# Broadening the conceptual framework for addressing the conundrum of sustainable development in Africa

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**Abstract:** This chapter contends that the nexus between the environmental thrust of science, politics and citizen interest creates a conundrum for implementing sustainable development ideals worldwide, particularly in Africa. The chapter examines this conundrum, delves into the logic behind sustainable development as a concept and practice and posits that the classical Environment, Economy and Equity (3E) principles of sustainable development, articulated in the Brundtland Report of 1987, are necessary but insufficient to effectively plan and implement sustainable development policies and programmes in Africa, where most Quality of Life (QoL) indicators are regressing alarmingly. This chapter prescribes adding the principles of Enlightenment and Engagement to the classical 3E principles, thus broadening the conceptual framework for sustainable development planning in Africa and the world to 5E principles. The advantages of the two additional principles are discussed, along with a list of the stakeholders who should work collaboratively to achieve sustainable development ideals.

## 1 Introduction

### *1.1 The notion and logic of sustainable development*

This chapter holds the view that the seed, impetus and political drive that turned Sustainable Development (SD) into a universal template for development policy and planning came with the initiative of the World Commission on Environment and Development, which resulted in the publication of the ground-breaking Brundtland Report of 1987. The now-famous definition of SD in that Report is development that meets "the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p.8). SD, in this sense, should be based on what this chapter calls the classical Environment, Economy and Equity (3E) principles. Friends of the Earth (1994, p.10) summarised the principles of SD as environment, futurity, equity and participation. Of note is that the Report served as the baseline for the intense discussions that occurred at the World Summit in Rio de Janeiro, Brazil, in 1992. Stefanovic (2000, p.17) noted that the Report "can be seen as one of the most significant in our century because it presented visionary descriptions of central problems and opportunities for sustainable development".

Since the World Summit in Rio de Janeiro, a staccato of initiatives have emerged in global efforts to implement the intent and spirit of SD. Some examples, discussed widely in the SD literature, include Agenda 21 and the eight UN Millennium Development Goals (MDGs). Agenda 21 was conceived and adopted at the World Summit in

Rio de Janeiro. Through programmes known as 'Local Agenda 21' or 'LA21', some national and state governments have legislated or advised that local authorities take steps to implement Agenda 21, in compliance with UN recommendations. The UN MDGs, another example of the UN's efforts to implement SD ideals, resulted from a Declaration by world leaders at the UN Millennium Summit in 2000. In addition to these two programmes, there is a plethora of other programmes at the international and local levels to achieve the ideals of SD. An example at the international level is the Kyoto Protocol, which is a 1990 agreement made under the United Nations Framework Convention on Climate Change (UNFCCC) urging industrialised countries to reduce their collective emissions of greenhouse gases by 5.2% compared to the amount of emissions in 1990. At the national level, an example which is fast becoming internationalised is the eco-municipality programme that originated in Sweden as a brainchild of Swedish oncologist Karl-Henrik Robert, the founder of The Natural Step (TNS) approach on which the eco-municipality programme was based (James and Lahti, 2004).

This chapter subscribes to the notion of SD implied in the definition articulated in the Brundtland Report for several reasons. Before delineating those reasons, however, it is critical to acknowledge that the definition of SD has been a subject of intense intellectual and professional debate and discourse. Gunder (2006, p.212) examined some of the sustainability polemics and definitional puzzles and noted that "no one knows, let alone can succinctly or comprehensively and universally define, what a sustainable city … actually is". However, he added, quite interestingly, that "… it is this lack of clarity that allows this concept to be a 'real' or 'good thing' for all those who embrace it, regardless of the particularity of their individual understandings, dreams, and desires about this sublime subject". Some cynics or critics even consider SD an oxymoron. To this charge, the view in this chapter is that it is the term 'development' that indeed provides meaning and essence to the term 'sustainable'. This is because the concept of development as the qualitative and distributive aspect of growth necessarily triggers the question of how growth (with its quantity and pace), hence development, occurs or is achieved. Growth as the quantitative measure of productivity implies that there are inputs into processes that lead to outputs or products. In this sense, all human activities are indisputably based on organic and particulate matters derived from the Life-Support Systems (LSS). Even in today's knowledge economy, where tacit knowledge is said to be the key to productivity (as discussed elsewhere by Kolo, 2009), knowledge *per se* cannot benefit humans or enhance Quality of Life (QoL) unless and until it is transformed or translated into real or tangible services and products. Again, the basis of producing, distributing and consuming all services and products, including the technology which some pundits believe would solve the world's SD problems, is society's natural resources.

