A blueprint for Africa: sustainable planning and development through regional upgrading

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Introduction

Africa is experiencing a period of massive change and making gigantic leaps in development. An example of this is the virtual explosion in the telecommunication industry through the introduction of mobile phones to the African market. The rate of mobile phone penetration in the African market is relatively high compared to the rest of the world. The continent is a late bloomer, but it is catching up in record time. Currently, Africa is on the cutting edge in the development of mobile phone applications, the most successful being mobile banking and money transfer. This is an astounding achievement considering that telecommunication infrastructure a decade ago was more or less antiquated.

This and other evidence of shifting socio-economic landscapes in neighborhoods, cities, countries and entire regions point to the potential benefit in having a comprehensive approach for managing the rapid evolution being witnessed. The aim of this paper is to demonstrate the need for an exhaustive exploration on ways in which the continent can leverage regional resources to ensure an effective management of this change and eventual optimal outcomes.

Sustainability: Why it Matters

According to the World Commission on Environment and Development, Sustainable Development meets the needs of the present without compromising the ability of future generations to meet their own needs (UN, 1987). The root of the word sustainability is the Latin word “tenire” meaning “to hold”. It also happens to be the basis for the word “tenure” which is commonly used in reference to land tenure.

There is often a debate on the use of the word sustainability in relation to development. Some argue that the term “sustainable development” is more of an oxymoron than a descriptive term because the two words are more or less contradictory. How is it possible to reconcile development, a word that implies consumption, depletion of limited resources and a negative contribution to climate change, to sustainability which implies preserving currently available resources for future generations?

> "Sustainability is a condition of existence which enables the present generation of humans and other species to enjoy social wellbeing, a vibrant economy, and a healthy environment, and to experience fulfillment, beauty and joy, without compromising the ability of future generations of humans and other species to enjoy the same (Dauncey, 2010)."
>
> - Guy Dauncey

A vital point of clarification here would be to submit as unrealistic the notion of sustainability as a stagnant state of being; one that preserves natural resources, as we know them today, and keeps them intact for centuries to come. The very essence of the natural world is one that relies

heavily on regeneration through dynamic forces and consequently, relies on change in order to thrive. The kind of sustainable development that is addressed in this discussion is one that takes into account the variables, opportunities and limitations of natural and human existence. The definition relies heavily on the origins of the word sustainability as an element that can be responsibly used and preserved. While the scope may change over time, it is hoped that the lessons learned in the process will serve useful and worthwhile to future generations.

In relation to the African continent, the subject of sustainability matters because it is a goal post that guides decision makers in striking and achieving balance between environmental stewardship and socio-economic development. Furthermore, the economic mainstay of many countries in Africa includes sectors such as agriculture, tourism and mineral extraction. As such, a balanced approach that incorporates the three elements of sustainability; environment, economy and equity is not only a beneficial addition to the discussion; it is an integral part of it.

Balanced Approach to Sustainable Development

A balanced approach to development would invariably need to address the issue of sustainability as pertains to the environment, economy and equity. Regional upgrading presents an opportunity to:

- foster equity through regional cooperation;
- drive economic growth and development through infrastructure development;
- promote environmental sustainability by positioning and upgrading cities and;
- utilize regional networks as a platform for an equitable and enabling policy environment

The economic, environmental and socio-political landscape is changing so fast that there is an urgent need to plan for and manage that evolution before it becomes overwhelming. Governments are often ill-prepared and ill-equipped to manage the process due to the lack of capacity to accommodate these far reaching effects. Current and recent events in one country have profound consequences on surrounding nations.

The impact of agrarian and land tenure policy in Zimbabwe and the consequences to the national economy thereafter had a direct impact on South Africa's immigration and workforce arena. The effect of the brief period of political instability experienced after Kenya's election in 2007 was felt acutely throughout the East African region. Uganda and other landlocked countries were adversely affected due to the amputation of transportation networks, while Tanzania experienced a boom in the tourism industry during that period. The same region has been affected by the ongoing civil war in neighboring Somalia. Tourism in the region has been on the decline since the inception of close-monitoring via the terror watch list.

