Vol 8, No 2, 2016 ISSN: 1309-8063 (Online)

POLITICS OF CLIMATE CHANGE: WHY SHOULD AFRICA MITIGATE?

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─Abstract ─

In pursuit for sustainable economic growth, developed countries have constantly rejected proposals to reduce gas emissions from their economic dependent industries. For those countries who accepted or seem willing to mitigate, progress has been somewhat snail paced. On the other hand, developing countries have also raised concerns for the need to accelerate economic development of their societies faced with high rate of poverty, unemployment and many other social ills. Furthermore, because of weak infrastructural and socio-economic base, developing countries argue that they are already faced and forced to deal with the burden of responding and adapting to somewhat visible impacts, consequences and aftermaths of climate change related events and disasters. The complexities surrounding this reasoning, has hampered progress towards successful climate change mitigation. For developing countries, particularly those in Africa, the challenge is to comprehend the notion that putting efforts to control human induced climate change may impact and limit socio-economic transformation of the society. Even though these countries experience direct impact of climate change induced heat waves, floods and drought which are forcing them to inevitably improvise adaptation strategies. On the other hand, developed countries have continued emitting according to unchanged patterns of their unfettered consumerism and production while imposing limitations on developing countries' access to environmental resources and pushing them to adopt mitigation processes. The paper argues that the responsibility to curb gas emission and ultimately mitigate climate change should be vested to developed countries, whose economies are dependent on industrialisation, which is a worse emitter of gasses thought to be causing climate change. Developing countries should be

given space to develop their economies and accelerate socio-economic change without any limitation and derailing tactics towards climate change mitigation. Furthermore, the latter need to be given support to activate strategies and practical activities to respond and adapt to the consequences of climate change. The paper concludes that acceleration of economic growth and ultimately economic development in Africa will not only have positive effects on people's wellbeing but will contribute positively to the efforts towards current climate change adaptation needs and those that will emerge in the future.

Key Words: *Climate change, politics, mitigation, adaptation, economic development, Africa*

JEL Classification: Q54, Q56, Q58

1. INTRODUCTION

Global climate change, understood as an ongoing and complex pattern of changes in the composition of the earth's atmosphere (Giddens, 2008; Leggett, 2009 Keohane & Victor, 2010). Most natural scientist argue that the change arise from human activity such as industrialisation which contributes to the release of greenhouse gasses whereas sceptics consider the change as a natural process (Zehr, 2000; Michaelowa, 2001). Some of the common variables of climate change that are reported include amongst others rising of sea-levels, melting of mountain glaciers, changes in precipitation, heavy precipitation events, droughts, floods, and possibly changes in storm intensities (Weingart, Engels & Pansegrau, 2000; Zehr, 2000; Michaelowa, 2001). Michaelowa, (2001) also stated that, climate change has attracted enormous interest amongst different groups of society in recent years. Reportedly, climate change has consistently been regarded as one of the most pressing problems facing the world in surveys of elite and public opinion, even when there are considerable disagreement as to the appropriate response to the problem.

The intensity of the expected impact of climate change is assumed to present a clear danger to civilization as is known unless urgent remedial actions are undertaken (Swyngedouw, 2010; Zehr, 2000). The Intergovernmental Panel on Climate Change (IPCC) (2007) echoed the latter by stating that the precarious environmental conditions caused by climate change may lead to the premature end of civilization as we know it. For instance, it is anticipated that in addition to other social ills, Africa, climate change is expected to accelerate the vulnerability to poverty caused by conflict, environmental degradation, colonialism and post-colonialism, market failure, demographic changes, and disease such as malaria, HIV and AIDS (Thomasa & Twymanb, 2005). The said imminent danger to the future of common human and non-human world calls for radical changes in all domains, from the way of living to strategically formulating strategies relevant for adapting to climate change (Giddens, 2008; Leggett, 2009; Swyngedouw, 2010). However, with all the perceived imminent danger and damage that climate change may cause, it has been difficult for governments to craft a strong, integrated and comprehensive regulatory system to globally manage climate change.