As stated earlier, the resolve in this chapter is not to engage in any debate with critics of the definition of SD for three of several possible reasons. First is that SD, regardless of its critics, remains one of the most consistently popular and embraced paradigms of development around the world today. As Bell and Morse (1999) noted, quite inspiringly:

> "Few development interventions or research initiatives these days can successfully attract funding unless the words 'sustainability' or 'sustainable' appear somewhere on the proposal to the funding agency. Indeed, if one listens to speeches by politicians or reads articles by economists, policy-makers or scientists the word sustainable appears with a remarkable regularity." (p.3)

Along with the definitional debate, critics have also charged that SD implementation is equally impractical. Onuosa (1988, p.433) observed that "in general, the prominence of the principle of sustainable development has not obviated the misgivings as to its practicality". Reid (1995, p.xiii–xiv) charged that SD is a "moral conviction serving as a substitute for thought" and "a good idea which cannot be sensibly put into practice". Yet, the global embrace of the ideal of SD has withstood all criticisms of its underlying concept and even implementation strategies. Indeed, there are arguments that the uncertainties are beneficial for the creativity and flexibility needed to implement SD initiatives. For example, Bell and Morse (1999) noted that:

> "This uncertainty over the meaning of sustainability has not reduced the popularity of the concept. On the contrary, it could perhaps be cynically argued that the resulting flexibility has allowed the concept to attain the heights that it has. … In a less cynical vein, this flexibility as to what sustainability means can also be a great strength in a very diverse world. People differ in the environmental, social and economic conditions within which they have to live, and having a single definition that one attempts to apply across this diversity could be both impractical and dangerous." (p.10)

The second reason is that SD is an ideal or goal, quite similar to the ideals of truth and justice, which humans all cherish but define subjectively (Schaller, 1993). This point was echoed by Bell and Morse (1999, p.7), who opined that "we all want truth and justice, but what these mean can also vary greatly from individual to individual and between societies". This chapter strongly believes that Sub-Saharan Africa (SSA) needs to aggressively pursue SD, regardless of how the intellectual pundits define it. This leads to the third reason, which is that consensus (or lack of it) on the definition of SD does not negate or nullify the dreadful and deplorable condition of development in SSA, the geopolitical region of the world on which this chapter focuses. Evidence of this condition is adduced in Table 1.

The reasons for avoiding the definitional quibble in this chapter are now followed by the reasons why this chapter subscribes to a subjective but pragmatic notion of SD that critics may consider 'narrow' or 'limiting' for intellectual posturing. The first reason is that SD, as defined in the Brundtland Report, is widely embraced and has come to stay as a universal platform or template for development policy and planning, both in the developed and developing worlds. One of the many reasons for this is that "sustainability, like development, is all about people, and there may be little point achieving a sustainable system that reduces the QoL of the people in that system" (Bell and Morse, 1999, p.15).

The second reason for the definition in this chapter also serves as the logic of SD. The chapter acknowledges as the most rational and defendable of all its possible roots what Bell and Morse (1999, p.6) termed the 'ecological root of sustainability'. Based on this root, the chapter posits that the logic of SD is how human life and activities 'respect' and remain in harmony with the Earth's environmental resources on which life in its entirety is based. These resources are land, water, air, fauna (animal life), flora (plant life) and, as some would add, underground minerals or resources (James and Lahti, 2004; Marsh and Grossa, 1996). The chapter delves into this logic in more detail below.

The third reason is simply the urgency of SSA's development indicators, depicted in Table 1. The indicators leave no room for intellectual posturing and it is not farfetched to argue, as this chapter does, that the premier causes of these regressing indicators are inept political leadership and unavoidable or uncontrollable environmental disasters such as droughts, floods, locust invasions, pollution, nature-borne diseases, *etc*.

