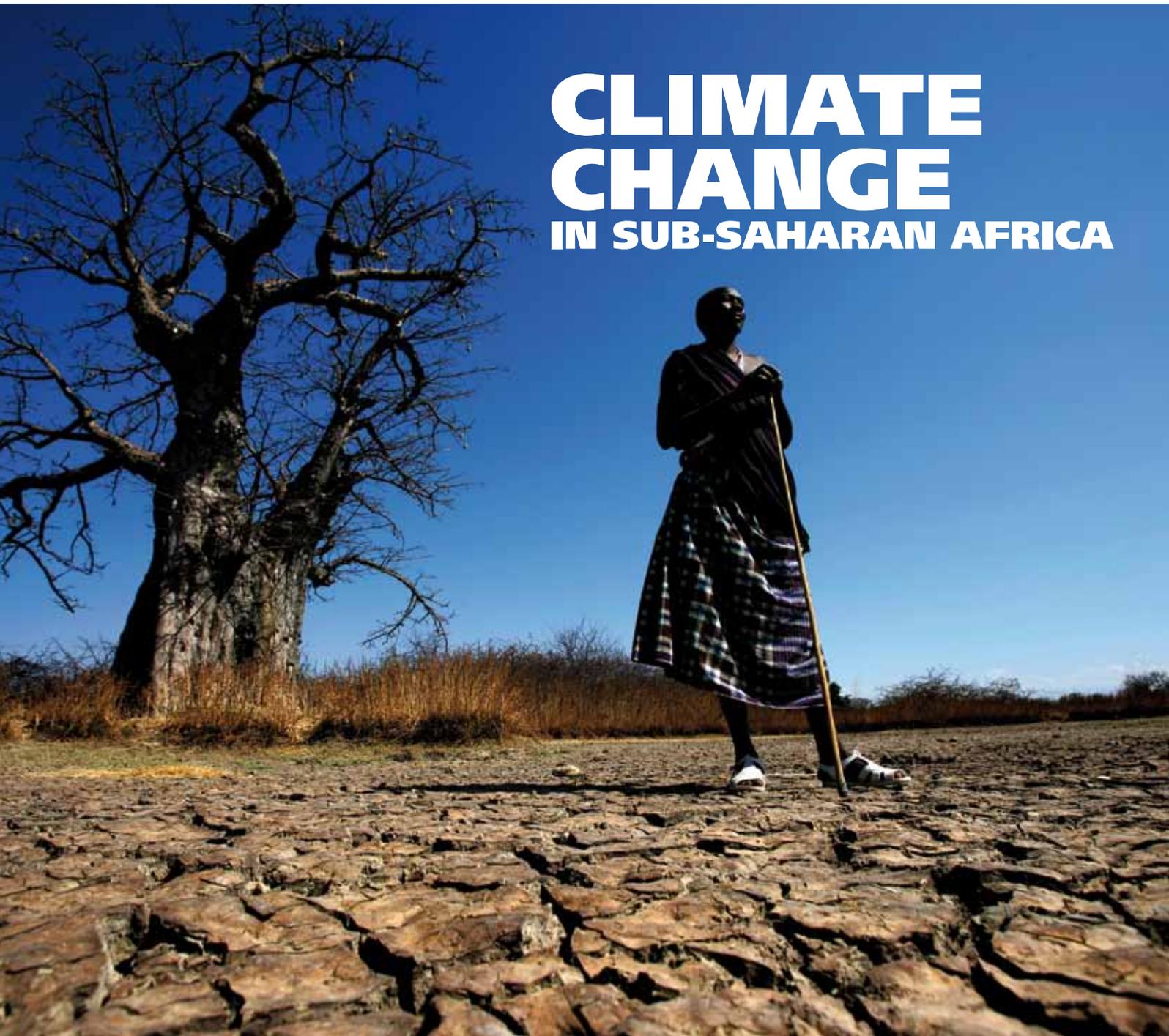


CLIMATE CHANGE IN SUB-SAHARAN AFRICA



DFID, THE DEPARTMENT FOR INTERNATIONAL DEVELOPMENT: LEADING THE UK GOVERNMENT'S FIGHT AGAINST WORLD POVERTY

Since its creation, DFID has helped more than 250 million people lift themselves from poverty and helped 40 million more children to go to primary school. But there is still much to do to help make a fair, safe and sustainable world for all.