Climate change discourse and debate are always clouded by complexities, controversies, politically and economically driven misunderstandings (Page, 2007; Giddens, 2008; Leggett, 2009; Keohane & Victor, 2010; Moser, 2010;

Madzivhandila, 2014).The paper commences by providing a discussion of the complexities of the climate change debate. This is done by looking at different and opposing arguments from both climate change scientists and sceptics. Furthermore the role of politics in climate change debate is addressed. The paper also addresses the question "why should Africa mitigate". The discussion looks at the ongoing tale of climate change mitigation versus adaptation. It also look at the need and role of economic development for successful adaptation in Africa. The paper furthermore gives highlight of some of the impact of climate change in developing countries and different adaptation tools which are employed particularly for those practicing agriculture. The paper concludes by providing a way forward on what to consider to deal with opposing arguments and create unified strategies in order to address the impacts of climate change.

2. COMPLEXITIES IN THE CLIMATE CHANGE DEBATE

For almost three decades, concerned scientists have sounded the alarm about global warming and its consequences of climate change becoming an environmental threat that might seriously alter and interfere with the normal functioning of human life on earth (Weingart et al., 2000). However, majority of these early communicators of climate change, were physical scientists and environmentalists, professional groups not necessarily familiar with the dire socio-economic consequences of the changes. Nevertheless, the message was clearer in that, climate change conundrum was not only global but a universal humanitarian threat in which all earth inhabitants, environment and the people are potential victims (Swyngedouw, 2010; McCright & Dunlap, 2011). Furthermore, because of the uncertainty in terms of timelines, the invisibility of its causes, inadequate signals indicating the need for change and reflection self-interest, it was also clear from the onset that the idea of climate change will evoke lot of debates and discourses. Discourses which were more complex and controversial than any other environmental science subject area that was ever explored in the natural science fraternity (Keohane & Victor, 2010; Moser, 2010; Madzivhandila, 2014). In other words, very few aspects of the climate change debate are uncontroversial, and the controversies between protagonists are often intense and even bitter. The controversy of the debate has been around uncertainty in terms of the methodological problems and open questions which are inherent to the issue, also unclear production of a systematic and scientific assessment of its global scope, as well as of its internal dynamics and global impact (Weingart et al.,

2000). These has attracted much attention from different actors, commentators and spectators to the debate. Many people misunderstand aspects of the science underlying climate change and in particular are confused on the precise nature, causes, and consequences of climate change.

Even though there has been numerous occurrence of natural transformations of the earth's atmosphere in history, the magnitude of the debate and the attention that global warming and climate change received was beyond normal. Madzivhandila (2014) stated that, the global reaction to climate change science vary from prime believers to sceptics and ultimately to the ongoing political ball game that still continues to overwhelm the world discourse up to this day. The most interesting part of the debate amongst different groups has been about whether climate change is man-made or it is just a natural process. This is still the centre of the battle between the sceptics and the main body of scientific opinion and each of the group tend to continuously rubbish the other's arguments on this matter (Giddens, 2008; Leggett, 2009; Keohane & Victor, 2010; Moser, 2010). Scientist claim that the present-day processes of global warming are produced by human activity such as industrialisation which contribute to gas emissions and sceptics point out that climate change is produced by natural causes and that it has been a constant feature of the world atmospheric history (Keohane & Victor, 2010; Moser, 2010; Madzivhandila, 2014). Interestingly, there are other sceptics who accept that climate change is happening and that it is humanly induced, but argue that the threat it poses has been exaggerated (Weingart et al., 2000). For them, other world problems, such as poverty, Aids, or the possible spread of nuclear weapons are more worrying and presently pressing than climate change (Giddens, 2008; Leggett, 2009).

