

CLIMATE CHANGE IN AFRICA

Mainstreaming Adaptation for Sustainable Development

SIX MESSAGES FROM AFRICAN CIVIL SOCIETY



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In its most recent report, the Inter-governmental Panel on Climate Change (IPCC) highlighted the serious impact climate change will have on Africa. Overwhelming scientific and anecdotal evidence shows that climate change is happening now and there is an urgent need for African governments and the international community to help Africa adapt to it.

In response to this, LEAD Africa, LEAD International and their African partners, SouthSouthNorth (SSN), ENDA Du Tiers Monde (ENDA TM), and the African Centre for Technology (ACTS), brought together development and climate change experts from across sub-Saharan Africa to discuss how the continent should adapt to climate change. The aim was to build African ownership of the process, mainstream it, and generate solutions that will help Africa adapt.

This paper presents six key messages which represent a summary of the discussions and recommendations for action.

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“The impact of climate change will fall disproportionately on the world’s poorest countries, many of them here in Africa. Poor people already live on the front lines of pollution, disaster, and the degradation of resources and land. For them, adaptation is a matter of sheer survival.”

**UN Secretary General Kofi Annan,
12th Conference of the Parties to the United Nations Framework
Convention on Climate Change, 2006, Nairobi, Kenya.**

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MESSAGE 1

The effects of climate change are already being felt in sub-Saharan Africa



For many Africans, especially the poorest and most vulnerable, climate change is not an academic debate about lifestyle choices but a daily reality that is already affecting their lives and causing suffering. The experts at the consultations highlighted the following effects of climate change:

Increased Climatic Variability

Africa as a whole has become 0.5°C warmer over the past century. This sounds like a small increase but the climate has already become increasingly variable and unpredictable. Rainfall patterns have shifted, with arid areas tending to become dryer and wet areas wetter. This is having a significant impact on Africans because two thirds of the continent is already classed as either dryland or desert. The effects are compounded by Africa's reliance on rain-fed agriculture.

Increased Frequency of Extreme Events

Droughts, dust storms, floods, cyclones and other extreme events are becoming more frequent and beginning to affect traditionally 'low-risk' regions. Countries across the Sub-Saharan region have begun experiencing both droughts and floods in the same year. Rising sea levels, coastal erosion, and developments along Africa's shorelines, are affecting wetlands and increasing vulnerability to flooding. The consequences for livelihoods, agricultural production, and basic infrastructure such as roads, bridges, and electricity grids are often severe.

Significant Related Effects

Climate change's knock-on effects can impede a population's ability to adapt. It can lead to increased competition for resources such as water and energy. This in turn can lead to increased migration and a general lowering of health standards. For example, as temperatures rise, mosquitoes can spread into malaria free zones. This has already happened in the highlands of Kenya, Rwanda, and Tanzania. In 2000, it was estimated that over 1.2 million deaths from disease could be attributed to the effects of climate change. Similarly, reports on the Darfur crisis have indicated that competition for water was a significant factor in igniting the conflict.

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MESSAGE 2

Current development gains are threatened and future development and economic growth will be negatively affected



Climate and development in Africa are inextricably linked. For example, the achievement of Millennium Development Goal 1, 'the eradication of extreme poverty and hunger', is threatened by changes in rainfall on a continent where over 95 percent of agriculture is rain-fed. The productivity of rain-fed agriculture in some countries could be reduced by up to 50 percent by 2020.

Experts at the consultations highlighted the following areas as the most critical:

- Agriculture and food security
- Water resources
- Energy
- Health
- Biodiversity
- Security

Climate change is already having an effect in each of these areas. To make matters worse, they are often inextricably linked so that a negative effect in one area can adversely affect another and seriously impair sustainable development.

For example, the provision of energy is a major problem in Africa. Eighty percent of the population relies on such biomass as wood and dung. As a result, increasing energy use can lead to deforestation and increased competition for the remaining resources.

To help solve this problem in a sustainable way, African governments with the support of international financial institutions are increasingly looking to hydroelectric power. However, few of these schemes take into account the likely effects of climate change on lake and river levels. Lower water volumes will reduce the output of hydroelectric stations. Ghana's current electricity crisis, caused by a fall in water levels behind the Akosombo Dam, is a prime example.

Climate change is also likely to enhance other interlinked vicious cycles that lead to poverty and impair sustainable development. For example, crop failures are likely to increase the spread of HIV/AIDS as they often result in increased migration and poverty related prostitution. This in turn leads to higher infection rates and increased spread of the disease. In addition, increasing competition for such scarce resources as productive land, freshwater and fish stocks will lead to instability. The resulting conflict and malnutrition are likely to hit women and children the hardest.

It is clearly critical to gain a greater understanding of the links between climate change and development so that Africa, and development institutions, can begin to 'climate-proof' their planning.

