes need to be designed so that in their use, they minimise waste. Furthermore, all products should result in little or no pollution.

• Disposal

The ideal is to avoid and reduce the creation of waste through sustainable procurement options. Where disposable options are needed then recycling systems need to be put into place to encourage zero waste to landfill. The greenest products are those that manufacturers take back after use, where they will be re-used (such as glass bottles with a deposit) or recycled and used in the making of new goods (such as PET bottles). For example, the fabrics used to make event-specific banners and flags could be used to make new products, such as conference bags or other promotional items. Thus the demand for natural resources is reduced.

4.10.3 To procure products and services that will have the least possible negative effect on the environment

The purchasing of seasonal fruit and vegetables has minimal environmental impact because it has a smaller carbon footprint and requires fewer resources to grow. Procurement of organic or GMO-free products also has a positive impact on the environment because petro chemicals and fertilisers are avoided.

The South African Sustainable Seafood Initiative (SASSI) provides information about the conservation status of different fish species. It aims to improve the conservation status of overexploited seafood species through education and raising awareness among all participants in the seafood trade – from wholesalers and restaurateurs through to seafood lovers. The same applies to the Marine Stewardship Council (MSC).

Fair trade is an internationally recognised approach to trading that aims to ensure that producers in developing countries get a fair deal, including a fair price for goods and services, decent working conditions and a commitment from buyers to provide reasonable security for the producers. Selecting fair trade foods helps to secure the future of local farmers and thus contributes to the sustainability of future events.

4.10.4 Sourcing Local Goods and Services

The final objective of sustainable procurement is to promote the use of local goods and services. Sourcing locally supports Local Economic Development (LED), which is defined by the World Bank as ‘an opportunity for local government, the private sector, not-for-profit sectors and the local community to work together to improve the local economy’.

Event organisers often buy products in large scale and should whenever possible purchase locally produced rather than imported goods. The first option is to purchase goods from within a 50 km range, then regional or even national before importing from other countries.

Sourcing locally contributes to Local Economic Development in the following ways:

- By investing in their goods and services, event organisers give back to the communities that bear the environmental costs of the event;
- The local economy is stimulated by the demand for products and services, whilst jobs are created at the same time;

Selecting fair trade foods helps to secure the future
of local farmers and thus contributes to the
sustainability of future events.

- Locals naturally become more efficient in their production in order to meet demand for their products and services which will serve them well long after the event has past; and
- Locals make their products more marketable and competitive in a bid to have them meet the greening objectives of the event. This will benefit the community in the long run.

In summary, alongside the sustainable design and construction of venues, greening of procurement is the most important way of ensuring that an event is run in a sustainable way. It informs all procurement choices and is supported through the existence of standards and recognisable certification systems. Government is considering regulations to enforce the public procurement of locally produced goods and services, which is one step to ensuring sustainable procurement for the country.

At a municipal level, an excellent opportunity to influence the greening of events is through event permits. These are required by most municipalities for large events or smaller events that might impact on their surrounding area. These municipal event permits mostly consider the health and safety regulations, as well as possible impact on municipal services such as traffic flow or building inspection. It is however recommended that local municipalities also include event greening guidelines or sustainability criteria into their event permit requirements, which can promote resource management, local economic development, and social investment in the local community.



4.11 Conclusion

The greening of events applies to three major areas of event management: infrastructure, events operations; and tourism.

The first major area is concerned with the infrastructure (venues) and deals with spatial and land use planning, design, construction methods, material use and impact on the environment from a spatial perspective. The framework has promoted the construction of green venues using recycled building materials that utilise water and energy efficiently, and conserve and enhance biodiversity.

The second major area deals with the running of the event itself, which entails the choice of consumables (catering, stationary, branding and marketing materials, cleaning materials), and greening is dependent on procurement choices and the availability of certified green products. Another dimension is the behaviour of participants and staff in relation to the sustainable use of energy and water and recycling practices.

A third major area to event greening is the tourism industry, which is not directly related to an event but provides the broader environment that supports an event and therefore makes a major difference to the greening profile of an event. The connector between the event and tourism is transportation and whilst efforts can be made to green transport for the sake of an event, these efforts are short-lived if not incorporated into longer term transportation planning.

Event greening is steadily being achieved on a voluntary basis as the private sector becomes aware of the negative environmental impacts that events can have. This is supported through the supply of green products and services. Event greening will be further achieved through the development of appropriate standards and certification systems and endorsements demonstrating compliance with these standards.

Event greening is closely related to municipal planning systems and their effectiveness in relation to the site location, its development parameters and transportation systems. The greater the inclusion of sustainability criteria in municipal planning systems and services, the greater the extent of the greening of an event.



Appendix D
Greening Guideline for Events
Management
Appendix E: Monitoring tool for the
stadiums and host
cities for 2010 FIFA
World Cup™