Some sceptics claimed that they have proof that climate change was no more than media hype, accusing climate scientists of publishing exaggerated predictions to attract public attention and thereby facilitating the acquisition of research funds (Keohane & Victor, 2010; Moser, 2010; Madzivhandila, 2014). For instance the use of the concept "dangerous" climate change has been criticised as one which unnecessarily foster attention and bring fear to the mass public to jump into the bandwagon of climate change activities. In other words, sceptics believe that the perceived danger of global climate change which necessitate fear of its serious impacts expected by many scientists, unnecessarily reinforces the need for agreements on legal requirement to curtail greenhouse gas emissions and limit carbon-emitting land uses, the process which will have serious negative prospects

on countries' economies (Giddens, 2008). However, McCright & Dunlap (2011) argue that, the conflict between sceptics and climate change scientists reflects a deeper division between those who levy critiques of the industrial capitalist order and those who defend the economic system from such challenges (McCright & Dunlap, 2011; Page, 2011; Madzivhandila, 2014; Urquhart, 2014). Environmentalist are accused of depicting environmental problems as universally threatening to the survival of humankind, with an ability to stage premature termination of civilization and human existence in the planet earth. Furthermore, Zehr (2000) states that the battle has always been about environmentalists conjuring images of disaster caused by development actions and industrialists appeal to scientific uncertainty on such perceived hazards.

Climate change scientists believe that the fossil fuels industry and its business allies and conservative think tanks (with support from oil and coal companies and conservative foundations) work as hard as they can to debunk the scientific evidence for climate change in order to continue with emission (McCright & Dunlap, 2011; Page, 2011; Madzivhandila, 2014). Furthermore, climate change scientist argue that some of these fossil-fuel interest groups purposefully create think tanks, intentionally publish misleading messages, channelled through the 'megaphones' of the mass media, and persistent lobbying of politicians to deliberately create an impression of inadequate scientific understanding, continuing lack of scientific consensus, and legitimate alternative explanations for the growing evidence of global warming (McCright & Dunlap, 2011; Page, 2011). It is also believed that "sceptical" scientists of climate change are paid directly by the oil industry to call into question the credibility of the global warming hypothesis. However, even though the sceptics cannot be ignored because what they say can influence the public, the few remaining climate change sceptics are increasingly marginalized and seen as either maverick hardliners or conservative bullies whose work feeds into the global political or economic space (Michaelowa, 1998; Weingart et al., 2000; Zehr, 2000). In other words, climate change is no longer just a scientific issue but one which is politically driven and have huge influence on political decisions which are timely and economically inclined.

The politics of climate change is more visible at its conventions and international meetings organised by the United Nations (UN) through the banner Intergovernmental Panel on Climate Change (IPCC) and Conference of the Parties (COP). For instance, the Kyoto Protocol was supposed to be the first international

agreed upon strategy for climate change, however, it became strongly contested and increasingly politicized. Swyngedouw, (2010) argues that, the current hegemonic climate change policies are more political and leading to stagnate socio-political status quo rather than, as it had been hoped, offering a wedge that might contribute to achieving socio-ecologically and more egalitarian transformations (Weingart et al., 2000; Zehr, 2000). In other words, climate change is now a mainstream political issue and its discourse and strategies are a representation associated with policies which sustains political and populist gestures. Furthermore, within nations, politicians see climate policy as one issue among many others, one which only becomes relevant if it captures voters' attention particularly following a meteorological extreme (Weingart et al., 2000; Madzivhandila, 2014). For those political players with economic interest on industrial (gas emitting) activities and those with direct stake in maintaining the carbon-heavy status quo, they express climate change as a complex issue which has scientific uncertainties, thus not encouraging and requiring immediate political decision making. Some become loud spokespersons against the reality of climate change and the need for mitigation policies. Weingart et al. (2000) argue that, initially in the political discourse, climate change was constructed as humankind's all-embracing meta-problem, however, the discourse has shifted and it is currently seen a challenge which requires normal political regulation and routine.

Ultimately, climate change is a complex global issue and encompasses a wide range of research activities in many fields. Whatever ecological risk climate change has, the communication about it has been different among ordinary people, scientists, politicians, and the media (Madzivhandila, 2014). Lorenzoni, Pidgeon & O'Connor (2005) stated that, when it comes to climate change, the mass "public" could be separated into three groups: a minority who support strong immediate efforts to reduce greenhouse gas emissions (man-made climate change); an even smaller minority who judged almost any actions to be premature; and a majority who expressed a willingness to make reasonable sacrifices to begin to address the problem. Consequently and beyond the discourse on whether climate change exist or not and whether its predicted impacts are realistic or not, the issues is about whether countries should prioritise mitigation or adaptation to climate change and whether developed countries should foot the bill for these processes as they are believed to be the main culprits of the man-made climate change.

