

AFRICA AND CLIMATE-RELATED DISASTERS

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Abstract

Africa is the least emitter of greenhouse gases into the atmosphere, yet the most affected by the extreme impacts of climate change. The impacts come in the form of hazard-related disasters (Floods, erosion, drought and storm). Today, these disasters strike unexpectedly in different countries found in Africa. Many are, therefore, displaced or forced to move by the occurrence of these climate related disasters. This paper would study Africa's ability to handle climate related disasters on its own. To understand Africa's ability, this paper will first of all define disaster and show how it is related to climate change. It will also look into the different types of disasters that are caused by climate change. In addition to these, it will also look into the gaps and challenges faced by African countries in their bid to adapt and mitigate the climate related disasters. Finally, we have a way forward through which African countries can navigate out of the climate related disasters and a conclusion.

Keywords: Climate Change, Africa, Nigeria, Disaster, Green House Effect

Introduction

According to ISDR Report (2011), Africa is the least emitter of greenhouse gases into the atmosphere, yet the most affected by the extreme impacts of climate change. The impacts come in the form of hazard-related disasters (Floods, erosion, drought and storm). Today, these disasters strike unexpectedly in different countries found in Africa. Many are, therefore, displaced or forced to move by the occurrence of these climate related disasters. As a push factor

towards migration, it has increased the number of Africans on the migration list and with its expected increase in the years to come, it is expected that the contribution of Africa to the migration pull can only increase. Although many countries in Africa have ratified the United Nations Framework Convention on Climate Change (UNFCCC) Convention Treaty of 9th May 1992 and the Kyoto Protocol of 1992, though effective in 2015 and some do participate in COP deliberations and have their own Intended National Determined Contributions (INDCs) working towards reductions in greenhouse gas emissions under the United Nations Framework Convention on **Climate Change**, a lot needs to be done and put in place. It is also good to note that few governments have invested resources to reduce the risk to climate-related disasters (ISDR, 2011).

This paper would study Africa's ability to handle climate related disasters on its own. To understand Africa's ability, this paper will first of all define disaster and show how it is related to climate change. It will also look into the different types of disasters that are caused by climate change. In addition to these, it will also look into the gaps and challenges faced by African countries in their bid to adapt and mitigate the climate related disasters. Finally, we have a way forward through which African countries can navigate out of the climate related disasters and a conclusion.

Disaster in Relation to Climate Change

Disaster by definition is a serious disruption of the functioning of a community or a society involving wide spread human, material, economic or environmental losses and impacts which exceeds the ability of the affected community or society to cope using its own resources (UNISDR, 2009). According IPCC (2012) anthropogenic activities cause climate change which in turn influences the natural hazards hence making people vulnerable to droughts, floods and storms. The link between disasters and climate change are therefore wrought in the impacts to the society. The impacts range from region to region. In the horn of Africa and the Sahel desert, severe droughts have been experienced in the past years especially the year 2011 and 2012. The consequences of the droughts are lack of sufficient food as the droughts affect agricultural production that is pegged on rain fed agriculture. There is also loss of livestock due to lack of pastures and water (Kolmannkog, 2009). In the areas that receive rain, the people experience flash floods and diseases.

Types of Disaster

The noticeable impact of climate change is the increase in the frequency and severity of the hazard related disasters. Hazards combined with vulnerability results in disasters (Kolmannkog, 2009). Majority of the climate- related disasters are drought (climatological), flood (hydrological) and storm (meteorological). Many households and communities have been affected by these disasters in different countries found in Africa.

a) Drought

The horn of Africa has suffered drought in the past two decades and it has the highest vulnerability indicators for drought (ISDR, 2011). In the last thirty years, seven out of the ten worst droughts disasters in the world took place in the sub-Saharan Africa. The worst one took place in 2011 that took place in the horn of Africa and it hit Ethiopia, Somalia and Kenya as many people were affected and suffered from acute shortage of food (Dorsouma 2015). This accounted for close to eighty percent of loss of life and seventy percent loss of property (Dorsouma 2015). During the droughts seasons, the most affected and vulnerable sector is the agricultural sector (IPCC, 2012). It is the source of livelihood to many and contributes approximately 50% of Africa's total export value and approximately 21% of its Gross Domestic Product (GDP) (PACJA, 2009). As such now, food production is minimal and the lives of many cannot be sustained

b) Floods

This occurs in the form of river flooding and hence the displacement of many people living around the riverine areas. The worst experienced was in 1998 that affected many parts in Eastern Africa due to a record of an unusual rainfall (El Nino 2014) and disastrous flooding (Dorsouma 2015). Flash flooding has also been experienced in the Arid and Semi-arid lands that covers most of the horn of Africa and it results from excess rainfall (Dorsouma 2015). Cyclones occur in the south eastern coast of the Indian Ocean with Madagascar, Mozambique and Indian Ocean islands at risk (Dorsouma 2015).

c) Storms

Research has indicated that climate change will cause hurricanes and tropical storms to become more intense unleashing stronger winds and causing more damage to the coastal ecosystems and communities (The Nature Conservancy (2019). The strong winds will therefore destroy the houses and other property. Further, scientists have pointed out that higher ocean temperature as the main cause, since hurricane and tropical storms get their energy from the water (The

Nature Conservancy (2019). As sea temperatures rise developing storms will contain more energy hence putting many communities at risk for devastation from floods (NRDC 2016).