It is becoming more and more evident that African countries cannot continue to operate in socio-political silos. Activities in one country have far reaching implications in their respective regions and quite possibly throughout the entire continent. Borders have become so porous that their most significant purpose is arguably in the political arena. In other aspects, borders act merely as benchmarks against which the osmosis of regional trends can be measured.

The spread of microfinance banking from one country to another in various regions in Africa is one such example. As a result, it is important to note that while a single comprehensive plan for the entire continent might be a cumbersome or even far-fetched endeavor at the moment, regional plans are way overdue where none have been aggressively considered and implemented. The impending liability that lies in failing to pursue the option of having a regional upgrading and change anticipation policy far outweighs any immediate cost of pursuing the goal or potential benefit of not doing so.

Policy then, becomes the tool for incorporating sustainability into development, and the results of policy; the means through which the effectiveness of it is judged. Unlike other conceptual elements, policy allows us to test a notion and view the tangible consequences of the idea. This has become apparent in the recent years as concepts and policies implemented in one part of the globe significantly affect other distinctly different areas. Policies regarding subsidies on agriculture in developed nations, for instance, have a substantial negative impact on agriculturally dependent economies in the less developed world. On the other hand, the cooperation efforts by the European Union have seen it surge ahead to become the global leader in regional policy implementation and innovation. This comprehensive attribute of policy is growing beyond local, national and regional boundaries, with increasing far reaching global implications and consequences.

As such, the role of policy can be viewed as being two fold; in that both global and national policy affects the outcome of development efforts. The same applies to the role of planning in linking needs to resources, information to action, concepts to reality, and navigating the landmines involved in the process. While implementing policy interventions in Africa might be viewed as a gargantuan undertaking, cooperation and enabling policy at the regional level and beyond can result in successful implementation of urban and regional upgrading plans.

Concessioning and Infrastructure Upgrading as Tools for Economic Growth and Development

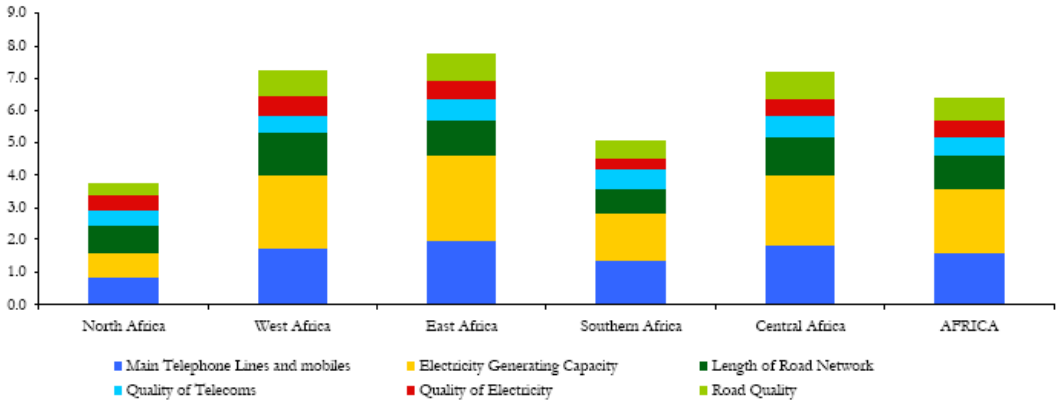
The challenges presented by the steep cost of public infrastructure investment are not unique to the African experience. In other parts of the world, alternative investment tools have been used and one method that has worked with relatively good success is concessioning. Concessions transfer the right to invest in, develop and operate infrastructure services from public bodies to private firms. In the developing world, Latin America has used such concessions to develop and expand public utilities such as power, water and road systems (Guasch, 2004).