3. WHY SHOULD AFRICA MITIGATE?

The question of whether African or any other developing countries in the world should or not fully participate in the processes of climate change mitigation tend to be political and not easy to answer. The fact that mitigation processes, its strategies and practice might have an impact on the economic progress of a country makes it difficult to accept. It is also easy to argue that the same reasons that for almost three decades after the Rio Earth Summit and the ultimate establishment of Kyoto protocol, some developed nations such as those in America and Europe are still reluctant and sometimes refuse to fully commit to the reduction of fossil fuels and gas emissions contribution to the atmosphere This stance makes it more difficult to convince developing countries whose economies are still struggling to flourish to agree to participate in this process (Thomasa & Twymanb, 2005; Page, 2007; Giddens, 2008; Leggett, 2009; Keohane & Victor, 2010; Moser, 2010). For instance, it took almost four year to elaborate the detailed rules for the application of cross-border cooperation in greenhouse gas reduction via the so-called “Kyoto Mechanisms” and the rules for carbon sinks. Mitigation involves stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system (Michaelowa, 2001).

Scientists believe that by achieving the stabilization of greenhouse gas to an acceptable levels, this will allow ecosystems to adapt naturally to climate change and ensure that food production is not threatened, thus enabling economic development to proceed in a sustainable manner (Lorenzoni et al., 2005; Thomasa & Twymanb, 2005). In other words, reduction of gas emission in industrial, agricultural, energy generation activities and any other activity which contribute to greenhouse gas, will make a huge difference in the fight to curtail climate change. Some of the preferred technologies to achieve mitigation include usage of solar power, nuclear fission and fusion, hydrogen, thermal energy, “clean coal” technology and for others mixture of several or all of these. However, according to Madzivhandila (2014), this process will cause more harm than good as such interferes with normal processes of economic growth. Madzivhandila (2014) argues that the situation will be worse in developing countries, particularly those in the Africa and Tropical Islands, which are faced with high levels of poverty, unemployment and are already affected by natural disasters such as floods and drought. Furthermore, developing countries are often considered more vulnerable to the effects of climate change than those that are more developed. The

inequitable distribution of negative climate change impacts are attributed to a low capacity to adapt in the developing world (Thomasa & Twymanb, 2005; Page, 2007; Giddens, 2008). Unfortunately and given the probability of damages from climate change, developing countries will start to invest in technical adaptation measures, especially after extreme events. Thus, for African countries to chase mitigation targets and still be able to sustain the struggling economic growth and development and also formulate sustainable climate change adaptation strategies is as hard as climbing a slippery steep hill (Page, 2007; Giddens, 2008; Madzivhandila, 2014). Understandably, the tale of climate change adaptation versus mitigation in Africa is one which is not easy to narrate. According to Michaelowa (2001), it is more difficult for African countries to overcome this challenge because the clear dominant paradigm in international climate policy has been mitigation while adaptation has been a low-key issue. In other words adaptation discussions has been relatively neglected while mitigation measures and options taking centre stage during most of climate negotiations.