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MESSAGE 3

Adapting to Climate Change is imperative so a shared vision is needed



Some degree of climate change is now inevitable, so societies across the continent must adapt. This process has begun, especially at the community level, but it is largely unplanned and may not be effective because the stakeholders do not understand the magnitude of the problems they could face in the future. Effective planning for climate change, taking into account evolving knowledge, is therefore critical.

The UNFCCC provides a mechanism to help governments in the Least Developed Countries prepare National Adaptation Programmes of Action (NAPAs). However, progress on NAPAs remains variable across Africa. Even where they exist, their implementation is fairly limited. This is primarily due to a lack of political will because planning for climate change often resides in the Ministry of Environment portfolio rather than forming an integral part of the finance or planning portfolios. In addition, NGOs, CSOs, and in particular donor agencies, are only now beginning to 'climate-proof' their work. As a consequence, the long-term prognosis for sustainable development is poor.

Stakeholders at the consultation argued that this was primarily because climate change is seen as 'less pressing' than other developmental concerns. Those working in the development arena often do not grasp the speed and magnitude with which climate change could hit Africa. Equally, those concerned primarily with the environment do not always understand the concerns of development practitioners. In short, a common perspective has to be developed. This can be achieved by:

- Creating the tools, methodologies and channels necessary to communicate scientific and technical findings to all stakeholders.
- Drawing out the relevance of current and future climate variability to the various stakeholder priorities.
- Identifying the appropriate entry points for climate information to ensure integration of climate change into national and local development plans.
- Enhancing communication between those engaged in research, development, and policy-making, and the vulnerable community groups.
- Raising general awareness of climate change.

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MESSAGE 4

Even where adaptation is prioritised, governments face other significant challenges



Africa faces many structural problems in adapting to climate change, even where politicians and the public accept the need. Chief amongst these is the complex and variable nature of climate change itself, which makes concrete planning extremely difficult. Matters are further complicated by a lack of accurate and reliable baseline climate data, an on-going skills drain to richer nations, poor infrastructure, and a lack of investment in environmental monitoring. As a consequence, experts find it extremely difficult to present policymakers with definitive predictions about shifting weather patterns and what needs to be done to ameliorate its worst effects. At best, policymakers will get an ‘envelope’ of probable impacts within which they need to operate.

There are also problems with technology transfer, intellectual property rights, and data sharing. All of these issues hamper the creation of an African scientific base from which to develop effective plans and policies.

Even if concrete predictions and action plans are eventually produced, other problems are likely to rear their heads. Effective project management and delivery are likely to be difficult. Coordination between government departments, civil society, and donor agencies may also be problematic. These difficulties extend to the regional and international scale when it comes to shared resources, such as river basins, and in implementing such policies as the parallel United Nations Conventions on Climate Change, Biodiversity and Water.

It is also a major challenge to build a consensual, strategic and long-term approach in a system governed by relatively short-term political and funding cycles. The actions that need to be taken are well understood. Nevertheless, the workshop representatives reiterated them in the hope that continued lobbying would bring progress in the following areas:

- Enhancing investment in scientific and technical capacity to boost R&D and environmental monitoring.
- Targeted regional, national, district, and local level capacity building programmes on understanding and prioritising adaptation for development. These need to be supported by sustainable funding and recurrent expenditure mechanisms.
- Establishing virtual and distributed ‘centres of excellence’ on climate change across Africa to concentrate limited knowledge, skills and resources.
- Creating regular fora for building co-ordinated policy responses to climate change at regional and national levels. The fora should include all concerned stakeholders, especially representatives from the most vulnerable communities.

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MESSAGE 5

Existing help from the international community isn't always effective and a lot more needs to be done



Africa accounts for only 2-3 percent of global CO2 emissions or less than 1 tonne per person. By comparison, the average EU-15 citizen emits almost nine tonnes and the typical American 20 tonnes. In a telling picture of global social injustice, Africa is predicted to suffer the most from climate change.

Costs of adaptation in developing countries generally, and in Africa specifically, are unknown. However, the World Bank has estimated "the incremental annual costs to adapt to projected climate change are likely to lie in the \$10 billion to \$40 billion per year range". In 2005-6, just \$43 million was given to the UNFCCC Least Developed Countries Fund and the Special Climate Change Fund. Developed nations are also failing to provide sufficient technical and human expertise.

To make matters worse, adaptation funds often represent little extra money, forming part of the typical richer nations 0.7 percent aid contribution. This is compounded by the difficulty many African nations face in negotiating the complex, costly and highly politicised funding arrangements. Lack of co-ordination of donor initiatives is also a real problem, leading to the wastage of limited resources.

Representatives at the workshops argued that the international community urgently needs to support adaptation in developing countries. They identified the following urgent priorities:

- The international community should increase the funding of adaptation measures to a level that reflects the scale of the challenge. This money should be additional to existing aid budgets.
- Economic models should be developed to estimate the true cost of adaptation.
- Private investment will be an important alternative funding source. Quantification of the adaptation costs will enable the creation of effective financial products and the conversion of such measures into tradable commodities.
- The international community should streamline its support for adaptation. The policy harmonization fora suggested previously may present opportunities for such an approach. For the UK, this would mean co-ordinating the responses of DfID, FCO and DEFRA.

