

Green space technology and integrated planning: Can we assist African cities?

Wayne Van Balen, 5 January 2021

At our [conference in Cairns in 2016](#) the impressive and tall Dyno Keating rose to his feet to remind us, in relation to Horticultural food production, it was almost laughable that Northern Australia would directly solve food supply problems in Asia. He pointed out that it was more likely the managerial and technical expertise that we could and were providing in horticulture which would make a major difference. Dyno Keating was the Immediate Past Director General of the World Vegetable Centre and a food and nutrition expert.

The same could be said of our involvement in amenity horticulture and together with our strong technical relationships with advanced Asian neighbours we can play a significant role in relation to achieving better greenspace outcomes around the world.

Currently most of our Foreign Aid budget is directed to nearer Asian and Oceanic countries so discussion about opportunities in the 54 countries on the African continent is rarely mentioned.

There are vast commercial opportunities as these countries modernise, but stark dangers if development takes place at the expense of the environment or the provision of appropriate greenspace and maintenance of some of the traditional food production land. In Kampala there is a large open space in the centre of the city which is a golf course largely restricted from the public. Newer construction projects provide very limited landscaping and an increasing number of developments are walled with public access restricted.



Recently constructed building in Kampala

In relation to food production a significant amount of vegetable and fruit comes from urban land close to the city centre which prospers on ancient fertile soils which receive good rainfall in most seasons. This form of food supply is pushed out and diminished by modern forms of urban construction.

Due to the fact that I have close personal friends in Uganda I have carried out extensive research and given some honorary lectures at Makerere University in Kampala in recent years.



Uganda is an example of a country with fertile soils, great rainfall, cheap labour and once cheap land. They are located on the Equator which also affords good temperatures for food production and great tropical tree and plant growth. So, for many decades there have been extensive investment in the horticultural sector with great interest from countries like England, Netherlands, Israel and other European countries.

Kampala Urban GreenSpace

In relation to urban greenspace the main concern is having policy in place that will balance rapid urban development with sustainable levels of parks, gardens and greenspace. One of the biggest problems being, "**Urgency**". This is because the exploitation of urban development opportunities takes place very rapidly with minimal or no contribution to Greenspace unless legislated for public and national welfare. There is a massive pace of urban expansion taking place with the majority of funds coming from Chinese, Indian and other foreign interests.

Last year Kampala City Council Authority (KCCA) released the new Urban Green Infrastructure Ordinance (Atelier 2019) which addresses many issues but would benefit greatly from input from countries with successful policies. World Parks are currently researching areas of greenspace provision per head of population in a number of countries which will assist in policy development.





As a result of a meeting initiated by myself and involving Makerere University and KCCA, a number of internships were offered to Makerere Horticulture students. Horticulture students will therefore become familiar with the effectiveness of the new Urban Green Infrastructure Ordinance (KCCA 2019) and the University will be able to provide better feedback to KCCA.

Over recent decades, there have been a number of successful Greenspace planning policies and funding options utilised in Australia. They can facilitate provision and retention of appropriate levels of Greenspace and include:

- Development site Greenspace ratios based on percentages of site area.
- Developer contributions towards Open Space as part of the Development approval process.
- Sourcing funding from Land taxes and Stamp Duties.
- Offering awards for projects displaying the best Urban Greenspace attributes.

African Green City Index

Last year I reviewed a major study which was conducted by Siemens (Consultancy) “African Green City Index” (Economist Intelligence Unit 2011) assessing the environmental performance of Africa’s major cities in 2011. The report is now somewhat dated but gives a guide to the concepts that need to be considered.

Important points from the African Cities study

1. Action on environmental sustainability must go hand in hand with solutions to Africa’s social and economic problems. Sustainable development policies at the City level in Africa are far from a “nice to have” option.
2. Studies indicate that a city run integrated programme is best, but this must be coupled with a decentralisation of Fiscal Governance.
3. The study indicated about 40% of Africa’s population living in urban areas.
4. By 2035, population in urban areas will double again to about 870 million and 50% of Africans living in Urban areas by 2035.
5. Affluence does not always lead to better and sustainable environments (Omenya). Governance appears to be more important. We should not wait for affluence to solve environmental challenges. South African cities (Durban and Johannesburg) that performed well have good environmental policies. Strong local structures are in place. In poor performing cities, policies are run from afar (i.e. National and Provincial level). It is argued that as cities in Africa have grown and become richer their environments have degenerated.

6. More undeveloped cities could “leap frog” others through better current planning.
7. Informal settlements (slums) are unsustainable. Living proof that we are not planning our cities well.
8. The study of the 15 cities in Africa indicated an average of 40% living in informal settlements but 70% in Maputo and 68% in Dar es Salaam. There are some environmental positives emanating from the settlements such as low water consumption and high levels of resource efficiency (Cartwright). Further discussion on this point hastened to add that it was not acceptable to conclude that the informal settlements (slums) should persist.
9. Waiting a long time or young children walking a long distance to collect water is a sign that water is not really, readily available.
10. The city is a living organism that should be managed as a single entity i.e. a complete system.
11. The study gives some green policies and projects that other cities can learn from.
12. A number of cities in Africa have implemented integrated green/energy policies. Eg. Wind power, solar together with hydro options.
13. Once satisfactory services were in place for water, waste management and human health (like the South African cities in the study) then consideration was given to the next round of sustainability problems like environmentally conscious resource consumption, smarter planning, limiting reliance on fossil fuels and increasing recycling. It follows that planning for greenspace with all its benefits for the urban population is part of this second round.
14. In more undeveloped poorer performing countries in the study the environmental emphasis was on the “brown agenda” which focused on human health and poverty reduction as opposed to the green agenda which looks to improve the sustainability of ecosystems. Many say the two agendas should go “hand in hand” but the latter is often overlooked because of short term immediate demands taking priority over longer term sustainability planning.
15. A key tool for planning Urban Greenspace is a statistical analysis of the amount of Greenspace in hectares per 1,000 head of population.
16. Important factors to incorporate are how much Green space is accessible to the public not just elite groups (eg. Golf courses and walled compounds) and how far does one need to travel to get to the open space or leisure space. In Asia, the ratio is approx. 3.9 hectares per 1000 head of population. In the study of the 15 African cities the statistics were ranging from less than 1 up to 29 hectares per 1,000 head of population in Cape town.
17. In some cities in Asia, green space ratios of up to 3:1 exist. In addition, it is common to have significant urban greening focus on transport corridors for new and existing redevelopment areas. Policies for the protection of environmentally sensitive areas is important together with policies that prevent the overall reduction of existing greenspace.

The Way Forward

The United Nations co-incidentally also set out 17 Sustainable development Goals (SDG's) or Global Goals for 2015 to 2030. [Transforming our world: the 2030 Agenda for Sustainable Development](#) with its 17 SDGs (United Nations. Department of Economic and Social Affairs, 2015) was adopted at the [UN Sustainable Development Summit](#) in New York in September 2015. They called upon the International Development community to act to improve living conditions in developing countries but in a holistic and sustainable manner.

There are many successful Urban Greenspace projects throughout the world that can be used as examples and be applied to developing cities and regional areas. There is an urgency to have appropriate policy in place to avoid rapid exploitation and an opportunity to assist the developing cities to have even better outcomes than the perceived success stories in other cities. We have some success stories in Australia and near Asian countries and it is important to identify these. Our technology and managerial talent can play a role.

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