Generally, there is a trade-off between mitigation and adaptation strategies as resources for climate policy are limited. Also, countries preferences concerning mitigation and adaptation depend on income and are strongly influenced by the occurrence of extreme weather events. Michaelowa (2001) argues that, in Africa successful adaptation is inevitably necessary and it can be much more powerful strategy to reduce impacts of climate change than mitigation. In this instance, reduction of greenhouse gases has a different degree of attractiveness to these nations (Michaelowa, 2001; Thomasa & Twymanb, 2005; Page, 2007; Giddens, 2008). In other words, developing countries particularly those in Africa with low incomes become autonomously not interested in mitigation unless strategies proposed and the costs are very low to not consume the limited financial resources available. Consequently, Michaelowa (2001) argues that mitigation will usually be preferred by societies with a strong climate protection industry and low mitigation costs while the quest for adaptation is linked to the occurrence and damage by extreme climate related hazards in developing countries (Michaelowa, 2001; Thomasa & Twymanb, 2005). However, on the other hand (Michaelowa, 2001) argues that even in developed countries, mitigation will only be preferred if the emitters only face low mitigation costs, otherwise it will also be rejected. In contrast to mitigation policies, adaptation policies are much more diverse than mitigation and there are direct individual and local benefits due to the reduction of potential damages from climate change. Madzivhandila (2014) argues that in

developing countries the choice of adaptation measures also depend on the levels within which such a process align with growing and maintaining pressing issues such as economy and development pressures faced.

Since climate change does not occur independently of other processes impacting upon developing world societies, it is apparent that the strategies to respond to it should interface with the development processes to simultaneously provide progress towards sustainable transformation and reduce existing inequalities and vulnerability to climate change, poverty and other social ills. According to Page (2011), climate change strategies should not derail Africa's quest for the continued reintegration of industrialisation in order to sustain its growth. Page (2011) believes that Africa should follow the path of other economies with more diverse and sophisticated industrial sectors for its growth to be faster. What has been missing from Africa's economies and which ultimately makes it vulnerable from climate change disasters for decades now has been sustainable structural change which provide for current investment climate reforms on infrastructure, skills, and regional integration activities (Swyngedouw, 2010; McCright & Dunlap, 2011; Page, 2011). Majority of Africans continue to work in agriculture which is worse affected by climate change and is diminishing (Page, 2011).Unfortunately, agriculture provide limited range of technological innovations to transform Africa's economy and enter into the upper league of global competitiveness, thus many of African countries are affected severely by climate change and are failing to come up with sustainable measures to adapt to it.

4. IMPACT AND ADAPTATION MEASURES IN DEVELOPING COUNTRIES

The current perception is that climate change activities are not yet prominently well featured in the environmental and policy agenda of many of developing countries even though they are the most vulnerable to the effects of climate change than any other. Many developing countries are said to still regard climate concerns as no more than potential barriers to their ability to reduce poverty and increase income levels (Leggett, 2009; United Nations Framework Convention on Climate Change (UNFCCC), 2007; Urquhart, 2014). Most developing countries are said to be ignoring the fact that the future effects of climate change will be severe if they do no formulate proper adaptation methods (Leggett, 2009). For instance, it is predicted that climate-related decreases in food security and increased malnutrition are rated as high risks in Africa, Asia, Central and South

America under current levels of adaptation, should global mean temperature increase by 4°C (UNFCCC, 2007; Urquhart, 2014). Furthermore, it is estimated that billions of people particularly those found in developing countries face a shortage of water, food and greater risks to health threats as a result of climate change in the next decade (UNFCCC, 2007). Such a situation will have a devastating effect on the quest for achieving the goals of sustainable development and also the United Nations Millennium Development Goals (MDGs) (United Nations (UN), 2007). Interestingly, even though it might not appear in most of developing countries environmental and policy agendas, many of these countries' farm households are already adopting some adaptation methods in response to the perceived long-term climate changes effects (Urquhart, 2014). In these countries, particularly those which are largely dependent on agricultural activities and which are already facing climate change challenges, governments have given adaptation action a high or even urgent priority (UNFCCC, 2007; Urquhart, 2014).

