

## Climate Change: The Challenges of Adopting Green Economy Model in Africa

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### Abstract

*Experts estimate that developed economies with 15 percent of the global population and utilizing about half of global resources have contributed to large increases in greenhouse gas (GHG) emissions in the atmosphere through the burning fossil fuels, that have contributed immensely to climate change. African countries are amongst the most vulnerable to the impacts of climate change, although they have contributed the least to the problem and also have the least infrastructure for managing and adapting to the impact of climate change. According to IPCC assessment reports, while African continent contributes less than 4 percent of global GHG, about 70 million Africans will be exposed to water shortage by 2020. This is a clear indication of the huge vulnerabilities associated with climate change. The vulnerabilities are a testimony to the direct impacts of climate change on development with regard to climate-sensitive activities such as agriculture. Indeed, the crisis is a significant threat for people living in African countries due to the high reliance of their livelihoods on climate-sensitive economic activities such as; rain-fed agriculture, livestock rearing, forestry and marine eco-systems. This shows that climate change is expected to exacerbate existing challenges such as land tenure insecurity, inequality and marginalization of rural populations, weak natural resource governance and management, slash and burn agriculture and its attendant soil degradation problems and lack of access to alternative energy sources. In the context of the impacts of climate change on socio-economic development and its exacerbation of the existing vulnerabilities, policies and strategies for adaptation and mitigation of the old and new vulnerabilities associated with climate change, by the African countries become not only a priority but also an imperative. However, such policies and strategies have to be underpinned by adopting a green economy model. The model is defined as “an economy that aims to improve human welfare and social equity and concurrently reduce environmental risks and ecological scarcities”. The objective of the paper is to analyze the kind of challenges that Africa faces in adopting the model. The challenges range from those of raising awareness amongst stakeholders, donor dependence, weak and low capacities for planning and enforcement, to Africa’s low voice in global economic, social and political affairs*

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### 1.0 Introduction

In a recent publication by the Economic Commission for Africa (ECA 2011) it was underscored that Africa’s future economic and development strategies should be based on a green economy model. The main objective of the adoption of the proposed model to ensure that accelerating economic growth and making the structural transformation to achieve the Millennium Development Goals (MDGs) and other social development goals remain consistent with environmental sustainability.

Indeed, in the recent past, the concept of a green economy has surfaced in academic and policy discussions. Further, the RIO+20 meeting which took place in Rio de Janeiro, Brazil, 20-22 June

2012, affirmed that “green economy in the context of sustainable development and poverty eradication as one of the important tools available for achieving sustainable development and that it should contribute to eradicating poverty as well as sustained economic growth, enhancing social inclusion; improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of the Earth’s ecosystems”, (The Future We Want, 2012:9).

The currency of the concept is informed by the recent global food, fuel, climate-related, economic crises and the persistence of poverty in Africa. These crises have triggered the debate

on the sustainability of current models of economic development. Furthermore, they have also triggered the new thinking on the need for transforming socio-economic systems into green economies with a view to enhance sustainability and improve economic outcomes. It is in the context of this new thinking that we attempt in this paper to analyze the kind of opportunities and challenges that Africa may face in the quest to operationalize the concept of green economy. The rest of the paper is organized as follows. Section two provides the conceptual framework for the study by focusing on the definitional issues. The analysis on the types of challenges that Africa might face is undertaken in section three. The fourth section contains a set of proposals to address the challenges.

## **2.0 The Conceptual Framework**

A green economy may be defined as “an economy that aims to improve human welfare and social equity, and concurrently reduce environmental risks and ecological scarcities. At its simplest, a green economy can be characterized by low carbon use, resource efficiency and social inclusion. It is driven by public and private investments that contribute to reducing carbon emissions and pollution, enhancing energy and resource efficiency, and preventing the of biodiversity and ecosystem services, such investments are driven or supported by national policy reforms and international policy and market infrastructure” (ECA 2011, P. 64).

The term “sustainable development” has a variety of interpretations. According to the Brundland Report, sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987:8). It needs to be recalled that since the adoption of this concept by the Brundtland Report in 1987, there has emerged a considerable amount of literature in which sustainable development has been variously conceptualized: as a pattern of transformation that optimizes socio-economic benefits in the

future; as a process of development that emphasizes intergenerational, interspecies and intergroup equity; as an improvement in the current living standards without jeopardizing future living conditions; and as a process of ensuring environmental services on a very long-term basis (Noman, 1996:6-9; Barrow, 1995:372). The various constructions, notwithstanding, there are common features among the various interpretations. One of the commonalities is the recognition that a comprehensive approach to sustainable development should encompass environmental sustainability (requiring development to be based on biotic capacity and minimal non-renewable resources); economic sustainability (implying the impossibility of never-ending economic achievements based on natural resources and the need for incorporating environmental costs into consumer prices); social sustainability (highlighting the need for citizen participation in environmental governance); and cultural sustainability (emphasizing the changes based on core cultural values and the acceptance of cultural differences) (Estes, 1993:10; Reed, 1996: 33; Hempel, 1996:41; Haque, 1999:200).