**Table 1** Snippets of the SD conditions in SSA

| *Examples of development conditions/indicators* | *Snippets of development conditions in SSA* |
|---|---|
| 1. Human Development Index (HDI) | In the low HDI category of 22 countries, all of which are in SSA, Senegal is on top with a total score of .499 (156th in the world), life expectancy at birth of 62.3 years (132nd in the world), combined primary, secondary and tertiary gross enrolment ratio of 39.6% (159th in the world) and GDP per capita of $1,792 (145th in the world). At the bottom of the heap is Sierra Leone, with a total score of .336 (177th in the world), life expectancy at birth of 41.8 years (173rd in the world), combined primary, secondary and tertiary gross enrolment ratio of 44.6% (155th in the world) and GDP per capita of $806 (169th in the world) (World Bank, 2006). |
| 2. Life expectancy | The World Bank (2008, p.8) reported that: "Between 1990 and 2005 life expectancy at birth in Sub-Saharan Africa declined from 49.2 years to 47.1. Although life expectancy increased in 25 countries by an average of eight years, it declined in 21 more populous countries by an average of four years. HIV/AIDS, malaria, and armed conflict have contributed to these falling life expectancies." Alan Lopez, coordinator of the Epidemiology and Burden of Disease Team of the World Health Organization (WHO, 2000), observed that "healthy life expectancy in some African countries is dropping back to levels we haven't seen in advanced countries since Medieval times". |
| 3. Literacy | The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2000) stated that: "Literacy remains a major barrier to the development of African countries. Despite the progress achieved since 1990, the absolute number of African adults who cannot read or write increased from 131.4 million in 1990 to 136 million in 2000." |
| 4. Malnutrition | UNESCO emphasised the strong correlation between illiteracy and poverty. For example, 30% of Africa's children under five years of age suffer from moderate to severe malnutrition, compared to 26% in South Central and East Asia. The World Bank (2006) warned that "malnutrition rates are expected to fall everywhere – except in Sub-Saharan Africa". |
| 5. Information and Communications Technology (ICT) | The UN Millennium Project (2005, pp.152, 156) noted that "Africa has been the great laggard in technological advance," alluding to data that show that: "Tropical Sub-Saharan Africa produces roughly a twentieth of the average patents per capita in the rest of the developing world. And it has only 18 scientists and engineers per million population compared with 69 in South Asia, 76 in the Middle East, 273 in Latin America, and 903 in East Asia." |
| 6. Infrastructure | "Sub-Saharan Africa lags at least 20 percentage points behind the average for International Development Association countries on almost all major infrastructure measures. In addition, the quality of service is low, supplies are unreliable, and disruptions are frequent and unpredictable – all pushing up production costs, a critical impediment for investors. There are also large inequities in access to household infrastructure services, with coverage rates in rural areas lagging behind those in urban areas. The region's unmet infrastructure needs are estimated at $22 billion a year (5% of GDP), plus another $17 billion for operations and maintenance" (The World Bank, 2008, p.6). |
| 7. Governance | "Our explanation is that tropical Africa, even in well-governed parts, is stuck in a poverty trap – too poor to achieve robust and high levels of economic growth, and in many places simply too poor to grow at all. More policy or governance reform, by itself, is not sufficient to break out of this trap" (UN Millennium Project, 2005, p.147). |

**Table 1** Snippets of the SD conditions in SSA (continued)

| *Examples of development conditions/indicators* | *Snippets of development conditions in SSA* |
|---|---|
| 8. MDGs | On SSA's performance on the MDGs, the UN Millennium Project (2005, pp.19, 20) reported that: "The region is off track to meet every Millennium Development Goal. It has the highest rate of undernourishment, with one-third of the population below the minimum level of dietary energy consumption. Sub-Saharan Africa has the lowest primary enrolment rates of all regions. Despite recent progress, gender disparity at the primary level is 0.86, the lowest of all regions. The HIV/AIDS crisis is devastating much of the continent, destroying lives and livelihoods. Women are disproportionately affected, with 13 infected women for every 10 infected men. The region also has the highest TB incidence in the world and the highest maternal and child mortality ratios (maternal mortality ratios are 46 times higher than in the developed world). Progress in access to safe drinking water, though more promising, is still too slow to achieve the MDG targets. More than 160 million people live in slum-like conditions where they lack security of tenure, and safe housing. Most of the region lacks access to information and communication technology, with just 5.3 telephone subscribers per 100 inhabitants. Rates of deforestation are among the highest in the world, illustrating the continent's environmental crisis. Without sustained support, Sub-Saharan Africa is unlikely to meet any of the Goals." |
| 9. Business reform intensity | The World Bank (2006) sponsored a survey of the investment climate in 63 countries that covered 50 000 firms from 2001 to 2005 and discovered that Africa had the lowest business environment reform intensity than any other region in the world. Africa had an average of 0.6 reforms, in contrast with Central Asia and Eastern Europe, which recorded an average intensity of 2.4 reforms, the highest of any region in the world. The implications of this for foreign investments are immense, especially given Africa's overwhelming dependence on such investments. |
| 10. Economic growth | On economic growth in Africa, The World Bank (2008, p.9) reported that: "The average GDP per capita of most countries in 2005 closely mirrors that in 1975, reflecting inertia, stratification, and initial conditions in economic output. Countries that started poor, stayed poor, and those that started richer, stayed richer – with few exceptions." The World Bank (2008, p.15) added that Africa's "…GDP growth is on par only with slow-growing Latin America and the Caribbean, a third that in South Asia, and a fifth that in East Asia and Pacific. Savings and investment were well below those in all other regions. Foreign direct investment compared well, but it was concentrated in oil and minerals in only a few countries. Trade also compared well, but again it was highly concentrated and dependent on few sectors. Consumption was higher, reflecting the low propensity to save. And inflation and government consumption were higher. … Africa's economic fundamentals on average are not much better after a decade of growth. … Statistically it cannot be said that growth is more likely to last than it was a decade ago. It remains vulnerable to lower demand for oil and metals and to other outside shocks." In light of the global financial crisis that started late in 2008, the World Bank, in the week of 3 February 2009, revised its forecast for Africa's economic growth in 2009 to 3.5% from 6.8%. |