The adoption of adaptation measures such as changing crop variety, adopting soil and water conservation measures, harvesting water, planting trees, and changing planting and harvesting periods are found to have assisted some of the farmer on their subsistence farming activities particularly the ones which are rain dependent amid recent erratic rainfall experiences (Urquhart, 2014). Other measures of adaptation include non-yield related which include migration and shift of farming practices from crop production to livestock herding or other sectors (UNFCCC, 2007). However, it is safe to say that the war against climate change goes beyond households' low scale adaptation measures. Developing countries need to incorporate and integrate climate change issues into their broader socio-economic development strategies (UNFCCC, 2007). In other words climate change should not be dealt with in vacuum apart from other development challenges (UNFCCC, 2007). Developing countries should strive for measures to increase and build capacity for successful adaptation (UNFCCC, 2007). Consequently, developing countries need international assistance to support adaptation in the context of national planning for sustainable development, more capacity-building and transfer of technology and funds (UNFCCC, 2007; Urquhart, 2014). In other words, any effort to fully engage developing countries in the international climate regime should provide investment and technology flows toward climate-friendly development and such must take account of circumstances and trends that shape present development patterns and condition possibilities for the future of the country in question (UNFCCC, 2007). Furthermore, the realization that

developing countries have very different individual circumstances and that the specific impacts of climate change are dependent on the conditions experienced as well as the geographical, social, cultural, economic and political situations should be taken into consideration (Leggett, 2009). That is, countries' requirement for a diversity of adaptation measures very much depend on individual circumstances and specific effects encountered. It is already evident that the consequences of climate change affect almost all countries either developed or developing in one way or another. What matters is the capacity within which a particular country can cope and adapt to the after-effects of the climate change they are facing.

5. WAY FORWARD

To truly come to terms with the increasingly urgent need for either mitigation or adaptation to climate change, requires a broad policy perspective which is holistic in nature (Thomasa & Twymanb, 2005; Page, 2007; Giddens, 2008; Leggett, 2009; Keohane & Victor, 2010; Moser, 2010). Although an international agreement is a vital aspect of an effective global response to climate change, such an agreement should provide for context based approach and provide strategies which are tailor-made for each and every region, continent and even countries looking at the levels of gas emission, intensity of the impact, levels of vulnerability, standard and quality of the infrastructure and competitiveness of the economies. Furthermore, the policies adopted at the international conventions on climate change should not increase but lessen pressures on countries' economies and resources (Michaelowa, 2001; Thomasa & Twymanb, 2005). However, the process should improve management of environmental risks and increase the welfare of the poorest members of society. The process should also simultaneously advance sustainable development and equity, enhance adaptive capacity and reduce vulnerability to climate and other stresses (IPCC, 2001).

The evaluation and ultimately adoption of different mitigation and adaptation options requires both appropriate policy instruments coupled with wide ranging research, socio-economic analysis and political willingness to continue monitoring the implementation process of the agreed policies. Giddens (2008) argues that, political leaders have an obligation to track the course of the debate and assess new findings on a continuing basis in order to timely update climate change related activities. Therefore, strides to continuously track new experiences, occurrences and to understand the nature and drivers of public positions on climate change is crucial in order to develop effective responses to the problem of

climate change. In order to succeed in responding to climate change and ultimately attract buy-in of all relevant role players involved, there is a need for continuous worldwide, long-term observation and collection of crucial data (Weingart et al., 2000). This is important because in its nature climate change science findings and evidence are often preliminary, uncertain, and hypothetical. Lastly, adaptation measures and climate change response strategies should be formulated in such a way that they provide for implementation of early warning systems which can easily be transferred to location areas and communities in order to warn them about expected extreme events (Weingart et al., 2000; Michaelowa, 2001). Climate change strategies should avoid following the same path of applying the "firefighting" approach by waiting for natural hazards to happen and then respond after.

6. CONCLUSION

Even though there is a growing consensus that climate change poses danger to society and evidence of such is continuously playing itself out, the quest for successfully and universally responding to climate change in a unified manner has arguably been the most challenging aspect of its existence. The paper discussed complexities associated the climate change debate which amongst other include the continuous spat between the sceptics and prime believers of climate change. The paper revealed that the conflict and complexity of climate change debate is also exacerbated by the political and economic inequalities between developed and developing countries which ultimately lead to mistrust and misunderstandings. The staggering question on whether African or any other developing countries should prioritise mitigation or adaptation is also addressed on this paper. The paper also concisely looked at different impact and adaptation measures of climate change in developing countries and provided a way forward towards equitable climate change response strategies.

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