Infrastructure development is frequently linked to economic growth and development and it is important to establish evidence of links between the two. According to a report entitled *Infrastructure and Growth in Africa* published by the World Bank, the following evidence of the relationship between infrastructure and the economy in Africa's regions was presented (Calderon 2009):

- North Africa: Lengthening road networks is a catalyst for economic growth
- West Africa: Economic activities are heavily dependent on increased electricity-generating capacity and telephone penetration

- East Africa: Increased infrastructure stocks in transportation, power and telecommunications sectors is directly linked to per capita growth of at least 2%
- Central Africa: Increased access to telecommunications facilities and electricity drive economic growth

Figure 1: Potential Growth per Capita Benefits in Africa Due to Higher Infrastructure Development



Source 1: *Infrastructure and Growth in Africa,* African Sustainable Development Front Office, the World Bank, 2009

On a regional level, concessioning presents an attractive venture for investors in sub-national projects due to increased project size and larger potential returns (Kerf 1996). Other benefits of regional cooperation in infrastructure investment are discussed below.

Economies of Scale

Proponents of regional planning and development often tout the benefit in economies of scale as one of its most obvious advantages. Economies of scale in this case generally refer to the advantage incurred by aggregating buying power and operating costs by creating a centralized system. An example would be the lack of a railway network in Rwanda. It is a relatively small landlocked country with a hilly topography that makes the notion of investing in rail less than ideal due to the expense. Due to its small size, the benefit in investing in a rail network is not immediately apparent. On the other hand, the cost of transporting goods to and through Rwanda from ports and manufacturing zones in neighboring countries is high.

Arguably, access to markets and suppliers via the presence of a rail system would be beneficial to the country. If a case was made for a regional rail network linking the eastern section of resource-rich Congo to Kenyan and Tanzanian ports along the Indian Ocean through Rwanda, the country would benefit from the economies of scale presented by the venture (Kerf, 1996). Regional linkages can present opportunities for savings and efficiency created by economies of scale. Infrastructure investment ventures that would be otherwise prohibitive due to the cost of investment and lack of evidence of profitability become more feasible.

Increased Savings and Private Investment

Private investment in infrastructure results in increased savings for governments. Depending on the structure of the concession, countries can earn or save money. Public funds that the

government budget would have otherwise been allocated to infrastructure investment and maintenance can be freed up and channeled it to other development activities (Yepes, et al., 2009). Revenue from the concession arrangement can be earned through leases or special taxes. As is evident from Figure 2 below, African regions that lag behind in one infrastructure sector tend to trail in others as well. Private funds for infrastructure would allow regions to redirect capital to other sectors that are not immediately attractive to private investors (Kerf, 1996).

Figure 2: Infrastructure Endowments by African Sub Region[i]

	African subregion			
	ECOWAS	EAC	SADC	Central
Transport				
Density of paved road network (km/1,000 km^2, 2001)	38	8	92	41
Density of paved road network (km/1,000 arable km^2, 2001)	301	93	3,636	416
Density of total road network (km/1,000 km^2, 2001)	144	105	214	132
Density of total road network (km/1,000 arable km^2, 2001)	1,279	1,286	6,164	1,790
Information and communication technology				
Density of fixed-line telephones (subscribers per 1,000 people, 2004)	28	6	74	13
Density of mobile telephones (subscribers per 1,000 people, 2004)	72	54	180	74
Density of Internet connections (subscribers per 100 people, 2004)	2.4	2.1	5.5	1.7
Energy				
Electrical generating capacity (MW per 1 million people, 2003)	31	24	175	44
Access to electricity (% of households with access, 2004)	18	7	21	18
Water and sanitation				
Water (% of households with access, 2002)	63	64	71	58
Sanitation (% of households with access, 2002)	35	45	43	28

Source 2: Making Sense of Africa's Infrastructure Endowment: A Benchmarking Approach, the World Bank, 2009

Accountability and Reduced Political Risk

Regional participation increases accountability in the concessioning bidding process and mitigates elements of political risk on the investment. This increased accountability reduces the risk of renegotiation once contracts have been awarded. Private investment also plays a role in resolving potential priority and allocation disputes between countries because investment is profit driven and the private investor would be guided by potential returns. This system addresses potential regional contention over allocation of resources by using a market based approach to prioritize and fast track infrastructure investment. As such, the default system for

gauging investment priorities is evidence of potential returns to the investor rather than political means to influence and direct investment. Rewards and incentives in the form of tangible upgrades also emerge as by products of cooperation in the region

Reduced Transaction Costs

Transaction cost in this instance can be described as the cost incurred by a governmental entity when it engages in activities in order to provide a service to the community. Concessions for infrastructure development have the potential to reduce transaction costs that would have otherwise been prohibitive. Implementation via the private investment vehicle is a leaner, more efficient method than the public authority structure. Reduced inefficiencies have a direct impact on bottom line profit and efficiency is achieved through the market.