**Table 1** Snippets of the SD conditions in SSA (continued)

| *Examples of development conditions/indicators* | *Snippets of development conditions in SSA* |
|---|---|
| 11. International aid and globalisation | Strauss-Khan (2009) of the International Monetary Fund (IMF) noted that: "Sub-Saharan Africa depends heavily on commodity exports, so it is especially vulnerable to the global downturn." In the midst of the current global financial and credit crisis, "the world must not forget Africa during this crisis". A real but sad counterview is that as the crisis persists or worsens, aid donors would be very reluctant, even unable, to reach out to poor countries. Commenting on the daring economic situation in Ethiopia, for example, Wright (2009) opined that "being the darling of the West is no good in a downturn. Never mind donor fatigue: now it's all about donor poverty. The US is not going to send Food Aid and infrastructure financing when it needs all its money to bail out its banks." |
| 12. Absolute poverty | Using GDP per capita as a measure of absolute poverty, the UN Millennium Project (2005, pp.14, 16) noted that "in the 33 countries of tropical Sub-Saharan Africa, the average GDP per person is only $270 a year, a mere 71 cents a day". Also, "In sharp contrast to Asia's progress, most of Sub-Saharan Africa faces significant challenges in meeting the Millennium Development Goals on almost every dimension of poverty, with many countries falling behind. Between 1990 and 2001 the number of people living on less than $1 a day rose from 227 million to 313 million, and the poverty rate rose from 45% of the population to 46%." |

*Source:* Culled by author from sources cited

The final reason is more on a 'nostalgic' and 'self-assuring' note for Africa. It is, as passionately argued by Eyong and Foy (2006), that SD is not anything new in and to Africa, as African dynasties and empires practiced some form of SD prior to the imposition of Western ideologies, technologies and development models, models which have proven to be wasteful and highly polluting attitudes of overproduction and overconsumption. Thus, defined whichever way by the global community, SSA would be well-served to revisit its past in order to identify and recapture some of the strategies that enabled the region to achieve SD ideals.

To briefly address the logic of SD, the chapter draws attention to examples of critical concepts at the crux of SD discourse (comprehension and implementation), which ought to be the relationship between society's LSS and people's value-, goal- or need-driven activities. In this sense, discussions of the human-ecosystem relationship date as far back as the beginning of human existence, particularly the advent of sedentary life. In one fashion or another, this chapter opines that this relationship was implied in notable and classic writings such as those of philosopher and political economist Thomas R. Malthus in his 1798 seminal book, *An Essay on the Principle of Population* and the English ecologist, Arthur G. Tansley, who in 1935 coined the term 'ecosystem'. Other examples are Rachel L. Carson's 1962 book, *Silent Springs,* Garrett J. Hardin's 1968 paper, *The Tragedy of the Commons*, The Club of Rome's 1972 report, *The Limits to Growth*, which probed and prescribed mathematical solutions to the world's problems, a 1980 report, *North-South: A Program for Survival*, produced by a commission chaired by Willy Brandt, former German Chancellor and a 1996 Oxford University Press publication, *Caring for the Future: A Radical Agenda for Positive Change*, which was a report by The Independent Commission on Population and Quality of Life. More recently, concepts such as carrying capacity, ecological footprint, green living and eco-municipality have

emerged in international and local policy and planning spheres to show the world's commitment to safeguarding the environment. In spite of these historical roots and pedigree of the human-ecosystem discourse, perhaps one of the premier challenges of SD planning today is best summed up by Stefanovic (2000, p.5), who stated that "…while the concept of environmental care may be as old as civilization itself, it is clear that modern technological society places new demands upon us – demands that will require new ways of interpreting our changing world". This is the broader context for the SD implementation prescriptions made in this paper for SSA.

