

Human Development Report 2007/2008



Fighting climate change: Human solidarity in a divided world

REGIONAL OVERVIEW AND FACTS: AFRICA AND ARAB STATES



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The scale of the impacts on the lives of people that will come with climate change has been heavily underestimated. The 2007/2008 Human Development Report, *Fighting climate change: Human solidarity in a divided world* stresses that sub-Saharan Africa will be disproportionately hit by its effects, creating cumulative cycles of disadvantage that are transmitted across generations. Faced with existing vulnerabilities, governments in the region must act now to address its current effects and avert future catastrophe.

But wealthy countries must live up to their international obligations and their historic responsibility for the world's greenhouse gas emissions. With world leaders preparing to gather in Bali, Indonesia next month to discuss the post-2012 Kyoto Protocol framework for reducing greenhouse gas emissions, the window of opportunity for all of us to avoid dangerous climate change is closing rapidly.

Sub-Saharan Africa, already being affected by climate change, will require the support of wealthy countries to adapt and to prevent reversals in recent drops in the share of people living in extreme poverty. The region is particularly vulnerable to climate shocks such as droughts, floods and storms that will become more frequent and severe. Part of the solution lies in national governments planning. The other part falls to wealthy countries who are failing to meet their international obligations.

First, how does climate change affect poor communities in Asia, Africa or Latin America?

When global warming changes weather patterns in the Horn of Africa, it means that crops fail and people go hungry, or that women and young girls spend more hours collecting water. By contrast, in rich countries, coping with climate change to date has largely been a matter of adjusting thermostats, dealing with longer, hotter summers, and observing seasonal shifts.

Such inequality in the impacts faced by poor people around the world is at the heart of the arguments the authors make.

Examining the long-term impacts of climate shocks in the lives of the poor, one finding is that malnourishment and stunting in children increased greatly if they were born during a drought. In Ethiopia and Kenya, two of the world's most drought-prone countries, children aged five or less are respectively 36 and 50 percent more likely to be malnourished. For Ethiopia, that means some 2 million additional malnourished children in 2005. In Niger, children aged two or less born in a drought year were 72 percent more likely to be stunted.

With limited access to formal insurance, low income and meagre assets, poor households have to adapt to climate shocks under more constrained conditions than wealthy households. For the poor, climate shocks affect livelihoods by wiping out crops, reducing

opportunities for employment, pushing up food prices and destroying property. People have to make stark choices.

One example is the strategies used for coping in the 1999 drought in Malawi. Poor people resorted to eating less—to make meals last—and vegetables rather than meat. They also depleted their savings or borrowed money, sold their livestock and poultry or household items. In 2002, drought left nearly 5 million people in need of emergency food aid. But aid did not arrive immediately and households coped by turning extreme survival measures, such as theft and prostitution.

In wealthy households, people can manage shocks by drawing upon private insurance, using their savings, or trading in some of their assets, without running down their livelihoods or greatly affecting their lives.

When rainfall varies, so do agricultural production and employment in developing countries where this sector underpins many national economies. In sub-Saharan Africa, economic growth rates are very closely tied to rainfall. A clear example of this is Ethiopia where income variability follows rainfall variability.

Drought also affects people's basic access to water. With trends showing greater frequency of droughts on the rise as the world warms, women will be further burdened. They will have to walk further for water, as well as firewood, deal with agricultural production and care for HIV/AIDS victims and orphans.

Flooding is also part of the climate disasters faced by continental Africa. While Amsterdam, Copenhagen and Manhattan might be possible to protect themselves at high cost from rising sea levels in the 21st century, coastal flood defences will not save the livelihoods or the homes of hundreds of millions of people living in the Niger or Nile deltas.

By the 2080s, agricultural potential in developed countries could increase by 8 percent, primarily as a result of longer growing seasons. But in the developing world it could fall by 9 percent, with sub-Saharan Africa and Latin America projected to experience the greatest losses.

Another area of impact from climate change is human health. Examples of its effects in eastern Africa include flooding in 2007 which created new breeding sites for disease vectors such as mosquitoes, triggering epidemics of Rift Valley Fever and increasing levels of malaria.

An important issue is access to electricity; in sub-Saharan Africa almost 550 million people do not have such services, out of 1.6 billion worldwide. These people rely on biomass, often dung, as a source of energy also a health hazard particularly for women and children.

Fighting climate change underscores the inequality of the situation for Africa, noting that “the state of Texas (population 23 million) in the United States registers CO₂ emissions of around 700 Mt CO₂ or 12 percent of the United States’ total emissions. That figure is greater than the total CO₂ footprint left by sub-Saharan Africa—a region of 720 million people.”

The continent has the world’s lightest carbon footprint but is likely to pay the heaviest price in the coming century for human-induced climate change. While climate change mitigation is a global challenge, it is emphasized that the starting place for mitigation is with the countries that carry the bulk of historic responsibility and the people that leave the deepest footprints.