1.4 billion people still live on less than \$1.25 a day. Problems faced by poor countries affect all of us. Britain's fastest growing export markets are in poor countries. Weak government and social exclusion can cause conflict, threatening peace and security around the world. All countries of the world face dangerous climate change together.

DFID works with national and international partners to eliminate global poverty and its causes, as part of the UN 'Millennium Development Goals'. DFID also responds to overseas emergencies.

DFID works from two UK headquarters in London and East Kilbride, and through its network of offices throughout the world.

From 2013 the UK will dedicate 0.7 percent of our national income to development assistance.

UKaid is the logo DFID uses to show when UK funds are being spent to help developing countries.

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FROM CHALLENGE TO OPPORTUNITY

"THE TWO DEFINING CHALLENGES OF OUR CENTURY ARE MANAGING CLIMATE CHANGE AND OVERCOMING POVERTY. AND IF WE FAIL ON ONE, WE FAIL ON THE OTHER"¹

NICHOLAS STERN

A woman and her children carry water home from a creek in Bahir Dar, Ethiopia. Over 70 percent of the Ethiopian population has no access to a safe water supply
Photo © Dieter Telemans / Panos



Cover image: Maasai standing on cracked earth in front of Baobab tree
© Brent Stirton / Getty Images / WWF-UK

CLIMATE CHANGE AND AFRICA

THE CHALLENGE

Africa has done the least to contribute to climate change, but will be hit hard by its impacts. Africa already has a highly variable and unpredictable climate, and many countries are ill-equipped to respond to existing climate pressures, such as periodic floods and drought. In 2002, 13 million people in southern Africa needed food relief due to drought.²

The frequency and intensity of extreme weather in Africa is predicted to increase as a result of climate change. The impacts on a continent in which 333 million people already live in extreme poverty threaten to be devastating.

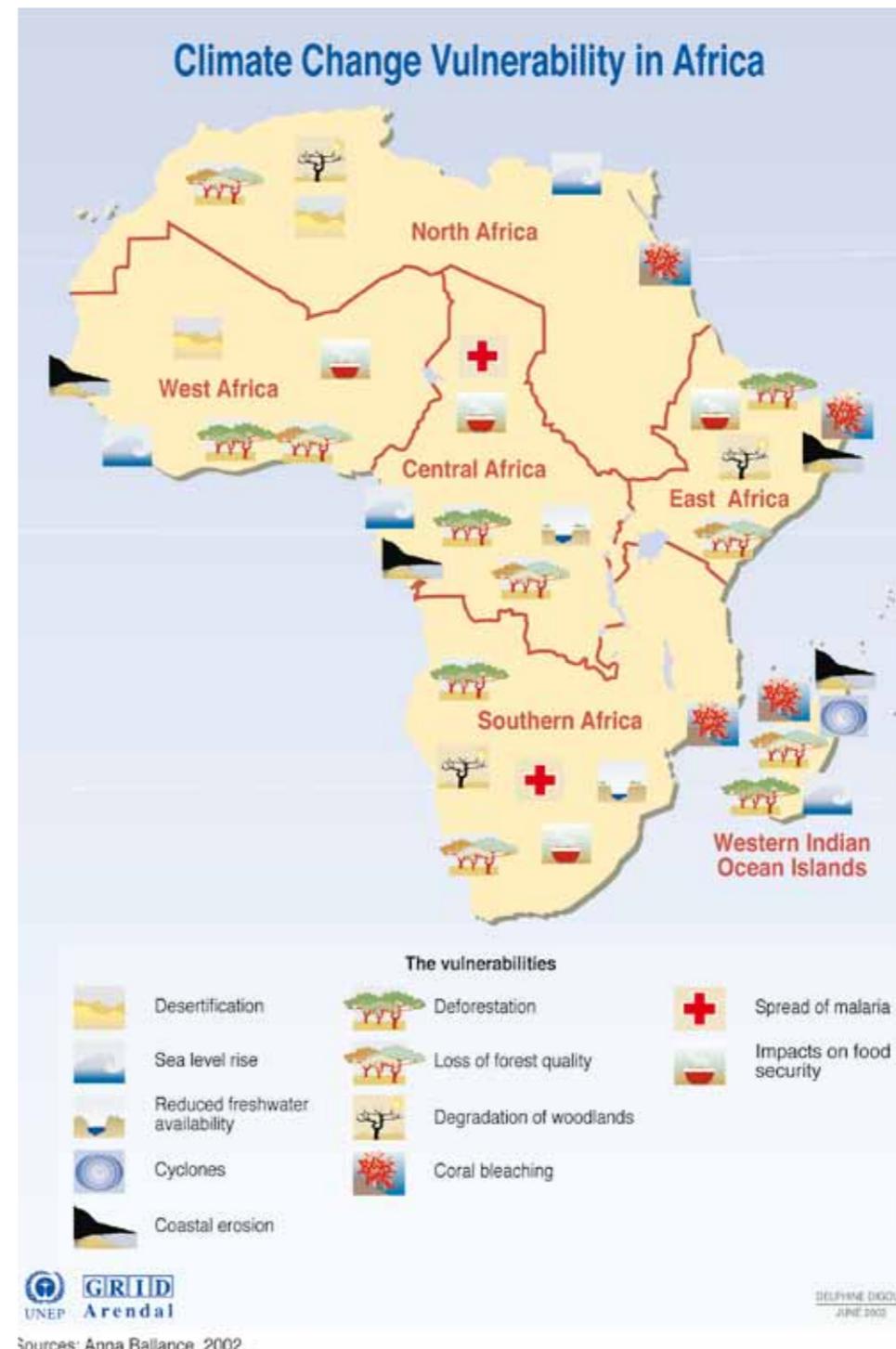
Agricultural production, on which two out of three Africans rely for their living, is projected to be severely compromised by climate change. More frequent floods

