



Policy Brief



Climate Change: An African Response

by

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Background

Most Africans depend directly on agriculture and natural resources for their livelihood, and yet these livelihoods are threatened by the most important atmospheric phenomena in sub-Saharan Africa, which is climate change.

Ironically, and relatively speaking, the continent suffers little from atmospheric pollution except in major cities where emissions from industry and automobiles are rising. Although the continent contributes least in terms of greenhouse gas emissions (GHGs) such as carbon dioxide, the main GHG responsible for global warming, globally the continent is the most vulnerable region to climate change.

Climate data for Africa for the last 30-40 years show that if current trends continue, by 2050 the continent shall be 0.5 - 2.0 C⁰ warmer. But the impacts of climate change will be experienced differently at various spatial and temporal scales. These include drought, sea level rise, and flooding at low-lying coastal areas. The viability of small islands is also jeopardized.

Ecosystems and biodiversity are likely to be affected because many species may not be able to adapt, or migrate to more suitable areas. Furthermore, changes in rainfall and temperature patterns can have a negative impact on water availability, ultimately reducing food production and security. In addition, disease distribution patterns are also likely to change.

Challenges

Global efforts are underway to address mitigation and adaptation to climate change, but because of widespread poverty Africa's adaptive capacity is compromised. Resilience is further inhibited by weak institutions, ineffective governance, and fragile ecosystems. Deforestation and land-use changes further diminish the resilience of agricultural systems especially with regard to availability of ground and surface water, and yet resilience is a key component of weathering shocks, and fostering regeneration.

On paper, building Africa's mitigation and adaptive capacity in climate change is regarded as a priority by both African governments and development partners. But locally, there is the perception and growing concern, that agricultural development activity designed to respond to climate change is *supply driven*- in other words- that these activities are marshaled in response to funding from overseas (foreign funding). Therefore, at this critical juncture, we need to think about why there are few home-grown or *demand driven* initiatives that are designed, funded and led by African governments.

It behooves me to say, that on the whole in Africa, especially at the highest political echelons, mitigation and adaptation to climate change is not yet recognized as a priority. And yet, those of us assembled here know that this is not due to lack of

our valiant efforts. We all work extremely hard. The broad spectrum of stakeholders assembled at this forum are world experts: they include those that are concerned about biodiversity and natural resource management; those working on novel adaptation strategies and incentives in forestry and agro-forestry; those that are leading innovations in livestock breeding; innovations in aquaculture; plant breeding innovations; novel approaches to water harvesting; those leading advocacy campaigns designed to make political leaders more aware about climate change threats, and the plight of farmers; and those serving on the myriad inter-ministerial committees that have been created to synchronize these cross-cutting issues into meaningful policy and practice.

Indeed, the African agro-ecological landscape is strewn with august acronyms. These august acronyms include: AGRA, YARA, ICPAC, ACMAD, CSAG, NEPAD, IFAD, FARA, CAADP, ICRAF, ILRI, IFPRI, ADB, IGAD, ICRISAT, AWARD, ICIPE, WAAIF, IMWI, and ACTS. Some take the notion of having an august acronym to another level and become known as Bioversity, WorldFish, AfricaHarvest, and AgDevCo. But what is in an acronym? These acronyms represent a multi-disciplinary set of extremely important stakeholders. Collectively, these institutions embody robust bodies of work, the practical application of which can pave the way towards an African green revolution.

But why is meaningful implementation and enforcement lacking? Could it be that too much information has led to systemic *analyses-paralyses* at the highest political levels in Africa? Is this what Olesugun Obasanjo (former President of Nigeria) alluded to, two days ago at this Forum by saying that we are taking one step forward and two steps back?

Going forward

Obviously, the ultimate responsibility of taking three or four steps forward, and avoiding taking any step backward, lies in the hands of our political leaders. But our responsibility, as the people in the trenches, is to seek to enhance the meaningful application of our efforts by working together. For example, information about future climate change trends and scenarios, and information about current climate variability must be imbedded within the broader context of climate information. Both

perspectives are important but the value of each perspective depends on the decision-making context.

A plant breeder for example, is keen to find out about future climate change scenarios, but a small-scale farmer is keen to know how much rain to expect in the season in order to decide what crops to grow. Clearly, these views are not mutually exclusive. Rather, they are both important and efforts to integrate these perspectives ought to be accelerated. However, in order to achieve this, education and capacity building efforts must also be strengthened in order to avert constraints that are inimical to our success.

Without a doubt, the capacity of African scientists to interpret climatic data and put this in the agricultural context needs to be improved. The decision of what model or scenario to use is often based on ease of use rather than an analytical justification for choosing one model over the other.

Another constraint to effective adaptation strategies, especially in the agricultural sector, is lack of a comprehensive understanding of how climate change *per se* is discernible. By this I mean that (when not carefully assessed) we can be predisposed to isolating the impacts of climate change from the broader development challenge, and the possible impact of other drivers. For example, is a reduction in pasture due to overgrazing or due to climate change? Is a reduction in crop yields due to climate change, or due to lack of other important inputs such as fertilizer? These two examples tell us that we urgently need to improve our education and capacity of using climate-change-model -data to inform decision-making.

But this is not a human resource challenge alone. It is also an institutional and political challenge. In the face of climate change, African agriculture must incorporate a multi-disciplinary set of stakeholders that include politicians, agriculture experts, farmers, agri-business, climate scientists, community organizations, youth organizations, civil society organizations, academia, and policy-makers.

Finally, as Judith Rodin, President of the Rockefeller Foundation, implored at this Forum -a green revolution in Africa will need revolutionary ideas, revolutionary partnerships, and revolutionary leaders. Let us stand up to this challenge and respond innovatively and work collectively towards achieving an African green revolution.