## 2 An overview of the sustainable development conundrum

SD analysts such Bell and Morse (1999, p.16), share the view that SD confounds society with a conundrum. This chapter depicts the conundrum in terms of the tension, conflict, puzzle and dilemma caused by and result from the interaction or nexus of the scientific, political and citizen welfare dimensions of SD. Operationally, science is construed in this chapter from a lay perspective as the process of testing theories and establishing facts about phenomena, the phenomena in this case being human activities and LSS. Politics, on the other hand, is viewed as the 'contended' process of allocating societal resources based on prevailing interests, while citizen welfare is the exclusive domain of individuals, about one's prosperity and what some loosely term 'QoL'. Citizen interest is reflected through what Marsh and Grossa (1996, p.7) described as the "consumerism" dilemma in the tenuous state of the environment. Thorns (2002, p.211) stated that "there is a strong link between environmental deterioration and the constant drive to increase wealth and commodity production". So high is the world's consumption rates that, at the current rates, the Global Footprint Network (GFN), an international organisation whose mission is to end overconsumption, noted that the world would require 1.3 planets in place of the current one to support its consumption (GLOBE-Net, 2007).

This chapter contends that the need to understand and address the conundrum that the referenced nexus poses is at the core of SD policy and planning. The importance of this nexus was addressed extensively by Fischer (2000), who noted that in Western democracies, "nowhere are the conflicts between citizens and experts more salient than in environmental politics", and added that "indeed, many take this close relationship between environmental politics, science, and technology to render meaningless the search for non-technocratic alternatives; democratic alternatives are seen as impractical and ill suited for a modern technological society" (Fischer, 2000, p.47). These three critical factors come to play and fundamentally influence how society's resources are used to enable or foster human activities. The confluence or nexus of the factors is where the conundrum of SD planning lies, hence, the challenge of SD policy and planning. The importance of this challenge is buttressed by Stefanovic (2000), when she stated that:

> "Human development imposes environmental costs that seem necessary, particularly if technological society is to promote a higher quality of life for increasing numbers of people worldwide. The challenge of reconciling the demands of development within the graces of nature constitutes the most pressing task facing humanity today." (p.xv)

It is in order to address this challenge effectively in SSA that this chapter prescribes broadening the conceptual framework for SD policy and planning, as later expatiated.

## 3 The sustainable development challenge in Africa

This chapter submits that SSA faces a daunting task in pursuing and achieving SD ideals, irrespective of how liberally the ideals are set or defined. Based on the logic that growth and development (measures of productivity, living standards and QoL) are possible only though judicious, intelligible and sustainable use of societal resources, there is irrefutable evidence that SSA faces a myriad of complex and intertwined SD challenges. The poignant picture of development in SSA is widely captured in the empirical literature and will not be belaboured here. However, only snippets of the picture are presented as evidence in Table 1.

## 4 Broadening the conceptual framework for SD

The prescription in this chapter is to broaden the conceptual framework for SD policy and planning in SSA. The chapter contends that, combined with international goodwill and aid as well as the positive wind of democratic change blowing through SSA that results in more responsive governance, extant technocratic and professional machineries must undertake scholarly, intuitive and experimental measures to find models of SD planning that would best serve SSA. The need for this multipronged approach was underscored by Carley and Christie (2000), who stated that:

> "Constructive responses to environmental crisis are threefold. The first requirement is continuing philosophical and moral debate about the appropriate nature of sustainable development, North-South relations, and the need to empower local communities to manage their own futures. The second is for the development of human resources and organizational capacity for environmental management, linking governments, business and community groups in a sense of common purpose. The third requirement is for fundamental research and development, especially in … processes." (pp.viii–ix)

The framework prescribed in this chapter is in the context and part of the multipronged approach referenced above, specifically the parts that border on philosophical discourse and research.

The SD conundrum described in this chapter poses extraordinary challenges for the pursuit and attainment of SD initiatives around the world in general and in SSA in particular. The challenges in SSA are compounded by some of the age-old bottlenecks of development in the region, such as:

- the hasty and irrational manner in which the corrupt political elite makes policies and adopts programmes
- the very low productive capacity of all sectors of society
- the obsolete management systems, infrastructure and technologies in place
- inadequate resources and funds to meet the needs of the teeming population
- the dearth or obsolescence of reliable research and development data
- the two crucial bottlenecks addressed in this chapter, which are the frightening level of illiteracy among the populace, and the deliberative or inadvertent exclusion of the populace from the processes of governance, decision or policy making and programme planning and implementation.

It is for the two SD bottlenecks of illiteracy cum ignorance and non-engagement in policy and planning processes that this chapter prescribes the addition of the principles of Enlightenment and Engagement to complement the classical 3E principles in the Brundtland report. The broadened framework of 5E principles would then be operative in answering the following policy questions about any SD initiative (policy, project, programme):

- For the 'Environment' principle, does government and the other stakeholders in the community know and recognise and have the capacity to address the impacts that an initiative would have on society's natural resources (LSS)?
- For the 'Economy' principle, does an initiative address society's need for economic growth that respects the environment yet creates a healthy employment and revenue base for the society at large?
- For the 'Equity' principle, does an initiative contain provisions or conditions to provide citizens with equal and just opportunities to access the benefits accruing from the initiative?
- For the 'Enlightenment' principle, are there mechanisms in place to inform and educate all interested stakeholders about all aspects of an initiative in a timely manner?
- For the 'Engagement' principle, does the initiative make practical room for all the community stakeholders who choose to participate in the opportunities offered by the initiative?