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MESSAGE 6

Real change is possible and adaptation provides opportunities for moving towards sustainable development for africa



Although climate change threatens Africa it also offers a genuine opportunity for socio-economic progress and sustainable development. Across Africa, innovative strategies are being developed which show that real change is possible, provided;

- There is real political will and high-level action by African governments. These Governments need to drive the concept of adaptation into all levels of policy and planning.
- The international community acts to support adaptation in Africa with a level of commitment that reflects the global injustice of climate change. Adapting to climate change will cost money and this must be addressed by the international community. Help is also needed to build technical and human capacity, especially for climate research, modelling and interpretation. Action is also needed on technology transfer, innovative financing of adaptation, and the support of clean energy technologies developed by the private sector.
- There is equal commitment and action by civil society groups and other non-state actors. These can help build political will through effective lobbying and awareness-raising in Africa and beyond. It is especially critical that African voices are heard. This 'intermediary' role extends to communicating climate information to vulnerable stakeholders in Africa. They can also build capacity to help prioritise adaptation, develop strategies and policies, and help implement them effectively.
- There is adequate support for local government and community based organisations. Local actors are often the most important for encouraging and implementing adaptation. Local government and institutions are central to the provision of basic services that will be affected by climate change. These need support to help communities cope.

CASE STUDY 1

Lake Chad River Basin

Lake Chad is a water source for over 20 million people and is a prime example of how climate change and human behaviour can deplete natural resources. Over the last forty years, the lake has been transformed from the second largest wetland in Africa with a surface area of 22,000km² to around 300 km² today.

Persistent drought has seriously reduced the amount of water flowing into the lake. At the same time, large scale irrigation projects have increased demand for water. Between 1983 and 1994 irrigation demand increased four-fold. The people relying on Lake Chad now face an uncertain future as water scarcity is heightening the potential for conflict over arable land and water.

Source: One Planet, Many People: Atlas of Our Changing Environment
Africa's Lakes – Atlas of our Changing Environment - UNEP 2005

CASE STUDY 2

The Effects of Climate Change on Agriculture In Botswana

Over the next century, Botswana is predicted to become 1.5°C warmer and considerably dryer. As a result, there will be a shift in the growing season, increased aridity and desertification, and more frequent extreme events. Indications are that by 2020, Botswana will outstrip its existing water resources.

It is therefore a priority for water resources to be developed. This is challenging on many levels as Botswana lacks good sites for dams. Other sources, such as ground water, will be in decline.

Declining water resources and increasing temperatures will have a devastating impact on farming. It is estimated that a 2 per cent rise in temperature will result in a 21.6 percent reduction in maize yields and a 16.1 percent reduction in sorghum. Similarly, drought and drier climates and the loss of grasslands will have a serious impact on meat production.

Sources: Presentation: The Botswana national action plan and climate change issues - The Southern Africa Regional Climate Change Consultative Workshop 16-17 April 2007, Pretoria, South Africa.

Water Resources Management in Botswana under the Increasing Effects of Climate Change U.T. Umoh (Botswana) From Proceeding (515)
Environmentally Sound Technology in Water Resources Management - 2006

CASE STUDY 3

Communicating Climate Information to Farmers in Uganda

After the disastrous flooding following the 1997/1998 El Nino cycle, the US National Oceanic & Atmospheric Administration (NOAA) funded a project in Uganda aimed at making climate information relevant to farmers. The Ugandan Meteorological Office did carry out seasonal rainfall forecasts but they were distributed to agricultural district officers in English, a major shortcoming.

The NOAA project translated forecasts into local languages and distributed them through many channels including community radio stations. They also organised community training workshops and meetings. As a result, there was an increase in the number of farmers who understood the significance of the forecasts and who regularly followed them. This enabled farmers to adapt by changing crop cycles and varieties as needed.

Source: "Improving Climate Forecast Communications for Farm Management in Uganda". Final Report to NOAA Office of Global Programs (2004)

CASE STUDY 4

Mozambique's Early Warning Systems for Cyclones, Floods and Droughts

In February 2000, Mozambique was hit by severe floods followed by three cyclones, including the intense Category 4 Eline. It resulted in 700 fatalities, destruction of vital infrastructure, and the loss of 250,000 homes. In February 2007, Flavio, a category 4 Cyclone hit Mozambique on the back of heavy rains and flooding. This time less than 20 people died.

The difference between the two? A concerted effort by government, the international community, civil society, NGO's, and community groups to improve the country's capacity to respond to extreme climate events. Critical to Mozambique's success in beginning to address adaptation were the following:

- Political will and high-level commitment.
- Public awareness of risks and coping mechanisms.
- Communication between the government and scientific community which ensured that action plans were based on accurate climate information.
- International action was critical in helping to develop the early warning system.

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