and drought could reduce agricultural yields, affecting food supplies.

Climate change will also affect the supply and quality of water in Africa. Around 300 million people – more than 40% of sub-Saharan Africa's population – currently lack access to safe drinking water³. By 2020, an additional 75-250 million people could find water supplies are more unreliable⁴.

Climate change could also change patterns of disease, increasing pressure on underdeveloped health systems.

If no action is taken to help developing countries adapt and plan for the future, climate change threatens to undermine development gains made over the past few decades.



² Food and Agriculture Organisation (2002): The State of Food and Agriculture

³ WHO/UNICEF 2008

⁴ IPCC Fourth Assessment Report: Climate Change 2007

**WHAT NEEDS
TO BE DONE?**

Climate change will hit poor people hardest. It therefore needs to be factored into all aspects of development, rather than addressed as a separate environmental challenge.

Substantial new investments are required, for example to build infrastructure that is better able to withstand flooding, or to improve irrigation to make agriculture less vulnerable to drought. Increased resilience to climate change will often be achieved by changing patterns of agriculture and adjusting health services in response to shifting patterns of disease.

Some responses, such as better management of shared water resources, are likely to be most effective if addressed regionally. Others, such as varying

agricultural production to improve food supplies, are best addressed nationally.

Developing countries need access to science and knowledge to help inform their responses to climate change.

There are still gaps in our knowledge about the detailed impacts of climate change at the local level in Africa. Research to understand the regional and local variations in Africa's climate will be vital to helping the continent adapt to climate change.

Accessing global finance and investing in low carbon energy sources could help put Africa on the path towards sustainable long-term growth.

**MORE FREQUENT FLOODS AND DROUGHT
RESULTING FROM CLIMATE CHANGE
COULD REDUCE AGRICULTURAL YIELDS,
AFFECTING FOOD SUPPLIES**

Fields and mountains in Phalombe district, Malawi
Photo © Sven Torfinn / Panos



HOW WE ARE WORKING

DFID is working with developing countries to deliver the knowledge, tools and finance needed to adapt to a changing climate and move towards low carbon growth. We are doing this through our bilateral support to countries, and through our support to international institutions such as the World Bank and the African Development Bank.

We are working with African leaders and institutions to secure an ambitious and fair international agreement that will help poor countries adapt to changes in climate which are now inevitable, and avoid dangerous levels of climate change.

We will work to build on the Copenhagen Accord produced at the UN Climate Change Conference in December 2009. The Accord includes a commitment by developed countries to make finance

available between 2010 and 2012 for climate change and development. Developed countries committed to mobilising up to \$100 billion per year by 2020, to address the climate change needs of developing countries.

The UK is committed to reviewing our development programmes to ensure they take the impacts of climate change into account.

**DEVELOPING COUNTRIES
NEED ACCESS TO SCIENCE
AND KNOWLEDGE TO HELP
INFORM THEIR RESPONSES
TO CLIMATE CHANGE**

**SOME RESPONSES TO CLIMATE
CHANGE, SUCH AS BETTER
MANAGEMENT OF SHARED WATER
RESOURCES, ARE LIKELY TO BE MOST
EFFECTIVE IF ADDRESSED REGIONALLY**

Women walk beside a fishing pond in M'bawa village, Malawi
Photo © Alfredo Caliz / Panos



WHAT IS DFID DOING?

