

# Global Climate Change Program: Africa

Addressing the causes and effects of climate change has been a key focus of USAID's development assistance for over a decade. USAID has funded environmental programs that have reduced greenhouse gas emissions while promoting energy efficiency, forest protection, biodiversity conservation, and other development goals. This "multiple benefits" approach to climate change helps developing and transition countries achieve economic development without sacrificing environmental protection. To help countries address domestic and international climate change priorities, USAID's Global Climate Change Program is active in more than 40 countries and, since 2001, has dedicated over a billion U.S. dollars to promote:

- Adaptation to climate change
- Sustainable land use and forestry
- Climate science for decision-making
- Clean energy technology



USAID is working with Malian agricultural scientists to understand how projected changes in climate, including increased temperature and greater seasonal rainfall variability, could impact rice production, an important crop for Mali's rural economy. USAID is also exploring ways that farmers can adapt their production to a changing climate.

Many countries in Africa face severe socio-economic challenges that are exacerbated by short- and long-term climate stresses. Small disruptions can alter progress toward essential development goals such as reducing hunger, increasing incomes, decreasing poverty, improving governance, and ensuring the health and longevity of the population. Because overall greenhouse gas emissions are low but vulnerability to climate-related impacts is high, adapting to climate stresses is the principal challenge facing the African continent with respect to climate change. In the Africa region, USAID's Global Climate Change Program is active in countries such as the Democratic Republic of the Congo, Madagascar, Malawi, Mali, Senegal, South Africa, and Uganda. It is also supported by three regional USAID programs: USAID/East Africa, USAID/West Africa, and the Africa Regional Program.

## Adaptation to Climate Change

USAID supports activities to help developing countries lessen their vulnerability and adapt to climate variability and change. These activities are intended to build more resilience into economic sectors that may be affected by climatic stresses, including agriculture, water, and key livelihood sectors in coastal areas. In the city of Polokwane, South Africa, the Department of Water Affairs and Forestry (DWAF) is building infrastructure to meet the demand for water of a rapidly growing population. Climate change could affect both supplies and demand for water: USAID worked with DWAF to identify water demand management and infrastructure needs in light of changing climatic conditions. Water infrastructure has a useful life of decades, so planning with future climate in mind can lead to better investments. In Southern Mali, farmers believe that hotter and drier conditions in recent decades have contributed to declining productivity of maize, rice, and potato. USAID is working with farmers to improve crop yields and reduce vulnerability of crop production to climate variability and long-term climate change.

## Sustainable Land Use and Forestry

Promoting biodiversity conservation, improved forest management, and sustainable agriculture, USAID programs help mitigate climate change by absorbing and storing carbon dioxide from the atmosphere. They



Congolese foresters review management plans for reduced impact logging practices in the northern Republic of Congo, where USAID is studying the impacts on carbon stocks.

also help reduce the vulnerability of ecosystems to climate change. Reduced-impact logging of forests minimizes loss of vegetative cover, for instance, which helps stabilize the soil and control erosion during rain and wind storms. Reduced tillage and contour planting by farmers increase soil organic carbon and therefore enhance soil fertility, which helps increase food security in developing countries.

In Africa, the Central African Regional Program for the Environment (CARPE) focuses its efforts across the Congo Basin, which contains the world's second largest expanse of closed-canopy tropical forest. The region is threatened by unsustainable timber exploitation, shifting cultivation, commercial hunting, urban expansion, and decades of human conflict. In addition to providing other valuable ecosystem services, the large forested area of the Congo Basin serves as a globally important carbon stock. CARPE's principal goal is to reduce the rate of forest degradation and biodiversity loss through increased local, national, and regional natural resource management capacity. Key activities

include the establishment of nature reserves, integrated landscape natural resource management planning, forest policy reform, improved forest concession management, sustainable forest use by local communities, and improved environmental governance. USAID's efforts in this region have helped establish the Congo Basin Forest Partnership, which has resulted in a treaty among seven Central African countries to implement transboundary conservation and natural resource management activities spanning an area of nearly 200 million hectares.

### Climate Science for Decision-Making

USAID is also involved in U.S. and international climate change research to ensure that science produces information needed for global development challenges and that scientific findings guide development planning. Informed policy decisions are essential to sustainable natural resource management and economic development, key priorities of USAID. For example, USAID supports long-term research partnerships between U.S. universities, developing country research institutions, U.S. agribusiness, and private voluntary organizations through Collaborative Research Support Programs (CRSPs). CRSPs research issues of agricultural productivity and sustainability, food quality, and natural resource management that benefit both developing countries and the U.S.

### Clean Energy Technology

Finally, new technologies and practices offer the prospect for continued economic growth with reduced greenhouse gas emissions. Recognizing that increased productivity and efficiency are critical to economic growth, USAID supports the commercialization, dissemination, and widespread adoption of environmentally sound technologies. Attracting private investment is essential to popularizing such technologies. For example, USAID promotes low-cost solar lighting and water purification systems for rural hospitals, schools, and orphanages in East Africa through a partnership with Solar Light for Africa, a faith-based non-governmental organization. To date,

over 200 solar lighting and water purification systems have been installed in rural health clinics, schools, orphanages, community centers, and other public facilities in Rwanda, Uganda, and Tanzania, including the solar electrification of the Kakuuto Hospital located in the Rakai District of Uganda where the AIDS epidemic was first identified.



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A local official in the Durban area of South Africa found low cost solar water heating simple enough that he installed it on his own.

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Foresters and scientists assess the carbon impact of felled tree on surrounding forest in northern Republic of Congo. (Carrie Stokes, USAID/Washington)

Artisans in Mali make improved efficiency, wood-burning cook stoves. (Enterprise Works - Mali)

Local communities in Guinea learn to manage valuable forest resources through reforestation and sustainable agroforestry practices. (Laura Lartigue, USAID/Guinea)



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