Met Office

Projects in Africa

Why Africa needs improved climate information

Rapid population growth and development in Sub-Saharan Africa are increasing the region's vulnerability to climate variability and change. Weather extremes have the capacity to impact on people's lives, threatening infrastructure, human health, water supplies and food security. Managing these risks requires high-quality, accessible weather and climate information to enable decision-making that will help mitigate the impacts of weather and climate shocks.

The Met Office, with its world class weather and climate expertise, is working in partnership to help deliver such information, transforming science to services that make a difference to people's lives. The Met Office is collaborating on a number of international projects across Africa, working closely with stakeholders to design services to build resilience to weather and climate extremes.

FUTURE CLIMATE FOR AFRICA

UKaid from the British people

Improving Model Processes for African Climate (IMPALA)

The Met Office is leading IMPALA, part of the UK Aid funded programme Future Climate For Africa (FCFA). IMPALA aims to deliver a step change in climate prediction for Africa, enabling decision-makers to better tackle risks associated with health, water and agriculture. Using its scientific research and modelling expertise, the Met Office is helping to develop a pan-African very high resolution model down to a scale of 4km to capture extreme events at local scale.

IMPALA is feeding into a number of regional projects to aid planning, including resilience to extreme events in African cities, water resources in East Africa and changes in the West Africa monsoon. In all these areas, the Met Office is applying its science to aid solutions on the ground.

WISER
Weather and Climate Information Services for Africa

UKaid from the British people

Weather & Climate Information Services for Africa (WISER)

The Met Office is helping to deliver WISER, which will help at least 24 million people across Africa (focusing initially on East Africa) be more resilient to natural disasters and climate change by 2030. It will do this by improving early warning systems as well as helping them make better decisions by knowing what the weather and climate is likely to be.

This is being delivered through a programme of projects in partnership with National Meteorological Services including the development of multi-hazard early warnings in Tanzania, the strengthening of climate information partnerships in East Africa (SCIPEA), the development and delivery of demand-led climate information services in Kenya, enhancing national climate services (IRI ENACTS) in Ethiopia, Uganda and Kenya and the building of capacity of the World Meteorological Organization (WMO) regional training centre in Kenya.

Prediction across timescales for the improvement of climate services

The EU recognises the need for robust climate information covering future periods ranging from several months up to several years for economic, industrial and political planning. Through the EU funded SPECS programme (Seasonal-to-decadal climate Prediction for the improvement of European Climate Services) the Met Office is working towards providing reliable calibrated seasonal forecasts for Africa, based on forecasting systems from a number of centres around the world, including its own. The Met Office is developing improved multi-model output for East, West and Southern Africa with the designated Global Producing Centres of long-range forecasts for delivery to the relevant WMO Regional Climate Outlook Fora.

Supporting UN objectives to reduce poverty and build resilience

The Met Office's international activities help to support United Nations development objectives. Most notable among these are the UN's Sustainable Development Goals (SDGs), the Sendai Framework for Disaster Risk Reduction and the UNFCCC COP 21 agreement reached in Paris in 2015. Considering these activities together rather than separate strands, and recognising the value of working in partnership with others, the Met Office is using its expertise to help deliver weather and climate services to meet the UN's targets.

CASE STUDY

Improving regional accuracy of short-range weather forecasts

As part of the Weather and Climate Science for Service Partnership (WCSSP) South Africa supported by the Newton Fund, the South African Weather Service is working to upgrade and improve the quality of its weather forecasting activities by implementing high resolution numerical weather prediction (NWP) models. This will enable more detailed and regionally accurate short-range weather forecasts to be developed – potentially at 1.5 km resolution over South Africa – and will lead to further NWP model improvements in both South Africa and the UK. This development will mean improvements in the quality and accuracy of weather guidance provided to government, businesses and communities within South Africa.

Work featured in this publication has been supported by the Joint UK BEIS/Defra Met Office Hadley Centre Climate Programme (GA01101) and with UK aid from the UK government. The views expressed do not necessarily reflect the UK government's official policies.