BUILDING CLIMATE KNOWLEDGE AND CAPACITY

DFID is supporting programmes to improve knowledge of the impacts of climate change at the local level in Africa.

We were instrumental in facilitating the design of Africa's Climate for Development in Africa (ClimDev) programme. This programme, managed by the African Union Commission, the United Nations Economic Commission for Africa, and the African Development Bank, aims to improve climate change analysis in Africa and identify how countries can become more resilient to its impacts. DFID was the first donor to finance the programme's implementation.

In Kenya, Rwanda and Burundi, DFID has funded ground breaking studies to help identify the current and potential future economic costs of climate change. In Rwanda, for example, the direct economic costs of the 2007 flood were estimated to be \$4 - \$20 million in two regions. The information from the studies will be used by these countries to develop climate change strategies.

SUPPORTING AFRICA TO ADAPT TO CLIMATE CHANGE

The UK is supporting a range of regional, national and local programmes, to ensure that key sectors such as water, agriculture, energy and health continue to develop, even if climatic conditions change.

Research projects underway across Africa as part of the Climate Change Adaptation in Africa programme – established with the International Development Research Centre – are helping some of the most vulnerable communities respond to a changing climate. One project in Kenya has seen government meteorologists and traditional 'rainmakers' team up to share scientific and indigenous knowledge of local weather patterns to produce a 'consensus forecast'. The rainmakers relay the forecast back to villagers, helping their communities to plan the use of their land for agriculture in accordance with the changing weather patterns.

More frequent floods and droughts will affect water flows in the River Nile, threatening livelihoods. DFID supports the Nile Basin Initiative (NBI) a partnership of the Nile Basin countries⁵. The NBI works to improve the shared and sustainable management of the Nile waters through, for example, flood preparedness, irrigation, water storage and hydropower generation projects.

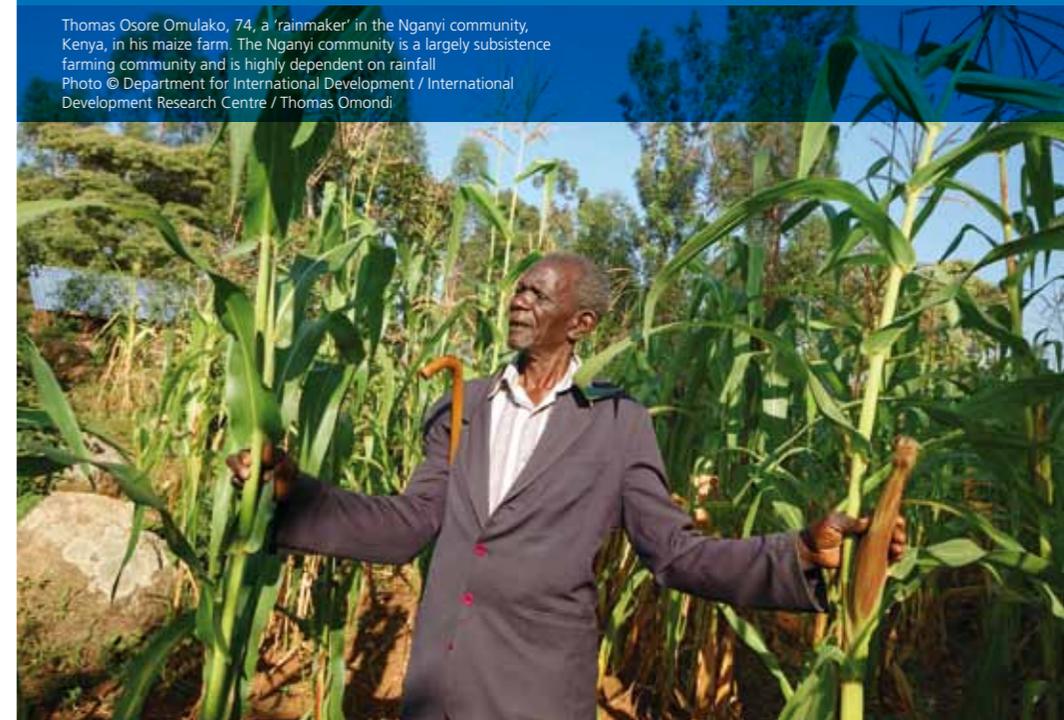
DFID's Regional Climate Change Programme is the first initiative of its kind in Southern Africa. The programme is looking at the cross border impacts of climate change, for example on shared water resources and migration patterns, and is helping developing countries access international finance to tackle these challenges.

