

Africa and climate change

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Remember the scenes from New Orleans of flooded streets and scavenging people? One year on and little progress is evident in achieving the step-change needed in controlling greenhouse gases. Hurricane Katrina showed only too vividly the massive power of natural forces combined with inadequate preparation. The flood waters washed away and exposed fully the lack of planning and low priority given to securing life and livelihoods, especially of the more vulnerable groups in the community. If this is what a whirlwind can bring in the southern USA, what might we reap in further storms and droughts tomorrow in poorer parts of the world? New research findings point to the likelihood of larger, faster and more substantial changes to our climate system. The African continent is particularly vulnerable to adverse changes in climate, the evidence for which is becoming more and more stark.

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 Inter-governmental 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. Being such a large land mass means that Africa's interior will suffer greater increases in temperature than the average warming elsewhere. And while Africa's drylands may not experience a fall in annual rainfall totals, rains will occur in heavier torrential downpours, which risk carrying away soils and vegetation, causing 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. 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% decrease in rainfall 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 relations between incomers and local people and the growing shortage of land in a region where it had formerly been considered in endless supply.

KEY MESSAGES:

- African countries are likely to be badly hit by climate change, yet have contributed least to greenhouse gas emissions
- The global costs of addressing climate change by cutting greenhouse gas emissions are minor in comparison to the likely major adverse impacts from climate change, in rich and poor countries alike
- Low carbon technologies are widely available. Their widespread adoption requires political will to set prices and permits to provide strong incentives for them to be taken up
- We need to learn what "adaptation" to climate change means, and how to strengthen capacity to cope in ways that bring positive rewards to local people
- Climate change resilience needs to be built systematically into new projects and policies. Whether its design of river basin management, new irrigation systems, or urban planning

What does the Sahel's experience with climate change 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 ensure more transparent systems for gaining 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 has been people, their families, communities and local institutions, that have allowed for innovative ways of dealing with difficult times.

Next steps for the climate change agenda

The launch of the UK government initiated Stern review on the economics of climate change, and the next Conference of the Parties to the UN Framework Convention on Climate Change in November 2006 have demonstrated limited progress in achieving significant cuts to greenhouse gas emissions, and ways to help poorer countries address the inevitable impacts of changes to the climate already now underway.

First, we must recognise a historic 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 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. It is totally unrealistic to expect a major effort by developing countries when the US, as the largest emitter, remains outside the Kyoto Protocol.

Third, we need to learn about what "adaptation" means, and how to strengthen local capacity to cope in ways which bring 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 has almost never been used as the template within which to make choices between options. Yet, whether it's design of river basin management, new irrigation systems, or urban

planning, impacts of 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 African continent, seeing how local experience with adaptation can benefit those elsewhere. The Kyoto Protocol offers one opportunity for combining climate mitigation measures with socially beneficial outcomes, to get a "development dividend" on activities funded through the Clean Development Mechanism (CDM). However, to date, African countries have had almost no access to the CDM. Help to encourage South-South access to this funding mechanism, and exchange of lessons on building resilience and adaptation have much to offer.

Seventh, invest in design of new and better energy systems in Africa, through decentralised power generation, use of biofuels, and improvements in solar technology. Support for decentralised energy generation, based on African priorities and resources, needs to be seen as a high priority challenge, rather than the orphan topic it seems to have become.

Eighth, the rapid growth in towns and cities across Africa needs clever thinking to provide institutional and technical innovations for better energy, shelter and transport systems. Great cities like Beijing, Shanghai, London, Moscow, Los Angeles all face enormous challenges in becoming more climate friendly, requiring a systems shift in thinking. Together with Lagos, Nairobi, Johannesburg and Accra, we need new, smart ideas to promote urban design which will make our cities liveable for the future. The "modern" city of glass sky-scrapers, motorways, and private car transport has had its day and needs radical re-thinking. Given current great expansion in many big cities, it makes sense to build low carbon technology into their design rather than having to subsequently go in for major re-adjustments.

A chance to be seized.....

The launch of the Stern review on the economics of climate change has provided a welcome opportunity for the UK to confirm its willingness to lead global opinion on addressing climate change, and provide for adaptation by poor countries and poor communities. All the evidence now shows the relatively small cost of investing in low carbon technology, in comparison with the growing risks of catastrophic damage if we continue with business as usual. Those nations with the most innovative, carbon-friendly industries will be the global leaders of the future. We have a common interest in climate stability, and a common responsibility for making progress. A hunger for global justice, and concern for peace and long term stability demand that we act now.