## 5 Meaning and rationale of the enlightenment principle of SD

The notion of enlightenment in this chapter is that of the consciousness (Freire, 1970; 1973) or awareness that comes from formal and informal education, practical experience, culture and other means of socialisation. The information transmitted through those avenues, individually or collectively, provides the basis or rationale for one's convictions, decisions, actions, beliefs, attitudes, views and choices. This notion of enlightenment is captured by the aphorism 'knowledge is power'. Knowledge (or what may be loosely called information) is a powerful enabling tool for reasoned judgement in a given situation. Cunningham and Cunningham (2002, p.353) noted that reasoned judgement depicts "thoughtful decisions based on careful, logical examination of available evidence that recognize the potential for error or new information". Reasoned judgement is a pragmatic approach to dealing with the uncertainty and inconclusiveness of science and the subjectivity and whimsicality of politics. Thus, Cunningham and Cunningham (2002) added that "society has long used reasoned judgment to address issues of uncertainty…" and, as Stefanovic (2000, p.xxi) noted on a rather cautionary note, "science is reaching some limits in predicting environmental risks and no amount of technological manipulation can solve problems in the face of such scientific uncertainty".

In the foregoing sense, Enlightenment can serve as the glue between the other four principles of SD and the 'clue' to implementing SD initiatives effectively. In the case of the 'Economy' principle of SD, for example, in today's knowledge economy, enlightenment that comes from formal education would be critical for a nation's (and any

one's) participation and success in the global economy. For the 'Environment' principle, the attitudinal and behavioural changes needed to be environmentally conscious and responsible would come from one's awareness about the costs and benefits of his/her choices and actions. For the 'Equity' principle, the decision and follow-up action by anyone to treat others equitably, including generations unborn as implied in the SD philosophy, would come from one's awareness of and subscription to the dividends of equity as a virtue, in the same sense as the virtues of social justice, fairness, enlightened self-interest, moral obligation and social responsibility. Finally, for the 'Engagement' principle, as experience in Western democracies has shown, people, especially politically marginalised groups, tend to become more involved in governmental processes if and when they become aware of the advantages and prospects of participation, networking, collaboration and partnerships. Among such advantages are access to local bases and sources of power, influence, material resources, technical assistance and other development resources.

The pertinence of enlightenment for SD planning and implementation is clearly documented and evidenced in the SD literature. This relevance is how enlightenment leads to the changes required in people's attitudes toward the environment. In his recent book on sustainability planning, for example, Wheeler (2004, pp.85–101) discussed various "tools for sustainability planning", such as Geographic Information Systems (GIS) and mapping, environmental impact reporting, development path analysis, ecological and footprint analysis. Yet, he also stated that:

> "Among the most important tools for long-term change are strategies of education, communication, and consensus building," adding that "one common denominator behind such strategies is the recognition that for political or social change to occur people's beliefs, knowledge, values, and paradigms of thought must also change." (Wheeler, 2004, p.100)

The pertinence of enlightenment for SD planning is also highlighted in the famous account of James and Lahti (2004) on the eco-municipality experiences in Sweden and the USA. They stated that:

> "Education about what sustainability means and how local actions connect to global trends is key to local official endorsement, municipal staff participation, and widespread community agreement on the goal of a sustainable community. Education fosters a shared understanding of the challenge facing humanity. It can reveal global and local possibilities for those who choose to be on the forefront of change. Community engagement and motivation for changing to sustainable practices will occur only if people come to understand the nature of the unsustainable problems with which we all wrestle, and if they have access to a mental model for more sustainable behavior." (James and Lahti, 2004, pp.206, 207, 229)

Along the same reasoning, in the Forward to these authors' 'how to' book, Swedish oncologist Karl-Henrik Robert, the founder of TNS approach on which the eco-municipality programme was based, commented on the advantages of communication and enlightenment for SD planning. He said:

> "The clearer and more decent the communicated core values and principles are, the less leaders need to make demands upon participants and to control the process with all its details. Clear core values and principles for dignified goals attract engagement, and the demands and the control occur where it belongs – where the actual change takes place." (James and Lahti, 2004, p.xiii)