Knowledge and Innovation Transfer

Concessioning presents an opportunity for learning and knowledge transfer to governments especially in Build-Operate-Transfer (BOT) arrangements (Guasch, 2004). Previously unsuccessful public authorities and parastatals have the opportunity to inherit efficient operations and systems from private infrastructure operators. Investment and visible improvement nudges sectors that lack growth, initiative, innovation and cooperation sectors by encouraging a pro-active approach to socio-economic growth and development

Positioning and Upgrading Cities to Promote Environmental Sustainability

It is estimated that by the year 2020, the developing world will be home to close to 80% of the world's urban population. In 2001, 924 million people or 31.6% of the global urban population lived in slums according to a UN-HABITAT estimate. Sub-Saharan Africa housed the largest proportion with 187 million or 71.9% of the urban population being slum dwellers (UN-HABITAT, 2003). This points to two major facts; the population in Africa is growing at a rapid rate and is becoming increasingly urbanized. Whatever the reasons for the high natural population growth rate or immigration from rural areas may be, the fact is that the urbanization trend is on the rise and is a matter that not only needs to be addressed, but also aggressively tackled.

In the developing world, low wages, environmental degradation, overcrowding, poverty and crime are still prevalent. It is with these opportunities and limitations in mind that the United Nations drafted the Rio Declaration on Environment and Development in an attempt to address the issue. First among the twenty seven (27) principles that were identified as being central to the sustainability and development was the recognition that "Human beings are at the centre of concerns for sustainable development…entitled to a healthy and productive life in harmony with nature." (Environment, 1992)

This statement has a number of implications, one being that human beings are both the means and end in the quest for sustainable cities. The following factors are challenges faced in the pursuit of realistic sustainable solutions in African cities:

- In order to make sustainable choices one must not only have the will to make those choices but also have economic ability to do so.

- Developing countries are on the same unsustainable development path that developed countries took in the past, and one significant problem is that there is greater potential for rapid, unchecked, irreparable damage than there was before, in part due to technological advances and increased scarcity of natural resources.
- Human beings act in self interest and while most agree that sacrifices ought to be made, the issue of free riding and willingness to pay present cooperation problems on various levels.
- Economic concessions must be made that facilitate livability in cities and create incentives that protect natural resources and mitigate. Eco-tourism is an example that aptly demonstrates how willingness to pay interacts with environmentally sound choices. In a broad sense, residents in rural Africa know the contribution that forests make to the worlds air quality and in housing biodiversity species of animals and plants. However, conservation efforts that force them to forgo livelihoods without the option of viable alternatives are often met with resistance. Alternatives such as eco-tourism serve a dual purpose by improving the local economy and promoting environmental protection.

Environmental sustainability therefore, has a direct relationship to the economic viability of cities. The use of positioning to direct comprehensive plans for cities that ensure viability within the larger region particular are central to a long term sustainable approach for economic, physical, environmental and social livability. In regard to economic development, regional coordination and cooperation prevents the problem of competing to the bottom. Instead of competing among themselves for limited traditional investment opportunities, cities can position themselves and capitalize on their high value, high return resources. This approach to economic development will boost improvement areas and diversify the city economy as opposed to concentrating on areas in which other cities have durable competitive advantage.