According to Haque (1999), despite the complexity, multi-dimensionality, and multiple measures of sustainable development, he argues that most crucial issue of sustainability relates to environmental or ecological concerns: (a) the rapid depletion of resources challenging future generations (b) the excessive accumulation of wastes compromising the future use of the biosphere, (c) the rapid decline of biological diversity threatening the varieties and future human use of biological species (d) the undesirability and redundancy of many of the goods and services currently produced in the name of economic growth and (e) the internal and international inequalities (resulting from the existing modes of development) causing adverse environmental outcomes (Dovers, 1989:33).

Indeed, with regard to these environment-related concerns of sustainability, there are three major perspectives, including the contamination

perspective, which according to Haque (op.cit.) and Hempel (1996) consider environmental problems to be a matter of biochemical contamination of water, air and soil; the eco-simplification perspective, which explains environmental destruction in terms of the simplification of complex ecosystems by destroying various species and reducing biodiversity; and the natural-resource-consumption perspective, which focuses on environmental damages caused by the use of narrow consumption-values to evaluate resources.

The linkage between the concept of green economy and sustainable development is that the former is more of a strategy (the how?) of achieving the latter. As a strategy, therefore, it has to address both the problems of sustainability, which are more related to natural resources and the environment, and the causes of such sustainability problems related to social, economic, cultural and even intellectual factors. For the purpose of this analysis, the focus on challenges is mainly on addressing those issues related to the causes of sustainability.

### **3.0 A Green Economy: Challenges**

In order to adequately capture the challenges facing Africa in adoption of the green economy model, one has to revisit some of the major causes of sustainability in the continent.

#### **3.1 Causes of Sustainability Problems**

Africa's population is among the fastest-growing in the world. Between 1960 and 2009, Africa's population grew at an average of 2.7 percent per year (World Bank, 2009). This high population growth rate tends to aggravate various forms of sustainability crisis, including depletion of lands due to over-cultivation and overgrazing destruction of forests to expand cultivable lands. This colossal expansion of population, coupled with high rates of urbanization, poses a serious challenge to sustainability due to the threat to the existing stock of non-renewable resources, environmental health and ecological balance, and massive increase in the number of over-crowded cities, leading forth to expansion of environmentally detrimental slums and health hazards.

The prospect of sustainable development is undermined by extreme poverty and economic inequality within and between continents. In this regard, Africa harbors 33 countries which are world's poorest, compared to Asia (15) and Latin America and Caribbean (1). For example, between 2000 and 2008, per cent of African people below the poverty line of USD 1.25 per day. The continent has also stagnated in terms of literacy and life expectancy. The UN Human Development Index indicates that 32 of the 40 countries that rank lowest are in sub-Saharan Africa (The Aryeetey, et.al 2012). Extreme poverty and inequality undermine sustainability of non-renewable resources in a number of ways, including clearance of virgin forests to obtain firewood and foodstuffs for survival (Postel and Heise, 1988:86). The practice of rotational agriculture by poor farmers in the continent also leads to depletion of the forest cover.

The other threat to sustainability is the development paradigm which tends to put emphasis on economic growth (GDPISM). This development thinking has tended to spearhead industrialization in other continents of the globe with negative effects on the global environment. Indeed, the massive industrialization drive which has been experienced in Europe, USA, Asia and Japan remains a major factor responsible for environmental catastrophes such as global warming, ozone-layer-depletion, deforestation, soil erosion, resource depletion, etc. Related to this phenomenon is that of globalization which has facilitated the diffusion of consumerist values and life-styles across cultures. The spirit of consumerism-implicating a direct correlation between maximum consumption of industrial goods and mechanized agricultural products – is one of the major causes of greenhouse gases, chlorofluorocarbons, and non-biodegradable wastes (Itty, 1984:24). It is no wonder that Ramphal (1992) claims that: “the question of consumption is central to the environmental crisis. It is the human impact that is endangering the planet's capacity to sustain life”.

The high levels of product concentration, which characterize Africa, have negative effects on sustainability. For example, countries rich in natural resources are the most problematic, with concentration levels as high as 80 percent on a single commodity. Likewise, the population in non-mineral rich countries depends on agriculture for their livelihood to the extent of 60 percent. These high levels of concentration tend to accelerate the rate of depletion of natural resources.

### **3.2 The Challenges**

One of the challenges in adopting the green economy development paradigm is that of raising awareness of governments and other stakeholders on the large gains that could be achieved by expanding investments to enhance natural capital. Studies show that Africa's natural capital assets, both renewable and non-renewable, are estimated to account for 24 per cent of total non-human wealth in Sub-Sahara Africa (World Bank, 2006). These resources comprise sub-soil assets (39 percent), crop land (36 percent), timber resources (9 percent), pasture land (8 per cent), non-timber forest (5 per cent) and protected areas (3 per cent) Millennium Ecosystem Assessment, 2005; Economics of Ecosystems and Biodiversity, 2010).