The view by Thorns (2002, p.210) on the need for an enlightened approach to SD planning is also noteworthy. He suggested the need for planning institutions to be equally enlightened in the process of improving the human-ecosystem relationship. This need, he noted, "brings the debate around to the necessity for 'enlightened institutions'". In her own reasoning, Stefanovic (2000) opined that:

> "As we develop policies and plans for sustainable development, basic beliefs and value systems frame the very questions we ask in the first place," adding that "after all, environmental decision-making is first and foremost a process of thinking, as a condition for enlightened action." (p.xvi)

A summary of the foregoing discussion and rationalisation of enlightenment as a critical and requisite principle for SD planning in SSA is that there are essentially two inextricably interwoven aspects to the concept of enlightenment. The first aspect is society's understanding of the full consequences, impacts and ramifications of choices, decisions and actions on each individual in the society, on groups and the supragroup (beyond the local community). The second aspect is acting intelligibly and responsibly to eliminate, minimise, prevent or mitigate the negative externalities of one's decisions, choices and actions. One cannot occur without the other but, most importantly, it is best when both occur concurrently, such that decisions do not trigger negative externalities. Enlightenment has the potential to place a heavy moral burden on a person or society to act responsibly towards the environment, towards others and towards future generations.

It is important to state, in conclusion, that this chapter is not suggesting enlightenment as a guarantee for the cost-effective implementation of SD initiatives in SSA. The chapter agrees with Boone and Modarres (2006, p.185) that the pathways to a sustainable urban future are difficult to predict, "but experience and knowledge can be the basis for guidelines or prescriptions". They added that "the first and most important prescription for a sustainable future is to be smart. It suggests that we use our best ideas to create an urban future that improves quality of life while continuing to make cities vibrant, progressive, energetic, and inviting places". The chapter also concurs with the view of Thorns (2002, p.211) that "in the end, change will be brought about through the conscious activity of citizens". Last is the view by Stefanovic (2000, p.6) that "it is only in a rethinking of our value systems and ethical paradigms that there is some hope for moving toward sustainable development that is also on an economic, social, and political level".

## 6 Meaning and rationale of the engagement principle of SD

The second additional SD principle prescribed in this chapter is engagement, also known in the development policy and planning literature and practice as participation and/or partnership. Engagement is a corollary of enlightenment, as evidence from the historical evolution of citizen involvement in governance would show, especially in Western democracies. The historical genesis of engagement is the democratic system of government that originated in Greece around the 5th and 4th centuries BC. Centuries after, this has evolved all over the world into what is now believed to be a preferred form of government around the world. Its basic tenets include representation, collaboration, accountability, inclusion, consensus building, negotiation and transparency.

To the extent that SD is also about how future generations can use the Earth's natural resources to live decent lives, planning resource use in the short and long term becomes critical. This chapter thus examined the principle of engagement from the standpoint of the planning profession. Carley and Christie (2000, p.65) noted that SD reflects "a concern for the future even to unborn generations"; hence, it "must imply comprehensive planning for that future". In the planning literature, a classic and widely heralded conceptual and pseudo-empirical construct of engagement is Arnstein's (1969) famous eight-rung ladder of citizen participation, which has been translated into five languages and used for programming by agencies such as the World Bank. To Arnstein, citizen participation implies the redistribution of power that enables the have-not citizens, normally excluded from the political process, to be deliberately included. To her, participation allows citizens to join in determining how information is shared, how goals and policies are set, how resources are allocated, how programmes are operated and how contracts are parcelled out. Arnstein's ladder has not been without its critics. For example, Nance and Ortolano (2007, p.296) cautioned that "increased participation" in a project should not be automatically "associated with enhanced performance". This chapter posits that, irrespective of the participation format and project type, performance will be based, to a large extent, on how much the participants comprehend the dimensions and dynamics of the project in focus, their roles and obligations, the total costs to them for participating and the dividends that would accrue to them directly from participating.

A general assessment of the SD planning experience across SSA would confirm that most citizens are grossly ignorant about (and uninvolved in) the processes that lead to policies, projects and programmes that are foisted on them by the political elite, acting in their capacity as national leaders, or as intermediaries for international donors. At the mid-2008 UN Summit on the world food crisis in Rome, Italy, for example, one of the presidents in attendance from a West African country complained loudly that Africa's food crisis would be better resolved if the UN consulted with and engaged African leaders in developing solutions to the crisis. The same charge can be levelled against most African leaders who, since the independence of their countries, governed their countries like caretakers rather than nationalists. The belief in this chapter is that the more enlightened the African masses are about the SD issues facing them and future generations, the chances of them getting involved and agitating for accountability from their governments would increase dramatically. Conversely, the more actively engaged the masses are in the SD policy and planning processes at all levels, the better the chances will be to achieve concrete results from projects. After all, as indicated earlier, Eyong and Foy (2006) argued passionately that Africans practiced SD centuries before colonialism and now, globalisation.