In regard to urban upgrading in African there are various challenges that should be tackled if effective urban and regional upgrading is to be achieved. These issues are present in many countries that are attempting to improve urban conditions. Establishing housing policy, obtaining security of tenure, infrastructural improvement and suitable financing options for urban dwellers are all central to successful urban upgrading schemes albeit in varying degrees. Tenure regularization and security is the overarching issue that acts as the basis and catalyst for urban settlement improvement. Ensuring security of tenure is the basic building block upon which sustainable urban upgrading can successfully and continually occur. Additional focus areas for the upgrading process include:

- Leveraging community assets by using existing sociological networks to seek out and facilitate community based initiative and action
- Addressing poverty by focusing on the economic activities and the livelihoods of informal settlement residents. The upgrading process should provide job training, jobs and economic development opportunities to the community
- Using the least invasive approach such as prioritizing in-situ (in place) upgrading. In-situ upgrading should have first priority unless deemed impractical or hazardous to the residents' well being

- Exploring diverse and practical financing structures based on the economic mechanisms of the area.
- A diverse array of housing types and tenure options should be made available both to those interested in home ownership and those seeking affordable renting options
- Political empowerment should be part and parcel of the upgrading goals as marginalization only serves to exacerbate the proliferation of slums
- Public health, education, gender empowerment, community driven economic development should be on the agenda to ensure that the upgrading efforts are expanded and maintained long after the initial project is completed.
- Planning for future growth and expansion is vital to ensuring the stagnation and eventual cessation of informal settlement and slum proliferation in the world's urban centers

Successful urban and regional upgrading and large scale infrastructure improvements will only occur if strong incentives for implementation and a clear process through which residents, and especially the urban poor, can invest in their own current and future well being exist.

Case Study: Manshiet Nasser, Greater Cairo, Egypt

In 2005 it was estimated that sixty two percent (62%) out of the 16 million people residing in the Greater Cairo Region (GCR) were squatters in roughly eighty one (81) informal settlements. According Egypt's Ministry of Housing, slums and/or informal settlements are located in areas set aside for other uses such as agriculture. It is estimated that up to 80% of the slums in Egypt have encroached into land designated as agricultural. Also important to note is that land suited to agricultural uses in Egypt is scarce due to the arid and semi-arid climate conditions prevalent in most of the country. Therefore, the expansion of informal housing into areas suitable for farming is problematic to the industry considering it employs roughly one third of Egypt's active population. Informal settlements are also located in places that are not well suited to residential development such as state owned barren land in the desert. Most buildings are not constructed to fulfill minimum standards and as such are not officially accounted for by the government (Madbouly, 2005).

There are a number of reasons for the prevalence of informal settlements in and around Egyptian urban areas. The poor population in the country has no formal access to land and any attempts at acquiring it are often unsuccessful due to the prohibitive cost and the amount of time it takes. The building codes are also outdated or unsuitable and the government has little control over land due to the lack of adequate laws and enforcement of those regulations in the past (Madbouly, 2005). Attempts at implementing comprehensive government housing policy have been made but those were largely unsuccessful. In the 1960's the Egyptian government's solution to slums and informal settlements was massive demolition and resettlement. That changed in the 1970's when community involvement was incorporated as part of a holistic approach to solving the problem. However in the 1980's, there was an increased tolerance that resulted in accelerated growth and consolidation of informal settlements (Madbouly, 2005).

In 1993, a national slum upgrading policy was implemented in response to the social unrest brought about by the rapid growth and expansion in the 1980's (Madbouly, 2005). The primary goals were to implement in situ upgrading policy in existing informal settlements by improving

living standards, ensuring basic service and infrastructure provision and integrating formal urban areas with the informal settlements. A significant amount of resources were used to provide basic infrastructure such as roads, water and sanitation but other issues such as ensuring secure tenure and resident alienation from the upgrading process were prevalent. As a result, informal settlement growth and expansion continued to be a problem.

In 1996, the government adopted a participatory planning approach to prioritize and solve the informal settlement problem. It integrated local participation, expertise from Non-Governmental Organizations (NGOs) and the government. It focused on increasing the number of affordable housing units, improving conditions in existing informal settlements and better urban environmental management practices. Urban upgrading was also viewed as a solution to encroachment into arable land by anticipating the growth of the urban population and redirecting growth into areas suitable for urban expansion. One example of an upgrading project that has benefited from the involvement of multiple partners and varied funding sources is the Manshiet Nasser Upgrading Project (UN, 2001).