Impact of disaster

The impacts of climate-related disasters vary from one country to another, in some regions they are common (horn of Africa). They include: decreased grain yield hence food insecurity, decrease of water levels and water availability, increase in droughts, floods and other extreme events, significant extinction of plants and animal species and finally, coastal erosion and an inundation caused by rises in sea levels (IPCC, 2001). These impacts now make people in different countries to migrate to places where there is either good pasture for livestock if they are pastoralists or to urban centers to seek for alternative livelihoods. It is also good to note here that disasters have different effects on human migration, with some people voluntarily migrating or being forcibly displaced, others trapped and forced to remain and yet others choosing to remain (Kolmannskog and Tamer, 2014).

In addition to this, climate-related disasters have also rendered most of the countries in Africa poor and as such there is no economic growth. When the disasters strike, most of the households lose their incomes. The infrastructure (road) is also destroyed due to the floods. Once the roads are destroyed access to markets is impossible and the exchange of goods and services is difficult to realize (IEG-World Bank, 2007). Lastly, the poverty levels rise as the livelihoods are affected and altered due to overreliance on rain fed agriculture.

Gaps and challenges that exist in African governments in dealing with climate-related disasters

Africa is blessed with natural resources; however, it is also one of the most affected by the climate-related disasters. Most of the African countries lack systems and structures that deal with these disasters because of the following: first, they have weak Early Warning Systems (EWS) compared to the developed world. In addition to the weak EWS, they lack modern tools and technology to monitor, predict and forecast future climate trends and the disasters they portend (Nwaniki, M. and Chagutah T. 2011). Telecommunication networks in most of the NMHS in Africa are also inadequate and obsolete hampering the efficient flow of observation (Nwaniki, M. and Chagutah T. 2011). This now

limits the ability of the NHMS to provide and disseminate information to the rural areas. Second, most of the African governments lack policies and laws that safeguard the environment. Third, there is lack of financial instruments. Most of the African countries rely on donor funds to from overseas to put in place policies and structures that mitigate disasters. For instance in Kenya, the National Drought Management Authority is funded by the European Union. Fourth, Africa lacks robust research and data for evidence as far as disasters are concerned. In fact, lack of data availability is a major constraint to measuring the disaster impacts effectively. Evidence remains patchy as availability of data on disaster losses in Africa is low (UN-ISDR, 2011). Fifth, lack of capacity and knowledge among the vulnerable on prediction and preparedness as far as disasters are concerned. Last, there is lack of participation as all communication is top-down. This is why there are no solutions to the problems affecting the vulnerable. Participation demands that there is need to listen to the people and problems and solutions must collectively be identified (Chagutah and Laudato Si, 2015).

Way forward/Recommendations

Africa is alive to the climate-related disasters and has made efforts on how to reduce the disaster of climate change. In most of the countries therefore there exist policies, laws, bills and national strategic plans that give them strategies and inform their decision on what, when and how to deal with different disasters. Many countries have therefore put in place different approaches to address climate-related disasters. Some have concerted efforts as regions to deal with the disasters. For instance we have Intergovernmental Authority on Development (IGAD), Southern African Development Coordination Conference (SADCC), Economic Community of West African States (ECOWAS) and East African Community (EAC). All this are regional bodies formed to advise countries found in that region. Above all, African countries by the virtue of ratifying the UNFCCC Convention and the Kyoto Protocol participate in Conference of Parties (COP) to discuss the pathways and how to handle climate change.

For Africa to be able to manage the climate-related disasters, this paper makes the recommendations:

1. There is need for practical actions that demonstrate results in order to reduce risk related to climate disaster. The practical action here is good financial systems.

2. Innovations that help the communities to build resilience against the climate-related disasters must be pursued. This includes innovations on social protection, food security and insurance of livestock and crops (Oxfam, 2011). These innovations will spur economic development and economic development reduces exposure to natural hazards (IEG world Bank, 2007)
3. There is need for collaboration and partnership between the African governments, private sectors, NGOs communities and learning institutions. This partnership should be guided by a trans-disciplinary research approach to find solutions to the problems and disasters affecting the people. This will help the African countries develop more robust adaptation and response capability to disasters as part of their development planning (IEG World Bank, 2007).
4. African governments must set aside or make budgetary allocations to development and recovery of drought prone areas especially the arid and semi arid lands.
5. African governments need to put in place working and actionable EWS and information derived should be cascaded to all and made accessible to all (ISDR 2012)
6. African governments need to document evidence of the investment made in disaster risk reduction of both short term and long term impacts of disasters on individual households and communities at large
7. Use of indigenous knowledge. To succeed in reducing the climate-related disasters, African countries should make good use of the indigenous knowledge. The information obtained from IK should be used to develop seasonal climate forecasts that incorporate both IK and modern science (Ouma, 2010).

Conclusion

This work has studied the African continent in relation to its capacity to handle climate related disasters on its own. To understand Africa's ability, it began by first understanding what disaster means in relation to climate change and

showed how it is related to climate change. It also looked in brief at the types of disasters that are caused by climate change. In addition to these, it studied the gaps and challenges faced by African countries in their bid to adapt and mitigate the climate related disasters. Finally, we have a way forward through which African countries can navigate out of the climate related disasters and a conclusion. This, notwithstanding, the paper submits that whatever the cause of hazards, that is, either by nature or by anthropogenic activities, climate-related disasters affect African countries more than any other in the world. As such now, Africa as a continent has the ability when the points on the way forward are acted upon and implemented in all the countries in Africa.

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