

## Africa and climate change

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**Remember the film 'The Day after Tomorrow'? Scenes from New Orleans of flooded streets and scavenging people suggest the day after tomorrow has arrived today. The massive power of natural forces combined with poor preparation and inadequate resources have shown up the huge weaknesses in social, technological and institutional structures. It's as though the floodwaters have washed away and exposed fully the lack of planning and low priority given to securing life and livelihoods, especially of the most vulnerable people in the community. If this is what the whirlwind brings today in the southern USA, what might we reap in further storms and droughts from climate change tomorrow in poorer parts of the world? The African continent is particularly vulnerable to adverse impacts from such changes in climate.**

Africa has experienced huge shifts in climate over past millennia, as can be seen from the dusty, fossil valleys that scoured their path through the Saharan landscape in earlier, wetter times. The Intergovernmental Panel on Climate Change (IPCC) estimates that global warming will bring further changes to African weather systems, over the next century, setting new challenges for a region already under stress. As a large land mass Africa's interior is suffering greater increases in temperature than the average warming elsewhere. And while Africa's drylands may not experience large changes in annual rainfall totals, rains will occur in heavier torrential downpours, which risk carrying away soils and vegetation, and cause more frequent droughts and dry spells. Higher temperatures will also increase evaporation of whatever moisture is left in the soil. Sea-level rise threatens many coastal cities with flooding, while changes to rainfall and temperature will shift disease patterns, wildlife habitat, and river flows.

The African continent will suffer the greatest impacts despite having contributed least to climate change.

Agriculture and natural resources provide livelihoods for some 70-80% of people in sub-Saharan Africa, 30% of GDP, and 40% of export revenue. African countries are already reckoned as being substantially off-track in terms of meeting the Millennium Development Goals. Yet many of these goals will become yet more distant dreams as climate change bites.

People often talk of 'environment' as an optional extra, once economic growth has been achieved. Environmental concerns tend to be hived off to be dealt with by a Minister for the Environment, usually a lowly post with few resources and little political weight. Yet for climate change in Africa, the dichotomy between environment and economic development is particularly false. There is and will be no economic development unless this is based on sustainable management of Africa's land, soils, forests and water.

### How might African countries and their people adapt to climate change?

The West African Sahel, a belt of semi-arid land lying along the southern edge of the Sahara desert, shows what 'adaptation' means in practice. Since the late 1960s, the Sahel has experienced a 25% fall in rainfall by comparison with the previous period, combined with several harsh drought years. In response, farmers have shifted to shorter cycle varieties of millet and maize, and abandoned crops like groundnuts that need higher rainfall. Livestock have been herded further south, away from the desert margins and into settled, cultivated areas, where a new accommodation between animals and crops must be sought. Wells have been dug and small dams built to provide for gardens of onions, tomatoes and mangoes for sale. Many farmers have also moved southward, seeking land in better-watered areas. Since the late 1960s, five million people from Burkina Faso and Mali have migrated south to neighbouring Côte d'Ivoire. Much of the civil strife there today stems from the uneasy

### KEY CHALLENGES:

- **Rich industrialised countries must live up to the Kyoto agreement on mitigating green house gas emissions, and start planning for major additional reduction in emissions beyond Kyoto in 2012.**
- **We need to learn what 'adaptation' means, and how to strengthen local capacity to cope in ways which brings positive rewards to local people.**
- **Climate change resilience needs to be built systematically into new projects and policies – whether it is design of river basin management, new irrigation systems, or urban planning, impacts and implications for climate change need to be at the forefront.**
- **The Kyoto Protocol offers a powerful opportunity to combine climate mitigation measures with socially beneficial outcomes, to get a 'development dividend' on activities funded through the Clean Development Mechanism.**



relations between incomers and local people, and the growing shortage of land in a region where it had formerly been considered in endless supply.

What does the experience from the Sahel tell us? People adapt to changes in climate, but the process is not cost free. Governments can help or hinder such adaptation – such as enabling movement across national frontiers. By strengthening local institutions, they can help install more transparent systems for outsiders to gain access to land. They can encourage technical and financial support for small scale irrigation activity. They can provide reliable channels for migrants' remittances, which have become key to the livelihoods of many families. But overall, in the Sahel, governments have played a limited role in making adaptation possible – rather it was people, their families, communities and local institutions, that allowed for innovative ways of dealing with difficult times.