Like enlightenment, engagement in SD planning and policy machineries has the potential to yield tangible and intangible dividends for engaged citizens. Besides the advantages listed for enlightenment, mainly access to power and resources, the additional advantages of engagement include support for the processes by all stakeholders (especially the masses), legitimacy of the processes, collaboration (team work) of all the stakeholders, accountability and transparency of SD processes, value-added benefits of volunteers and nonprofits in the processes and the overall longevity of initiatives. The engagement of citizens in SD processes is a way for citizens to demonstrate their commitment to SD initiatives. Engagement is also a powerful source for acquiring useful

information about SD, information that can lead to concrete changes in people's attitudes and activities regarding the environment. This point was made by James and Lahti (2004), who noted that:

> "It is important to remember that it is not reports that change society but the many concrete actions of individual people both within and outside a municipal government. However, those people's efforts will have more lasting results when their work is supported through use of platforms that integrate sustainable policies and practices into ongoing operations." (p.229)

Carley and Christie (2000) also shed some light on the implications and dynamics of engagement when they stated that:

> "For environmental management, we need to understand the role of consensus, which is sharing of views and values by a broad constituency within a society. In participating in any public policy debate, an objective should be to assist the development of a sufficient degree of consensus for action. At best, consensus reflects a transcendent societal view which goes beyond the individualism of the market but is complementary to it, reflecting a marriage between market economics and social responsibility. This involves trade-offs between individual freedoms in the market-place and the quality of public life… ." (p.43)

The dividends that citizens derive from their participation or engagement in SD processes are the type of concrete or visible results that can bring credibility to the processes. This view was implied in the statement by James and Lahti (2004) that:

> "The credibility of a change process depends to a large degree on showing visible results as soon as possible. In the general public's view, it is not enough to talk and produce good-looking documents about planning and sustainable development. Visible results count the most." (p.217)

In SSA, there is widespread evidence that there is an overall disgruntlement of the masses with their governments for various reasons. Sadly, the political elites in most SSA countries continue to deny their citizens their right to information or knowledge about state affairs and their right to participate in public policy affairs, planning and even political elections. This chapter deems SD in SSA as a 'life and death' issue of utmost urgency. It is critical, therefore, for citizens to be thoroughly enlightened and genuinely engaged in the processes of planning, using and managing society's natural resources to provide people with a decent and dignified QoL. This was the point so vividly made by Onuosa (1998), when he stated that in Africa:

> "If sustainability is to be achieved, it requires the cooperation of the general public who must perceive themselves as part of the process and take necessary steps to achieve its objectives. This is only possible where public consultation and enlightenment is involved in the development of such policies." (p.446)

## 7 Conclusion

At the heart of this chapter is the need to broaden the conceptual framework for SD policy and planning in SSA in order to use society's natural resources prudently and judiciously to address people's QoL goals cost-effectively. The chapter posits that, useful and pertinent as the classical principles of SD articulated in the Brundtland

Report are as a platform for SD planning, the principles are necessary but insufficient to attain the tangible results that are urgently needed to reverse the regressive conditions of living in SSA. The two additional principles prescribed are Enlightenment and Engagement, principles which will complement (not supplant) the classical 3E principles. The additional principles have several advantages discussed in this chapter. Above all, they introduce two critically vital types of power as inputs into the SD policy and planning process, namely, knowledge power from enlightenment and people power from engagement.

One final note is that formulating effective and intelligible SD policies in Africa, as well as planning and implementing SD initiatives, requires a continuous mutual partnership between and among all the stakeholder sectors of society. The four typical stakeholder sectors in any society are the public, corporate, nonprofit and grassroots sectors. Onuosa (1998) emphasised the critical role of government in coordinating SD efforts:

> "In striving towards sustainable development, the initiative of governments is central in leading to its actualization. They need to show a strong political resolve in this direction and promote programs that ensure its feasibility." (p.449)

In spite of the central or leadership role of government, it must be stated that, in collaborating and working together to build a livable and viable society, it is important for each stakeholder sector to know its specialised roles and bring its strengths and assets to playing those roles in each function or initiative that leads to growth and development. For SD as an example of any other public function that is a means of growth and development in SSA, the roles of the stakeholders would vary by function and society. Thus, societies have to delineate or assign stakeholder roles in the light of local conditions and realities. The roles should be disaggregated by each of the 5E principles of SD and the relationship between the stakeholders should be based on the principle of shared responsibilities in safeguarding the environment.

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