UK support for the World Bank administered Pilot Programme for Climate Resilience is helping the governments of Mozambique, Zambia and Niger to integrate climate resilience into development planning.

Many of our country programmes in Africa – including in Ethiopia, Malawi, Tanzania and Mozambique – are supporting government efforts to develop national plans to respond to climate change. For example, in Mozambique, DFID is helping the National Institute for Disaster Management prepare for periodic droughts and floods, which are likely to become more frequent as a result of climate change. This includes ensuring bridges and roads are in a good condition and that emergency supplies are available where drought and floods are predicted.

UKAID IS HELPING SOME OF THE MOST VULNERABLE COMMUNITIES IN AFRICA TO RESPOND TO CLIMATE CHANGE. IN KENYA, INDIGENOUS KNOWLEDGE IS COMBINED WITH MODERN SCIENCE TO HELP PLAN THE USE OF LAND FOR AGRICULTURE WITH CHANGING WEATHER PATTERNS

Thomas Osore Omulako, 74, a 'rainmaker' in the Nganyi community, Kenya, in his maize farm. The Nganyi community is a largely subsistence farming community and is highly dependent on rainfall.
Photo © Department for International Development / International Development Research Centre / Thomas Omondi



⁵ Burundi, DRC, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda



INCREASING INVESTMENT IN LOW CARBON DEVELOPMENT

Economic growth is essential to lifting people out of poverty – 80% of poverty reduction around the world in the last thirty years has been as a result of economic growth⁶. However, to avoid dangerous levels of climate change and to take advantage of international finance, all countries need to develop in ways which use less carbon and avoid environmental degradation.

Low income countries in Africa are not expected within international agreements to act on their carbon emissions, which are relatively small. However, as they develop they will have to compete in an increasingly carbon constrained world.

The UK is committed to helping African countries use less carbon for growth, improve the efficiency with which energy is used and protect natural resources that store carbon, such as forests.

In sub-Saharan Africa, only 8% of the rural population has access to electricity⁷. DFID is supporting the Scaling up Renewable Energy Program (SREP), managed by the World Bank. SREP will support low income countries to access renewable energy to benefit the poorest communities.

The forests of the Congo Basin provide food, shelter and livelihoods for over 50 million people and play a vital role in regulating the global atmosphere by absorbing and storing large quantities of carbon.

Until recently, the forests contributed a relatively small amount to total greenhouse gas emissions. However, logging, changing agriculture practices, population growth and oil and mining industry activities in the region are threatening to increase carbon emissions from deforestation.

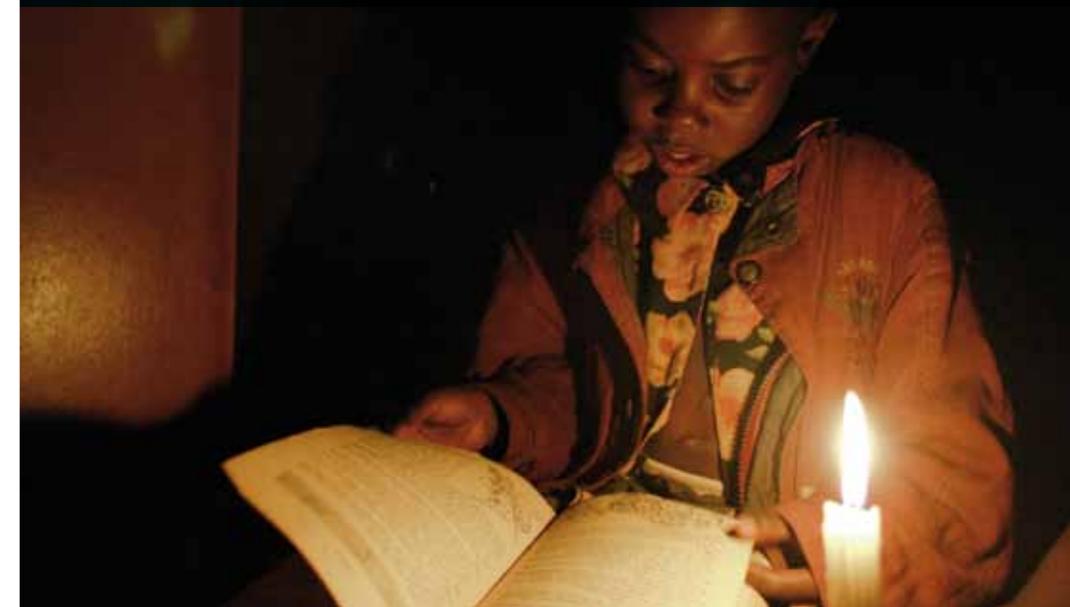
The £100 million UK and Norwegian funded Congo Basin Forest Fund, managed by the African Development Bank, is promoting the sustainable use of the forest, to reduce deforestation levels and improve the livelihoods of local people.