There are a number of specific recommendations made to wealthy nations, stressing the need for the international cooperation to account for climate change and help poor nations adapt to it, or the Millennium Development Goals will not be met. Moreover, many existing international aid investments in Africa will be put at risk because of climate-related events. An increasing proportion of development moneys will go to responding to disasters instead of long-term investments, which is not cost-effective.

Furthermore, core international aid to sub-Saharan Africa has been stagnant since 2002. The question is whether, on current trends, aid donors can meet their own commitments. Discounting debt reduction and humanitarian aid, the rate of increase will have to triple over the next four years if the 2005 commitment to double aid by 2010 is to be met.

Recommendations specifically for Africa include a number of critical actions that need to be taken by national governments and addressed in planning efforts and poverty reduction strategies:

- ♦ Expanding the continent’s meteorological monitoring network, so that farmers can access better information about climate patterns in the region. Currently the continent has one weather station for every 25,460 km². The Netherlands, by contrast has one site for every 716 km².
- ♦ Investing in water-storage or “water harvesting” facilities in Ethiopia, Kenya, and Tanzania, countries with high levels of rainfall concentrated in a few weeks of the year.
- ♦ Improving national social insurance programmes to protect farmers and poor urban residents from the worst effects of climate-related disasters. The Kalomo pilot project in Zambia, providing \$6 a month to families in the bottom 10 percent of the economy, is an example of one such experiment. Such projects should be expanded.
- ♦ Investing in early-warning systems. Mozambique’s creation of early warning and rapid-response mechanisms following devastating floods in the year 2000 is one such example referred to by the report’s authors.

KEY FACTS

Sub-Saharan Africa

- ♦ Africa account for 90% of malaria deaths and Some 800,000 children under the age of 5 die each year as a result of malaria.
- ♦ Sub-Saharan Africa will account for almost one-third of world poverty in 2015, up from one-fifth in 1990.
- ♦ Projected revenue losses for drylands in sub-Saharan Africa amount to 26% by 2060, with total revenue losses of US\$26 billion (in constant 2004 terms). This is equivalent to three-quarters of aid transfers to the region.
- ♦ Climate change will impact on human health at many levels. In sub-Saharan Africa, exposure rates to malaria, which account for 90% of deaths is projected to increases by 16-28%.
- ♦ Sub-Saharan Africa accounts for around 11 per cent of the world population but represents 2% of global emissions.
- ♦ In Ethiopia, the average per capita footprint is 0.1 tonnes, compared with 20 tonnes in Canada (200 times).
- ♦ Only around one-third of people in sub-Saharan Africa use modern energy services.
- ♦ Over 80% of sub-Saharan Africa's population depends on traditional biomass for cooking.
- ♦ In Uganda, children under the age of five are reported to suffer 1-3 episodes of acute respiratory tract infection annually.
- ♦ The 2005 drought that hit eastern Africa put the lives of an estimated 3.3 million in 26 districts of Kenya at risk of starvation.
- ♦ In Ethiopia, children aged five years or less are 36% more likely to be malnourished and 41% more likely to be stunted if they were born during a drought. This translates into 2 million additional malnourished children.
- ♦ In Niger Children aged two years or less are 72% likely to be stunted if they were born during a drought year.
- ♦ Every \$1 generated in the agriculture in sub-Saharan Africa is estimated to generate up to \$3 in the non-agricultural sector through economic linkages.
- ♦ Arid and semi-arid areas in sub-Saharan Africa are projected to increase by 60-90 million hectares with changing rainfall patters and desertification by 2090.
- ♦ The potential implications of a 2.9°C increase in temperature, coupled with a 4% reduction in precipitation by 2060 could result in revenue reduction per capita of 25%. In 2003 prices, this would represent overall revenue losses of around \$26 billion by 2060.
- ♦ A 1.5°C increase in temperature between 2030 and 2060 will increase desert encroachment for some regions in Sudan by 100 kilometres over 40 years.
- ♦ By 2020, between 75 and 250 million people in sub-Saharan Africa could have their livelihoods and human development prospects compromised by a combination of drought, rising temperatures and increased water stress.

Arab States

- ♦ In Lebanon, a 1.2°C increase in temperature is projected to decrease water availability by 15% because of change in run-off patterns and evaporation.
- ♦ In North Africa, a 1°C increase in temperature could reduce water run-off in Morocco's Ouergha watershed by 10% by 2020.
- ♦ In Syria, 1°C increase in temperature is projected to cause a 50% decline in renewable water availability by 2025 (based on 1997 levels).
- ♦ In Lower Egypt, a one metre rise in sea level could possibly displace 6 million people and flood 4,500 km² of farmland.