

Global warming in Africa

# Drying up and flooding out

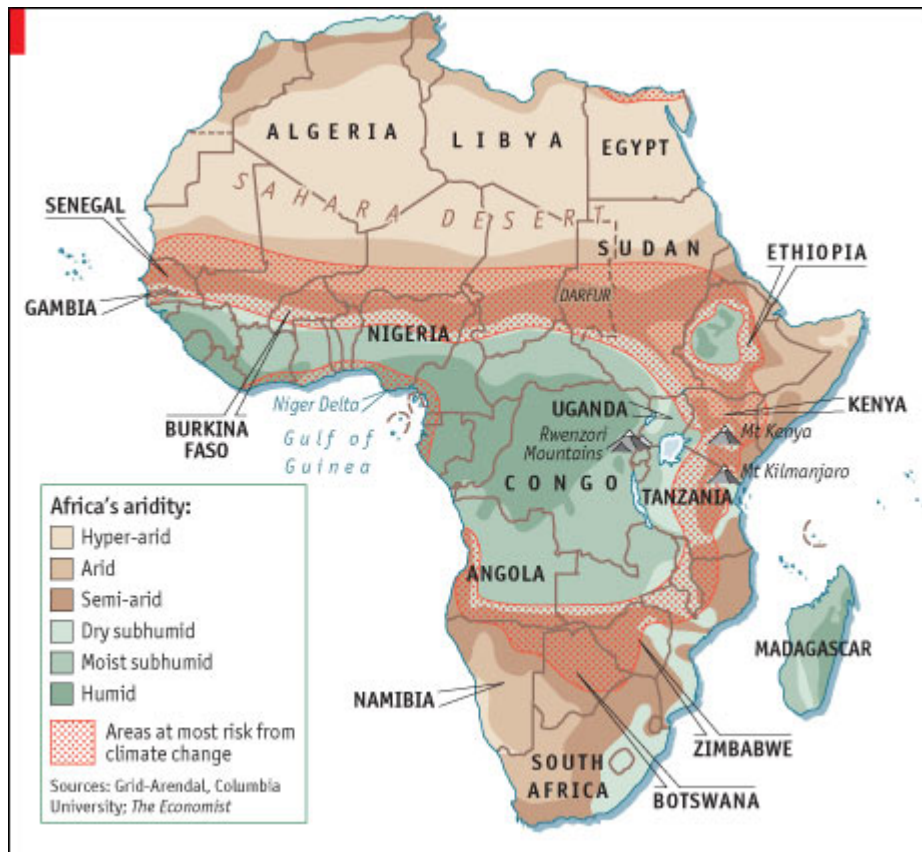
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## **Rich countries may be largely to blame for adding climate change to Africa's litany of problems, but the continent's own politicians have yet to take it seriously**

AT A recent African Union summit, Uganda's combustible president, Yoweri Museveni, declared climate change an act of aggression by the rich world against the poor one—and demanded compensation. The moral arguments on climate change are even murkier than arguments about other wrongs done to Africa, such as slavery, but Mr Museveni may have hit on something. If the predictions of the UN's Intergovernmental Panel on Climate Change (IPCC), hold true, climate change may have a graver effect on Africa than on any other continent; the final part of the panel's latest report has just been published (see [article](#)). Scientists now blame industrialisation (read, the rich world) for some of the warming. In any event, the contrast between poverty in Africa and carbon gluttony elsewhere is sharp. Why should the poorest die for the continued excesses of the richest?

The IPCC's most recent regional report certainly raises the spectre of rising mortality. It predicts a minimum 2.5°C increase in temperature in Africa by 2030; drylands bordering the deserts may get drier, wetlands bordering the rainforests may get wetter (see [map](#)). The panel suggests the supply of food in Africa will be “severely compromised” by climate change, with crop yields in danger of collapsing in some countries.



In the drylands, water may become a critical issue. Soaring temperatures and erratic rainfall may dry up surface water. Between 75m and 250m Africans, out of the 800m or so now living in sub-Saharan Africa, may be short of water. The soil will hold less moisture, bore-holes will become contaminated, and women and girls will have to walk ever greater distances to fetch water. Vegetative cover will recede. The IPCC guesses that 600,000 square kilometres (232,000 square miles) of cultivable land may be ruined.

Warming may also hurt animal habitats and biodiversity. More algae in freshwater lakes will hit fishing. The glaciers of Uganda's Rwenzori mountains, of Tanzania's Kilimanjaro and of Kenya's eponymous mountain may disappear; only seven of the 18 glaciers recorded on Mount Kenya in 1900 still remain. At the same time, a likely rise in sea levels may threaten the coastal infrastructure of northern Egypt, the Gambia, the Gulf of Guinea and Senegal.

There are two caveats to this gloomy scenario. The first is that some parts of Africa may benefit from climate change. Increased rainfall in highland areas in eastern Africa could, for example, be beneficial. Second, though climate-change models have improved, they have been unreliable in Africa. The broad outline is plain but the detail is guesswork.

Still, some scientists think that climate change may be even crueller to parts of Africa than the IPCC predicts. The important point, they say, is not the degree of warming but the continent's vulnerability to it. A University of Pretoria study estimates that Africa might lose \$25 billion in crop failure due to rising temperatures and another \$4 billion from less rain. The already impoverished drylands would suffer most. Some cite the war in Sudan's Darfur region as proof of the damage done by climate change, soil erosion and overpopulation.

Unfortunately, few African leaders have grasped the scale of the challenge posed by climate change. Most oil-producers have squandered their bonanza. Nigeria has failed to plan for how to stem the dreadful pollution in its oil-producing Delta region or to prevent desertification tearing at the fabric of its dry Muslim north. South Africa is only just beginning to own up to its coal addiction. Uganda's Mr Museveni is fighting off a rare insurrection from his supporters against plans to turn a piece of Ugandan rainforest over to farming. The World Meteorological Organisation says that weather-data collection in Africa has recently got worse, just as the need for accurate figures has grown; many of the automatic weather stations it helped set up have fallen into disrepair. The African Union has done little to sound the climate-change alarm.

Kenya's president, Mwai Kibaki, says that Africa should "join hands" with its friends in the rich world over climate change. He wants more carbon-trading projects to come to Africa; so far, most have gone to Asia. His advisers admit that Mr Kibaki's ambitious plan to turn Kenya into an industrial country by 2020 worries environmentalists, but say that reforestation, thermal power and better management of water and grazing would, if they materialised, offset the damage.

Africa emits far less carbon than other continents, so its recently faster-growing economies do not gravely menace its environment. Some rich-country consumers, however, want to punish African countries for airfreighting northwards some of their produce, from flowers to wine.

Hardier new varieties of staple crops, drip irrigation schemes and technologies such as solar power should help Africa adapt to climate change. But so can simple shifts in policy. For instance, a government decision in Burkina Faso to let farmers own the trees on their land has increased the country's tree cover.

Most vital of all is the cash—probably from rich countries—to pay for roads, schools, clinics and improvements in livestock management in the most vulnerable regions. Whether Mr Museveni's outrage will

sway donors is unclear. As the G8 rich countries are failing so far to fulfil the promises they made in 2005 to boost aid to Africa, the continent should not expect much new money to protect the environment. In the short run, Africa's own politicians need to take a lead, even if the people most culpable for the damage done by climate change live elsewhere.