### Climate change and the MDGs

The UN World Summit in 2005 provides us with an unrivalled opportunity to reflect on the limited progress in achieving the MDGs. The Climate Change COP in Montreal at the end of the year needs to follow on with discussion of what next after the Kyoto Protocol. What should be on the agenda for these talks?

First, rich countries must recognise our responsibility for climate change, and address problems of adaptation, particularly for African nations. Some funds have been allocated, but the sums involved are tiny in relation to the need. Admitting our responsibility for global warming means we can no longer adopt the 'lady bountiful' approach of charitable gesture towards those suffering from global warming. Instead, there are strong grounds for payment of reparations. Giving small amounts of aid is the preferred course for most rich country governments – allowing them a warm glow of self-righteousness, while avoiding the much more difficult task of undertaking domestic measures which could lose votes, or damage the interests of powerful groups, such as the oil and gas industry. As for trade and agricultural policy, so also for climate change – our governments provide fine words but little action, preferring to wait, establish a new commission to prepare a report, or set a deadline ten years hence.

Second, rich industrialised countries in the world must live up to the Kyoto agreement on mitigating green house gas emissions, and start planning for major additional reductions in emissions beyond Kyoto in 2012. This is crucial, as credibility must be built, as a necessary first step to engage developing countries in future mitigation efforts.

Third, we need to learn about what 'adaptation' means, and how to strengthen local capacity to cope in ways which brings positive rewards to local people. It is vital to recognise much of what is already being done by local people and organisations, rather than thinking that government should make such changes happen. NGOs and other civil society groups can play a major role to support local action.

Fourth, climate change resilience needs to be built systematically into new projects and policies. To date, climate change is almost never used as the template within which to make choices between options. Yet, whether it is design of river basin management, new irrigation systems, or urban planning, impacts and implications for climate

change need to be at the forefront.

Fifth, strengthening local land rights and encouraging investment in sustainable management will help farmers adapt to less rainfall. In many cases, this means improving local technologies for soils management, like the extraordinary spread of simple terracing methods which have transformed the central plateau of Burkina Faso. Governments also need to provide incentives for collective management of common resources – water, grazing, woodlands through joint management, legislation and local by-laws.

Sixth, there is much to be gained from monitoring and lesson learning across the continent, seeing how local experience with adaptation can benefit those elsewhere. The Kyoto Protocol offers one very powerful opportunity for combining climate mitigation measures with socially beneficial outcomes, to get a 'development dividend' on activities funded through the Clean Development Mechanism. Help to encourage South-South learning on resilience and adaptation has much to offer.

Seventh, it should be seen as a high priority challenge to invest in design of new and better energy systems in Africa, through decentralised power generation, use of biofuels, and improvements in solar technology.

Eighth, the rapid growth in urban centres across Africa needs clever thinking to provide institutional and technical innovations for better energy, shelter and transport systems. Twinning of G8 and African mega-cities offers mutual gains in learning how to cope. The great cities in the G8 – Berlin, London, Moscow, Los Angeles – face enormous challenges in becoming more climate friendly, requiring a systemic shift in thinking. Let's see how together with Lagos, Nairobi, Johannesburg and Accra, we can get smart ideas into urban design to make our cities liveable for the future.

### A chance to be seized...

European governments have an opportunity to take the lead on climate change and Africa. But this great chance demands more than fine words. Visionary language needs to be backed up by actions. Leadership requires credibility and moral authority. Given the scale of the challenge, and foot-dragging by the current US administration, Europe must take the lead. Only those nations with the most innovative, carbon-friendly industries will be the leaders of the future – so let's set ourselves a high standard and reap the longer term benefits.

A window of opportunity opens at New York – we should throw it wide and let in a rush of new thinking and energy to drive forward to COP11, and the tricky challenge of designing for post-Kyoto. While technology will have a role to play, we cannot rely on technical solutions alone. Climate change is the ultimate 'weapon of mass destruction' for us all, and for which there is serious evidence, collected by inspectors over more than a decade. New Orleans shows us one route to the future. The loss of life and property are estimated at more than \$100b – yet Bush tells us that signing up to Kyoto would ruin the US economy..... We have a common interest in climate stability, and a common responsibility for making progress. Let us not miss this chance to build a global partnership that fulfils the ideals of the Millennium Declaration.

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*The views expressed in this paper are those of the authors and do not necessarily represent those of IIED or FFI.*

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