Second, for many years African continent has been highly dependent on donors for policy advice and financial flows. The policy advice has been imbedded in the neo-liberalism development paradigm. However, this paradigm, coupled with its attendant policies, has serious implications for sustainable development. Some studies do claim that the neo-liberal programs and policies undertaken have produced outcomes – including increases in poverty and inequality; decline in state capacity; an upsurge of export-led production and foreign investment, and an expansion of industrialization and consumerism-which have serious implications for both environment and sustainability (UNDP, 1996; Onis, 1995).

Third, most African states are weak or have low

capacities for crafting enabling policies and establishing requisite institutions for successful adoption of the green economy model. In some instances, it is noted that where institutions exist they are more than often characterized by incompetence, lack of integrity and inability to enforce contracts. It needs to be underscored that a green economic transformation will require enabling policies and institutions which entail a critical role for the state, through public investment; fiscal policies; regulations; government procurement; market creation at national, regional and international levels; and active participation of non-state actors. Effective performance of these roles demands not only a developmental state but also a close collaboration and network between the state and the private sector, within the framework of public-private-partnerships (PPPs).

Fourth, on a number of fronts Africa appears to be marginalized in the world economy. For example, one of the most conspicuous features of African economies today is the smallness of their shares in global transactions. Their involvement in global trade is the lowest for all regions at

3.5 per cent of world merchandise exports in 2008 compared to 27.7 for Asia (Aryeety, op.cit.). This high level of marginalization in the world trade translates itself to “low-voice” in world political social and economic affairs. This being the case, it may be extremely difficult for governments to mobilize the necessary financial and technological resources, necessary to adopt a green economy development model. We do contend that trade is a powerful connector between production and consumption to drive a transition to a green economy.

Fifth, agriculture is of particular relevance to green economic transformation in Africa owing to its importance in sustaining livelihoods, reducing poverty, and contributing to economic growth and development. Currently, the crop lands provide employment to 64 per cent of Africa's active population and contribute on average 34 per cent of GDP (World Bank,

2008).

However, the main challenge as far as agriculture development strategy is concerned, is that of modernization versus traditional agricultural systems. Whereas the former has negative externalities on the environment in terms of water pollution and soil erosion, due to excess usage of chemical inputs, but leads to enhanced productivity and better incomes for farmers; the latter, characterized by small-scale ecological farming system, limited use of chemical fertilizers and pesticides, and labor intensive production, appears to be more environmental friendly. The big question is how to reconcile the conflict inherent in these two production systems without compromising issues related to the environment, productivity gains and enhanced farmer incomes.

Sixth, Africa, and especially sub-Saharan Africa, is the most vulnerable region to the effects of climate change, even though it has contributed the least to past emissions, and contributes less than 4 per cent to global warming now (AFDB, 2012). Nevertheless, a key challenge to the continent is to finance investment in low-carbon, climate-proof infrastructure, that is, infrastructure that will both mitigate and adapt to climate changes. In this kind of a situation the adoption of a green economy model is imperative for Africa. However, given the challenges the adoption becomes a “necessary evil”.

#### **4.0 Concluding Remarks**

While we are cognizant of the enormous developmental gains that could accrue to the African continent, if it were to successfully adopt sustainable development paradigm, we are equally aware of the challenges that have to be addressed in realization of the potential benefits. This being the case, there is an urgent need for the continent to chart-out a plan, an implementation strategies and priorities for the transition towards sustainable development. The continental plan, strategy and priorities should be adapted at the national level to allow individual countries to choose an appropriate approach which reflects adequately the realities

on the ground (country-tailored-approach). Nonetheless, the adopted and adaptation approaches should be informed by the Rio Principles, Agenda 21 and Johannesburg Plan of Implementation.

In addressing the challenges prominence should be given to the following areas (i) awareness raising, across the board, to galvanize the support of key stakeholders to domesticate the sustainable development agenda; (ii) raise and enhance the voice of Africa in regional and global forums as a way of driving home Africa’s predicaments in such forums; (iii) diversify the economy as a way of reducing dependence on one or a few commodities. The diversification should go hand in hand with efforts to scale-up structural transformation of national economies. Such transformation is critical for enhancing incomes, creation of jobs and enhancement of national technological capabilities and capacities; (iv) reduce dependence on donor-driven policies. In this case, the neo-liberal development model may need revisit with the aim of adapting it to countries’ context so that at the end of the day it is not only compatible with the tenets of country’s ownership of the development agenda, but also with the green economy paradigm; (v) scale-up efforts to mobilize financial resources by exploring new sources and instruments. For example, access to carbon credit by clean energy projects is one such source. Other sources could be through public-private-partnership projects; (vi) improve governance by ensuring that policy making processes are transparent and inclusive, institutions are efficient and accountable, the rule of law reigns in all walks of life, and growth is pro-poor and broadly based.

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