DFID also supports the World Bank administered Forest Carbon Partnership Facility, which will help prepare national plans to reduce deforestation and forest degradation. 14 African countries have been selected into the Partnership.

DEFORESTATION IS RESPONSIBLE FOR 19% OF GLOBAL EMISSIONS – MORE THAN THE ENTIRE GLOBAL TRANSPORT SECTOR⁸

ONLY 8% OF THE RURAL POPULATION IN SUB-SAHARAN AFRICA HAS ACCESS TO ELECTRICITY. THE UK AND OTHER DONORS ARE FUNDING THE WORLD BANK TO HELP LOW INCOME COUNTRIES ACCESS RENEWABLE ENERGY

Talent uses a candle to do his homework in the Nyamhuka suburb of Nyanga. There is no electric power here, so those who can afford it light candles after dark. Photo © Crispin Hughes / Panos



⁶ DFID Aid for Trade Strategy 2008-13, page 9
⁷ <http://earthtrends.wri.org/updates/node/339>
⁸ Stern (2009) A Blueprint for a Safer Planet



FROM CHALLENGE TO OPPORTUNITY

Climate change presents a significant challenge for developing countries in sub-Saharan Africa. Its potential impacts, on agriculture, food security and water supplies, threaten to constrain Africa's development and undermine efforts to eliminate poverty.

However, climate change also presents an opportunity for African countries to access low carbon finance that increases investment in much needed energy.

The UK will continue to work with African people and institutions, and the international community, to help strengthen the response to climate change in Africa, and address its longer-term impacts.

BOILING POINT

Rich in antioxidants but caffeine-free, red bush tea, or *rooibos* as it is known in its native South Africa, has become popular with health-conscious consumers around the globe.

The global supply of *rooibos* comes from a single area in the Suid Bokkeveld area, where the plant thrives on the region's unique soils and climate. However, the plant is threatened by climate change – and with it, the livelihoods of smallholders who grow it.

The DFID supported Climate Change Adaptation in Africa initiative is helping farmers in the region adapt to the changing climate. Local farmers feed information about weather patterns into the official seasonal forecast, which is used to develop local adaptation strategies.



Lansana Saffa plants a tree outside his school in Kailahun, Sierra Leone
Photo © Plan Sierra Leone

GREEN INSPIRATION

Lansana Saffa, a pupil at the Ahmadiyya secondary school in Kailahun, Sierra Leone, and his fellow pupils recently used a small grant from Plan UK to plant acacia trees around their school. When the trees grow, they will trap the wind during heavy storms, protecting the school's roof.

"Every year, we were afraid that our school was under serious threat of losing its roof," says Lansana. "We can solve problems of disaster in our communities ourselves."

UKaid from the Department of International Development is funding Plan UK to prepare young people for climate change and give them the skills and tools to combat it.

51 schools and 32 children's groups are involved in the programme, which also includes climate change workshops and the development of teaching materials.



Hendrik is one of 5,000 farmers in South Africa who produce the world's supply of rooibos (or redbush) tea – and who depend on it for their livelihoods
Photo © Leonie Joubert, from *Boiling Point: people in a changing climate*



MORE INFORMATION

WHAT CAN I DO?

Get informed:

Visit our website, read our publications and check aid agency websites.

Spread the word:

Get people talking, start discussions with your friends.

If you're at school:

Why not look into a school linking project?

Buy fairly-traded goods:

To help people in developing countries work their own way out of poverty.

Protect the environment:

Climate change presents a serious threat to development.

Give money:

To charities working to reduce poverty.

Give your time:

To an organisation like VSO.

And, during a disaster, give money, volunteer if you have specialist skills, or help raise funds.

HOW CAN I FIND OUT MORE?

This booklet forms part of a series to explain DFID's work around the world.

For more detailed information about DFID's work visit:

www.dfid.gov.uk

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