Manshiet Nasser is an informal settlement in the eastern part of Cairo and is considered to be one of the most dilapidated and dense areas in the city with approximately 400 residents inhabiting each acre. The population, estimated at 350,000 residents lacks sufficient basic services and existing infrastructure continues to deteriorate as a result of continued growth. The lack of infrastructure and the negative externalities that follow are felt acutely here because the area has steep contours that fall within the 50 and 200 meter range (UN, 2005) .Upgrading efforts in Manshiet Nasser were focused on ensuring sustainable development through:

- Securing land tenure and providing adequate housing
- Improving basic services such as water, sanitation and roads
- Acting as a testing ground for an integrated approach to upgrading that would be replicable in urban centers throughout Egypt
- Coordination and cooperation of partners and stakeholders such as NGOs, government agencies, community groups and private funding and consulting entities.
- Economic development and job creation
- Environmental mitigation and management
- Maintaining and rehabilitating housing stock considered to be in good condition
- Integrating the informal settlement with formally planned areas by improving road networks and enhancing infrastructure connections

Upgrading was done gradually by putting into practice the concept of renewal and replacement. The construction was done incrementally and relocated residents into rehabilitated and new homes in phases. The homes that the first group moved out of were rehabilitated and accommodated the second group of relocated residents and then the cycle was repeated. A total of 6,000 units had been built as of 2005 according to a UN agenda 21 status report (UN, 2007). Maintaining existing social networks was one of the main factors considered in the relocation plan. Extreme care was taken to ensure that families moved to housing that was in close proximity to previous residences and places of employment. In addition to rehabilitating existing homes and adding new units to the housing stock, the upgrading project also included:

- Increasing access to access to electricity, water and sanitation
- Road improvements that took the contoured topography of the area into consideration
- Offering a variety of subsidies and debt recovery mechanisms such as land for construction of affordable units at no or low cost.
- Economic development via micro-financing for local businesses and industries
- Gender and youth inclusion through community activities targeted at engaging women and encouraging young people to be productive players in the local economy

In Egypt, the role of the government in rethinking sustainable urban development policy and regulation, taking responsibility for meeting affordable housing needs and overseeing coordination of various stakeholders has been the reason for the focus on urban upgrading in the country. However, it has received various criticisms on its housing policy. Among these are that while the approach has been heavily focused on providing basic utilities and been relatively successful to that end, its failure to address the factors that contribute to slum creation and growth such as land allocation and tenure security have remained largely unaddressed. Recently, the Egyptian government has been more proactive in addressing systemic issues of sustainability and development. Involvement in regional coordination talks such as the Nile River – Lake Victoria Basin efforts to manage dropping water levels in Lake Victoria point to its renewed commitment to sustainable urban and regional policy interventions.

Conclusion

Although the solitary model has worked well for some countries, there is a need to go beyond that. This stems from the need to respond to issues caused by expansive issues such as growth management, transportation and environmental concerns. There is also the question of marginalized areas that require interventions on a scale larger than local authorities are equipped to manage. Over time, the line that existed between the services provided by local authorities and those provided by national agencies has grayed and as countries take on more responsibilities than they were initially designed to accommodate. As is the case with border towns, the option of regional involvement becomes a more attractive one.

In a continent where political fragmentation has been one of many drawbacks to progress, it would be a worthwhile venture to investigate implementation of plans on a regional scale as a tool that can mobilize adequate and relevant resources to effectively manage and solve problems. In Africa, the role of planners and policy makers has, in many ways been limited to just that, planning and policy making. This is rapidly changing as the vocation becomes more robust and demands increasingly that theorists take on the role of practitioners. Exploring and implementing comprehensive regional plans has the potential to yield a significant contribution to the theory and practice of sustainable planning and development in Africa and beyond.

End Notes

[i] African Regional Groupings – Source: Making Sense of Africa's Infrastructure Endowment: A Benchmarking Approach, the World Bank, 2009

- SADC (all the SADC countries except Tanzania);
- EAC - the East African Community of Kenya, Tanzania, and Uganda;
- ECOWAS - the Economic Community of West African States (all the countries); and
- Central Africa, a default category comprised of Burundi, Cameroon, the Central African Republic, Chad, Comoros, Congo, Rep., Equatorial Guinea, Eritrea, Ethiopia, Gabon, Madagascar, Mauritania, Mozambique, Rwanda, Sao Tome and Principe, Somalia and Sudan.

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